



QUARTERLY NEWSLETTER

New York Flora Association - New York State Museum Institute

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A DYNAMIC NEW YORK FLORA ASSOCIATION

By Troy Weldy

Over the past year, I hope many of our members have noticed various changes within the New York Flora Association. Hopefully the membership sees these as significant improvements. The NYFA Board of Directors wishes to update the membership on past changes as well as a few more planned updates coming your way.

Organization by-laws

In order to strengthen the organizational foundation and consider establishing NYFA as an independent 501c3, we needed to review and update our by-laws. Draft by-laws were printed in the July 1991 newsletter (Vol. 2, No. 2) but the Board realized that particulars in the by-laws, as written, were either no longer applicable or outdated. During our review, we also found no evidence that the draft by-laws were ever finalized and approved by the membership. Under the direction of then vice-chair Adam Ryburn, new by-laws were drafted and modified by the Board. These by-laws were approved by the membership on 21 March 2008 with final by-laws published in the Spring 2008 newsletter (Vol. 19, No. 1). These by-laws will guide the governance of NYFA as we move forward and strengthen both the Board and overall organization.

New York Flora Atlas

We continue to work hard to improve the overall quality and content of the New York Flora Atlas. This past spring, we updated the website layout and design to offer many new features requested by the membership. This included better search capabilities, an improved layout, and ability to download data. The new website was completed this past spring and we are now focused on improving the underlying data. There will always be needed data improvements and we request membership support in allowing these improvements to move forward. The Atlas is the best available compiled information on the flora of New York State and we hope the Atlas is useful to all. This is NYFA's flagship product, which will only continue to improve over time.

Logo

NYFA's previous logo was a black and white outline of the state with a *Mitella diphylla* (miterwort) growing from the outline. This logo served us well for many years, but as part of our overall update plans, the Board decided it was time for a new image. After much discussion and various draft logos, we settled upon the trout lily (*Erythronium americanum*) as our preferred base image. The trout lily fit the criteria of a beautiful native plant that can be found throughout New York State. The image also needed to lend itself to simplicity so that it could be converted to a logo design that is crisp at various scales. We chose to use a plant that was easily recognizable by most plant enthusiasts whether presented in color or black & white. Working with Paulina Manzo of Plina Designs (<http://www.plinadesign.com/>), a new logo was created. Plina Designs was extremely helpful and pleasant to work with throughout the design process.

Non-Profit Organization Status

For many years, NYFA has been an organization residing under the larger umbrella of the New York State Museum Institute. As NYFA completes its 20th year of service, we have grown through the nourishment of the NYS Museum Institute and are now ready to spread our wings. For the immediate future, we will still remain closely tied with the Museum Institute, but will establish ourselves as an independent 501c3 non-profit organization within this umbrella organization. This will give us the future ability to partner with another organization or become the larger umbrella organization, which provides greater support to regional botanical groups across the state. This will also allow us more freedom in seeking donations and sponsors for future ventures. More information on this is forthcoming.

Website

Many of you have undoubtedly noticed the outdated website. Our initial website was created in 2001 and was popular when first released. We received hits from around the world with annual users exceeding 100,000. Unfortunately, due to technological problems, the selling of our original hosting company, and changing e-mail addresses, we lost the ability to update the site. Thus, the old site was not updated since 2006. Again, working with Plina Designs, we have updated the website (see <http://www.nyflora.org>). Much of the general information remains the same, but the calendar function will be easier to update, events are up-to-date, and outdated information has been removed. We are still working on developing a searchable database for the newsletters, adding details/pictures from past trips, and improving the information available to plant enthusiasts of New York. One example is the creation of the NYFA's own YouTube Channel where you can watch and listen to experts provide identification tips and tricks for New York flora species (see <http://www.youtube.com/user/nyflora1>). These videos are part of our growing education workshops, and more videos will be added after each workshop. Please visit the improved and updated website and let us know if you have suggestions for improvement.

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As you can see, your Board is engaged in improving the overall NYFA foundation. As we reach the end of our 20th year, we look forward to many more years of service to the protection and appreciation of the Flora of New York State. To help us continue to grow and succeed, members should ensure their membership is up-to-date (see address label), encourage their friends/colleagues to join NYFA, and consider making an end of the year donation to support NYFA's projects.

SOAPWORT (*SAPONARIA OFFICINALIS* L.)

By Knowlton C. Foote, Ph.D.

Soapwort, also known as Bouncing Bet, is a pink-flowered plant seen flowering in New York from early July to the end of September. It is found growing in small to large colonies on the edge of fields, sides of roads, and sandy beaches. This species, because of its cleaning and medicinal properties and attractive flowers, came to us from Europe most likely early in our colonial history. It is unique in that plants have either one of two types of flowers, the single type of flower and the double flower. And to botanists, soapwort has all the characteristics of being a moth flower.



Figure 1. Soapwort (*Saponaria officinalis*). a) plant b) part of stem two internodes below the flowers c) inflorescence d) petal and base of two stamens e) flower, three stamens and one petal removed, calyx and remaining petals cut off near the base f) dehiscent capsule with remains of petals and stamens, half of calyx cut away g) seed h) part of surface of seed, much enlarged. From Stella Ross-Craig, 1951.

Names and Classification

Soapwort is known botanically as *Saponaria officinalis*, a binomial given to it by Carolus Linnaeus in 1753 in his *Species Plantarum*. It has been known by a plethora of common names over the ages in different regions as recognition of its usefulness. Besides Bouncing Bet, other names are London-Pride, Bruisewort, Fuller's Herb, Sheepweed, Sweet-Betty, Boston-Pink, Old-Maid's Pink, Hedge-Pink, Chimney-Pink, Goodby-to-Summer, Crow Soap, Crowther Soap, Latherwort, and Wild Sweet William (Coats 1973, LeStrange 1977, Quattrocchi 2000). Also found in New York is another species known as Soapwort, *Saponaria ocymoides*, alternately known in Europe as Rock Weed (Mitchell and Tucker 1997). These two species in turn are members of the large pink family, Caryophyllaceae.

Saponaria comes from the Latin root "sapo" meaning "soap." Its specific name, *officinalis*, refers to its many medicinal properties. The name Bouncing Bet has an interesting derivation. It developed in England most likely during Elizabethan times. The inflated calyx and scalloped petals of the flower suggested the rear view of a laundress, her numerous petticoats pinned up (obviously a double flower) and the wide ruff at her neck bobbing about as she scrubbed clothes (Mitich 1990). The word "bet" may have come from the queen's name at the time.

Entrance into North America

Over the centuries, soapwort has been used as a soap, as a medicinal, and as a garden ornamental. The plant is rich in saponins in its leaves and roots. Saponins are a vast group of naturally occurring glycosides quite common in higher plants (Heitefuss and Williams 1976). These compounds dissolve in water to form colloidal solutions that foam on shaking. As such, saponin-containing plants have been sought in the past for use in household cleaning agents (Sparg *et al.* 2004). Even at the end of the 16th century the juice of the leaves was known to be effective as a soap. When mixed with water, it was used to clean tapestries, hangings, and carpets (LeStrange 1977), and it was used to scour wooden and pewter vessels. Soapwort also has a long history as a medicinal. It was taken as a diuretic, laxative, and expectorant as well as in treating eruptions such as psoriasis, eczema, ache, and boils (Dobells 1986). The double bloom flower was a welcomed attraction to ornamental gardens with its perfume fragrance (Coats 1973). Because of its many uses, early colonists brought soapwort to North America. It was placed in gardens from which it escaped to the surrounding countryside and became naturalized. Thomas Nuttall described it as escaping from gardens in America in 1818 in *Genera of North American Plants*. John Torrey, in his *A Flora of the State of New-York*, described it as being “common to road sides, waste grounds, and about houses by 1843.” A search of established herbaria in the Northeast will most likely show that this species came to America in the 1700’s, if not earlier. Soapwort had been naturalized in England by 1629 and this is the likely source for North America (Corbet *et al.* 2001, Dobells 1986).

Phenology, Habitat and Range

Soapwort has been described as a “summer” flower (Gleason and Cronquist 1991). We first see it flowering in the beginning of July. In Central New York, this species blooms up to the first frost. Soapwort, not being particularly tall, is generally found in places where it receives good light exposure, which often includes the edges of fields, railroads, roadsides, gravel beds, streams, and along shores. I have seen it quite plentiful on the shores of Port Ontario, New York where the soil is quite sandy. It appears to have little preference to lime in the soil (Wiegand and Eames 1926).

Soapwort is widely distributed. It is found throughout most of temperate North America (Gleason and Cronquist 1991). It is also found in Europe, north to Scandinavia and Russia, and Asia. It is believed to be native to the mountains of central and Southeast Europe (Clapham *et al.* 1962).

Description

This species is usually found in colonies, which may consist of a few stems to several hundred stems extending 10 to 15 meters. The reason for the cluster growth pattern is that this species spreads vegetatively via deep rhizomes as shown in Figure 1a. So what is seen at a site often represents ramets of a clone that may or may not be a part of a larger genet. In one sand dune I examined in the Port Ontario area, the horizontal rhizomes of a cluster of plants were 14 inches deep. Each rhizome was attached to another stem. Thus, there are connections between stems via the rhizomes which may be quite beneficial. In Canada Goldenrod (*Solidaga canadensis*), for instance, it has been shown that a stem may be connected to 10 to 20 other stems by rhizomes. The older stems provide younger plants with

sustenance for growth, flower, and seed production via rhizomes (Hartnett and Bazzaz 1983).

Soapwort is a short-lived perennial and polycarpic. Flowers, which are hermaphroditic, open at dark. A particular clone will all contain either single or double flowers. In Central New York, out of 20 colonies I observed in a 100 mile radius, only one (5%) exhibited double flowers. In examining clones at three locations in Maine all were single. Robert Wesley of Cornell Plantations believes that since the double flower is partially or entirely sterile, the single flower may be better adapted to live and survive in the world. Interestingly, Asa Gray in 1887 described the double form as “most common” in the Northeast. Chromosome number is $2n = 28$ (Clapham *et al.* 1962).

Plants range from ankle high on beaches to waist high in fields (25 cm to 80 cm). The dark green leaves are paired on the stem. The leaves are elliptical in shape and commonly 7 to 10 cm long and 2 to 4 cm wide with smooth (entire) edges. Each leaf has three prominent parallel veins running lengthwise.

The flowers are found at the top of the stem arranged in a dense cluster. Botanically, it is described as a “loose corymb”. The terminal cluster may contain up to 30 buds presented in a semispherical fashion that open over the next 10 to 15 weeks. The next leaf axil down the stem as well the following one may also contain small clusters with more buds. Each flower has five sepals which are united into a narrow linear calyx tube 4 to 6 mm wide and 16 to 22 mm deep. The base of the calyx tube is an important area (Fig. 1e). Centrally positioned within the calyx tube base is the pistil. The pistil actually sits on top of a short inconspicuous 1 to 2 mm long stalk called a “stipe” leaving a small cavity below it. The

stipe acts as a receptacle to which is attached the pistil, 5 petals and 10 stamens. The cavity below the stipe is where nectar is stored.

From within the calyx tube extend 5 petals. Each of the 5 petals grows 2 to 3 mm beyond the calyx tube and then flares out to form the blade as shown in Figure 1c. At the top of each petal, just as it bends radially outward, is seen a minute two-forked pink structure 2 mm in length (Fig. 1d). John Torrey (1843) referred to this structure as the “crown” of the petal. Today it is referred to as an appendage (Gleason and Cronquist 1991) or as a “coronal scale” (Wolff *et al.* 2006). As the flower ages over 4 days time, the petals reflex backwards nicely exposing the appendage as the crown on each petal.

Within the floral tube are found the sexual structures (Fig. 1e). At the base of the tube there is a long narrow single green ovary that contains four rows of white ovules totaling 60 to 80 along a central axis positioned much like kernels on a corn cob. On the top of the ovary are two white styles that eventually extend 3 to 4 mm beyond the petals and curl back 90 to 180 degrees at the ends. The stigmatic surface is found on the inside of each style at the top and extending 2 to 3 mm down the style in several rows. The stigmatic surface contains numerous papillae for capturing and germinating pollen grains.

Outside of the pistil, 10 stamens are arranged in two groups of five. One group of five inner stamens grow so the anthers just pass the top of the sepals. Before a flower bud opens, each inner stamen lies neatly between the two forks of a petal’s coronal scale with the anther tucked in just above the fork. Above these inner stamens by about 3 mm in the opened bud is a second group of 5 stamens. These inner and outer stamens are referred to as “episepalous” and “epipetalous” stamens (Jurgens *et al.* 1996, Wolff

et al. 2006). Each of the 10 filaments is attached to the middle of an anther.

Double flowers

What do flowers of rose, chrysanthemum, English Daisy, marigold, primrose, hollyhock, petunia, marsh marigold, buttercup, foxglove, daffodil, geranium, sunflower, hibiscus, sweet pea, narcissus, peony, lilac, and violet, to name a few, have in common? They are often found with double flowers as is soapwort. Double flowers have more than the normal number of petals, a sometimes brighter and deeper color, increased scent, and longer life. As a result, double flowers became garden favorites early. The double form of soapwort was established in Britain by 1659 (Coats 1973). Stamens and pistils can also take on a “petaloid” structure often rendering these structures sterile and serving as petal-like structures.

Double flowers have been described as far back as the time of Theophrastus (370-285 BC) when he described double roses (Reynolds and Tampion 1983). Over the centuries, thousands of double-flowered cultivars have been described in the literature.

Opening of a Flower

The opening of a flower takes place in an orderly sequence. A flower bud first begins to unfurl one-half to one hour before sunset forming a lightbulb shape 8 to 10 mm in width. Then in a matter of 10 to 20 seconds the petals open up. Not quite as dramatic as when I saw evening primrose buds opening in several seconds, but still exciting to see. Accompanying the opening is the release of a perfumed scent, often strong, that attracts moths to the flower. This perfume is released each night by the upper surfaces of the petals of open flowers (Jurgens *et al.* 1996).

The opening of a soapwort flower shows it to be strongly protandrous. The stamens mature before the pistil by several days. During the first day of opening, observations in Germany noted that only the five episealous (inner) stamens emerge from the calyx tube to begin anthesis (Wolff *et al.* 2006). By the second night, the five epipetalous (outer) stamens then emerge and open their anthers upward releasing hundreds of sticky pollen grains. Over the following two days, the flower enters the female stage as two styles emerge through the center of the calyx tube. In the next one or two days these arch out radially opposite one another. This sequence of anther and pistil opening has also been observed in other Caryophyllaceous species *Silene alba* (snowy campion), *Silene dioica* (Red Campion), *Silene vulgaris* (bladder campion), and *Silene nutans* (nodding campion), but not in *Silene noctiflora* (sticky campion) (Jurgens *et al.* 1996). Stigmas were found to be receptive to pollen germination for up to 4 days, and possibly longer (Jurgens *et al.* 1996).

The sequence of flower development from my observations of six dozen soapwort flowers over the past two years in Central New York shows a slightly different pattern. Buds open towards nightfall; however, the following day all 10 stamens are present in the opened flower, not just the 5 episealous ones. Some 85% of the anthers of the episealous stamens did not open, and lasted only one day or less before being knocked off the filament by wind, rain, or senescence of the tissues holding the anther to the filament. As for the epipetalous stamens, 95% of the anthers opened.

Soapwort was found to be a rather nectar-rich plant. Nectar is produced by the disk at the base of each stamen that collects in the calyx cavity like other Caryophyllaceous species (Wolff *et al.* 2006). This cavity has been shown to hold up to 5 microliters (Corbet *et al.* 2001, Wolff *et al.* 2006). Single flowers contained between 1000 and 2000 micrograms sugar during the day when insects were kept away. The double flower, on the other hand, contained virtually no nectar. Nectar production begins with the opening of the flower at dusk and continues for three days during the evening up to the morning hours. The volume produced is more or less equal each night. During the day the nectar volume diminishes slightly due to an occasional visit by a pollinator, evaporation, and/or reabsorption. The sugar-rich nectar is sucrose dominant (88%) with only minor amounts of fructose and glucose (Wolff *et al.* 2006). This nectar may also contain amino acids that would provide sustenance to nectaring moths and butterflies as was dramatically shown in the nectar of Jewelweed (*Impatiens capensis*) by Richard Rust in 1977.

Reproductive Biology

Available literature and my observations indicate that soapwort is designed to be an outcrosser. The anthers open one to two days before the style branches begin to elongate. A distinct separation (3 to 4 mm in my observations) exists between the two stigmas and the anthers located below them that lasts the life of the flower. The transfer of pollen, therefore, from anther to stigma within the same flower would require a flying or moving insect often referred to as “facilitated pollination” (Lloyd and Schoen 1992). Yet in studies of the reproductive biology of soapwort by Jurgens *et al.* (1996) and Wolff *et al.* 2006 in Germany showed that this species is capable of significant self-pollination. In these

two studies, each inflorescence was placed into a nylon mesh bag to prevent insect access from the time of bud formation until the flowers had wilted in order to see if pollinators such as moths and butterflies were required for seed production. The results of the two studies showed considerable seed production in the covered inflorescence. In the Wolff study, 18% of ovules developed into seeds in covered flowers whereas 26% developed into seeds in uncovered flowers exposed to moths, butterflies, and bees. In the Jurgens study, 21% of ovules matured into seeds in bagged flowers and 34% produced seeds in flowers exposed to pollinators.

As discussed previously, the soapwort flower is structured for cross-pollination with another flower in the inflorescence or another plant. The results of Jurgens and Wolff suggests that intrafloral pollination occurs in this species. Dr. Wolff suggests that as pollen grains leave the anthers they might ripple down to the stigmas before the styles begin to elongate (personal comm.) She observed that stigmas of flowers in which the inflorescence was covered were coated with pollen on the stigmatic papillae.

There are four possible reasons why my observations differ from those of Wolff and Jurgens. First, in the studies by Wolff and Jurgens, no efforts were made to control small potential pollinators within the bagged inflorescences (aphids, thrips, spider mites and beetles) as discussed by Lloyd and Schoen (1992.) Second, no attempt was made to study apomixis, the process where ovules develop directly into seeds without pollination. Third, there may be structural differences between soapwort plants in Germany and those found in Central New York, resulting in actual contact between the anthers and the pistil in the German plants so that pollen can be physically transferred.

Figure 1e of a plant of England suggests a close association can occur in Europe, which I did not observe in Central New York plants. Lastly, the anthers may be opening within the flower before the flower ever opens. In Central New York, I observed that some 10% of the epipetalous anthers opened in the bud several hours before the flower opened so that pollen was in direct contact with the stigmas.

In discussing insects that pollinate soapwort, it is first necessary to review the flower structure. The flowers open at dusk. As they open, they produce a perfume that is sometimes quite intense. The calyx tube, which contains the nectar, is 18 to 21 mm long, a depth too deep for most bees. Honey bees have a tongue length of 6.5 mm and bumble bees 7 to 8 mm (Barth 1985). Copious amounts of nectar are produced in the evening. This indicates that the main pollinators are night-flying moths. Their proboscises, up to 25 mm in length, are sufficiently long to reach the stored nectar.

Wolff *et al.* (2006) reported seeing 11 nocturnal species of moths visiting soapwort in Germany, most of which are seldom seen in the Eastern United States. The most common moth seen was

Autographa gamma. Jurgens *et al.* (1996) also reported nectar-robbing bumble bees and syrphids in Germany. Robert Dirig of Cornell's Bailey Hortorium and Herbarium has seen 11 butterfly species and one moth species nectaring on soapwort in the Eastern United States.

Seed Production

As seed mature, they turn from red to black (Fig. 1g, 1h). The ovary wall turns into the seed capsule. The average number of kidney-shaped seeds per capsule has been reported to be 18 in Ontario, Canada (Lokker and Cavers 1995), and 29 to 32 in Germany (Jurgens *et al.* 1996, Wolff *et al.* 2006, respectively). In the Canadian study, some 46% of capsules were shown to be empty or aborted in the Canadian study and the total number of seeds per plant was found to be 350. Up to 86% of the seeds germinated. Once released from the capsule, the seeds must go through a cold period before spring germination to overcome dormancy. Most seeds sink rapidly in flood water, but some can be carried over significant distances (Lubke and Cavers 1969).

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Please Spread the Word

Common Reed Study Is Seeking Input

Laura Martin and Professor Bernd Blossey of Cornell University are conducting an online survey regarding *Phragmites australis* (common reed) management options, and are looking for representatives of organizations that manage natural resources to complete the survey. Common reed management is of ongoing concern for many land management agencies and conservationists. In many areas, a continued rapid population expansion of introduced common reed has resulted in the investment of large amounts of resources into repeated control efforts.

The study, funded by the Department of Transportation, seeks to collect information on recent management of *Phragmites* as well as opinions on future management options, so you do not need to be an expert on *Phragmites* management, nor does your organization need to have managed for *Phragmites* in the past in order to contribute to the survey. Results of this survey will be used to develop guidelines and management suggestions and will aid in future research.

If you are interested in participating the survey can be found online at:

<http://lab.invasiveplants.net/Pages/Survey.aspx>

For Further Information please email Laura Martin at: LJM222@cornell.edu.

IMPONDERABLES

Thanks to Ruth Schottman's wonderfully inquisitive mind, we have a new question for this issue:

"It seems that tree leaves color earlier in fall around bodies of water. Why?"

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

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

REGIONAL RARITIES



Pterospora andromeda (giant pinedrops), a S1 (State listed as critically imperiled) species in NY recently photographed at Point au Roche State Park, Clinton County, by Dr. Lawrence Gillett.

FALL MUSINGS

"The milkweed pods are breaking,

And the bits of silken down

Float off upon the autumn breeze

Across the meadows brown."

- Cecil Cavendish, *The Milkweed*

"FOR MAN, AUTUMN IS A TIME OF HARVEST,
OF GATHERING TOGETHER.

FOR NATURE, IT IS A TIME OF SOWING, OF
SCATTERING ABROAD."

-EDWIN WAY TEALE

"I cannot endure to waste anything as precious
as autumn sunshine by staying in the house.

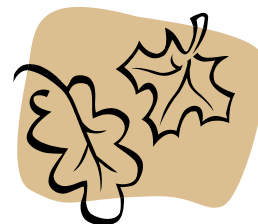
So I spend almost all the daylight hours in the
open air.

-Nathaniel Hawthorne

"Winter is an etching, spring a watercolor,
summer an oil painting

and autumn a mosaic of them all."

-Stanley Horowitz



RECAP OF NYFA WORKSHOPS

The *Crataegus* Workshop Led By Arthur Haines

by David Werier

This past May 29th-31st, Arthur Haines led a *Crataegus* workshop for NYFA based out of the Bailey Hortorium at Cornell University in Ithaca, New York. Seven participants attended: Heidi Adams, Ed Frantz, Ed Fuchs, Anne Johnson, Anna Stalter, Connie Tedesco, and David Werier. Arthur has been critically studying the *Crataegus* of New England for the past decade or so and his expertise helped us get a handle on this often challenging group of plants.

The first evening was spent indoors with Arthur giving a presentation to get us oriented to the genus *Crataegus*. He made the argument that *Crataegus*, like *Salix* and *Carex*, should be considered a “glamour genus” (i.e. the genus includes numerous species, many of which are easy to identify but some that present challenges; many species appear superficially similar to beginners; and, some species are very common and widespread while others are rare and local). Thus, *Crataegus* should deserve more attention from botanists than it currently

does. Most of the difficulty in the genus has to do with the huge proliferation of names by early hawthorn researchers. Additionally, some challenges to identification stem from not having all the useful diagnostic information available at any one season (i.e. flowers and mature fruits), morphological plasticity, and perhaps to a lesser degree apomixis and hybridization, at least in the Northeastern U. S.

Before heading out into the field, we also spent some of the next morning indoors, becoming familiar with *Crataegus* morphology and terminology. We put Arthur’s new key to work on specimens he had brought with him and some people worked on unknowns they brought.



Arthur Haines explaining *Crataegus* characters.

South Hill was our first field site. It was a gorgeous day and again we worked with Arthur’s key identifying the *Crataegus* we encountered. The site included some non-forested habitat as well as a utility right-of-way. Species we found at South Hill included: *C. dissona*, *C. forbesae*, *C. macrosperma*, *C. pruinosa* var. *pruinosa*, and *C. pruinosa* var. *porteri*. The two varieties of *C. pruinosa* differ primarily in their anther color with the typical variety having anthocyanic anthers and var. *porteri* having white or cream colored anthers. Species we found at South Hill included: *C. dissona*, *C. forbesae*, *C. macrosperma*, *C. pruinosa* var. *pruinosa*, and *C. pruinosa* var. *porteri*.

After lunch we headed over to Jersey Hill where we primarily explored the edges of a roadside. Here we found *C. coccinea*, *C. dissona*, *C. dodgei*, *C. macrosperma*, *C. pisifera*, and *C. pruinosa* var. *pruinosa*. *Crataegus pisifera* was our first species encountered in series *Macracanthae*. This series is



Participants of the *Crataegus* workshop hard at work keying out *Crataegus coccinea*.

quite distinctive with sepals conspicuously glandular-serrate to glandular-pinnatifid, leaf blades often with inconspicuous lobes, pyrenes with large depressions or erosions on the inner faces, and bracts at leaf opening conspicuous and strongly tinged red to orange-red. *Crataegus pisifera* differs from other members of this section by the small fruits, two cycles (about 20) of stamens, glabrous to sparsely villous inflorescence, and smaller flowers.



Crataegus submollis at Fish Creek
10 May 2009

We then headed over to a spot near Fish Creek to see *C. submollis* which is quite common in northern New England, but is rare in the Ithaca area. It is one of our earliest species to flower and is characterized by very large pubescent leaves, large flowers, non-anthocyanic anthers, herbaceous bracteoles in the apical half of the inflorescence, and short stamens.

On our way back to the lab we stopped at a one more site near the Cayuga Inlet. Here we found a *Crataegus* species that did not match any of the morphologies Arthur was familiar with in New England. It was very close to *C. lucorum* but the flowers were too large for that species so Arthur felt it was likely something that does not occur in New England. This helped to demonstrate that in New York more work is needed to understand what species we have present here. In particular, Sargent named numerous species from New York which need to be reviewed to determine their legitimacy. At the lab we reviewed what we had seen in the field, spent a little more time with the specimens, and capped the day off with a delicious dinner at a local Thai restaurant.

The next morning we did a final review of the specimens in the lab and then headed out to Union Springs. Along the way we stopped to see some *C. monogyne* on a roadside. This is one of the very few non-native *Crataegus* that occur in the New York flora. It is a very distinctive species with large lobes and the lateral veins running to the sinuses as well as the points of the lobes.

The Union Springs site is along a small dirt road that leads down to the edge of Cayuga Lake. Here we saw *C. calpodendron*, *C. crus-galli*, *C. dissona*, *C. holmesiana*, *C. macracantha*, *C. macrosperma*, *C. pennsylvanica*, and *C. succulenta*. *Crataegus calpodendron* is another member of section of *Macracanthae*. It is the latest species to flower in central New York and often appears dead early in the



Crataegus calpodendron just beginning to leaf out in May.

season because it doesn't break bud when the earlier species are in full bloom. The workshop occurred toward the end of the flowering season for *Crataegus*, but the *C. calpodendron* that we saw at Union Springs was still not in flower. *Crataegus calpodendron* is one of the very few species that we saw that does not occur in New England.

Overall, the workshop was fantastic. We spotted 16 taxa in the field with one unknown. Many of us realized that the "thorns" are not always that hard to identify and that, in fact, many are fairly easy and straight forward. Hopefully this workshop has inspired at least some of us to work towards a better understanding of the full *Crataegus* diversity in New York. A huge thanks to Arthur for taking the time to help us New Yorkers out. Thanks are also due to the Bailey Hortorium for co-sponsoring the workshop and opening up their lab space.

The NYFA Sedge Workshop

by Kim Smith, NY Natural Heritage Program

This year we held another excellent Sedge Workshop with Dr. Tony Reznicek from June 23-25. The workshop was based at SUNY Oneonta and we visited a number of interesting sites in the area. There was a great turnout with

interested botanists from across New York and Pennsylvania present. The participants included Dr. Tony Reznicek, Donna Vogler, Ed Frantz, Claudia Knab-Vispo, Richard Koval, Bob Ingalls, Kim Smith, Catherine Landis, Fred Gaffney, Laurie Freeman, Adam Ryburn, and Rocky Gleason.

On Tuesday and Wednesday evening, we had an opportunity to

look at specimens in the lab with Dr. Reznicek. This was incredibly useful as many of us had stacks of specimens awaiting verification, and many of the specimens in the SUNY Oneonta herbarium were also annotated.

On Wednesday morning, we set out into the field to the Susquehanna Riverbank, a property owned by the city of Oneonta known as “The Greenway”. We explored a small area of floodplain forest and adjacent uplands and saw the following species:

Carex blanda
Carex bromoides
Carex emoryi
Carex griseae
Carex hirtifolia
Carex normalis
Carex radiata
Carex spengelii
Carex trichocarpa

This was a new state record for the rare *Carex emoryi*, which may be easily overlooked in the state since it fruits early in the season and it is often difficult to find fruiting material for this species. At this site, we also briefly looked at two



Dr. Tony Reznicek, the renowned *Carex* expert, led a group into the field during the 2009 NYFA *Carex* identification workshop.

grasses, *Poa nemoralis* and *Poa trivialis*.

Later that day, we went on to Emmons Pond Bog, a property owned and managed by The Nature Conservancy. At the bog we saw just a few species characteristic of this habitat type: *Carex lacustris*, *Carex utriculata*, and *Carex lasiocarpa*.

Our next stop was Pine Lake Environmental Center, a property owned by Hartwick College. At this site we saw the following species:

Carex annectens
Carex cephaloidea
Carex deweyana
Carex scoparia
Carex stipata
Carex tenera
Carex umbellata
Carex vulpinoidea

The last site we visited on Wednesday was a fascinating area - a bog right in the middle of I-88! This area is known as the I-88 bog or Schenevus Creek Bog. We stopped in the adjacent upland forest to look at some woodland species on our way to the bog, and saw the following species:

Carex appalachica
Carex debilis
Carex digitalis
Carex gracillima
Carex intumescens
Carex laxiculmis
Carex novae-angliae
Carex pallescens
Carex pennsylvanica
Carex rosea
Carex swanii

Despite all these interesting sedges we encountered along the way, we finally did make it to the bog. What an interesting spot! The sedges we saw at the bog were:

Carex billingsii
Carex limosa
Carex pauciflora
Carex trisperma

On Thursday, we spent all of our time at the Greenwoods Conservancy, a property that was donated to SUNY Oneonta. It was an interesting place to spend the day, with wet meadows,



woodlands, old fields, and even a bog-bordered pond to explore.

The following sedges were observed throughout the course of the day:

Carex arctata
Carex atlantica
Carex brunescens
Carex canescens
Carex comosa
Carex conoidea
Carex flava
Carex gynandra
Carex leptonevia
Carex lurida
Carex projecta
Carex prasina
Carex scabrata
Carex stricta
Dulichium arundinaceum
Eleocharis acicularis
Eleocharis palustris
Scirpus atrocinctus

Overall, it was a great workshop and everyone involved learned a lot. Many thanks to Donna Vogler and Ed Frantz for organizing the workshop and to Tony Reznicek for sharing his expertise with us.



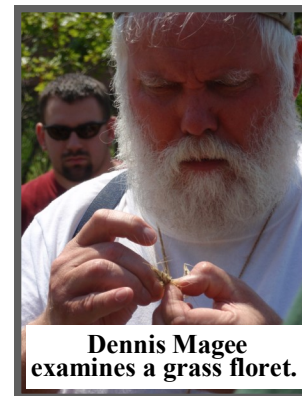
1144. *Carex flava* L.
Yellow Sedge.

Walter Hood Fitch - *Illustrations of the British Flora* (1924) - Permission granted to use under GFDL by Kurt Stueber. Source: www.biolib.de

NYFA Grass Identification Workshop

By Connie Tedesco

On August 1st, 2009, NYFA held a Grass Identification Workshop at the Albany Pine Bush Discovery Center. This well attended event was taught by Dennis Magee of Groton, Massachusetts, author and regional expert on grasses of the Northeast. In the morning Dennis gave a comprehensive lecture detailing nine grass tribes and 60 genera, which was followed by a hike through the Pine Bush in the afternoon where over 30 grass species were identified. NYFA would like to thank those who attended and the staff of the Albany Pine Bush for this great learning opportunity.



Alerts

Invasive Grass to Watch For: Slender False Brome (*Brachypodium sylvaticum*)

Slender false brome grass was recently found in Bergen Swamp in western New York by naturalist Steve Daniel. Until now this invasive grass was only reported in Oregon, where it is an aggressive invasive covering tens of thousands of acres, and also recently in Virginia and Northern California. Active attempts at control are underway in these states. This plant can form extremely dense solid stands in a variety of habitats, and eliminates native vegetation. It has probably been in New York for some time but has been overlooked because it closely resembles other brome grasses or species of *Elymus*.



For more information see the September 21st entry on our blog (<http://nyflora.wordpress.com>) or the following websites:

<http://www.appliedeco.org/invasive-species-resources/FBWG>

http://www.calapooia.org/wp-content/uploads/2009/01/FB_brochure.pdf

RECAP OF NYFA FIELD TRIPS

Mt. Skylight Field Trip Report

by David Werier

As part of the NYFA's "Genera Quest" NYFA held a field trip to Mt. Skylight in the high peaks of the Adirondacks on June 13th, 2009. We started at 6:45 AM knowing that we had a 16-mile roundtrip hike ahead of us with a climb of about 2700 feet. We decided to try to avoid botanizing along the way so we would have time to botanize the alpine region. Along the way we did stop to admire *Amelanchier bartramiana* (Bartram shadbush) shrubs in full bloom. With their short petioles, hairy ovary summits, finely toothed leaves that taper at the base, and few-flowered inflorescences this boreal shadbush is very easy to identify.



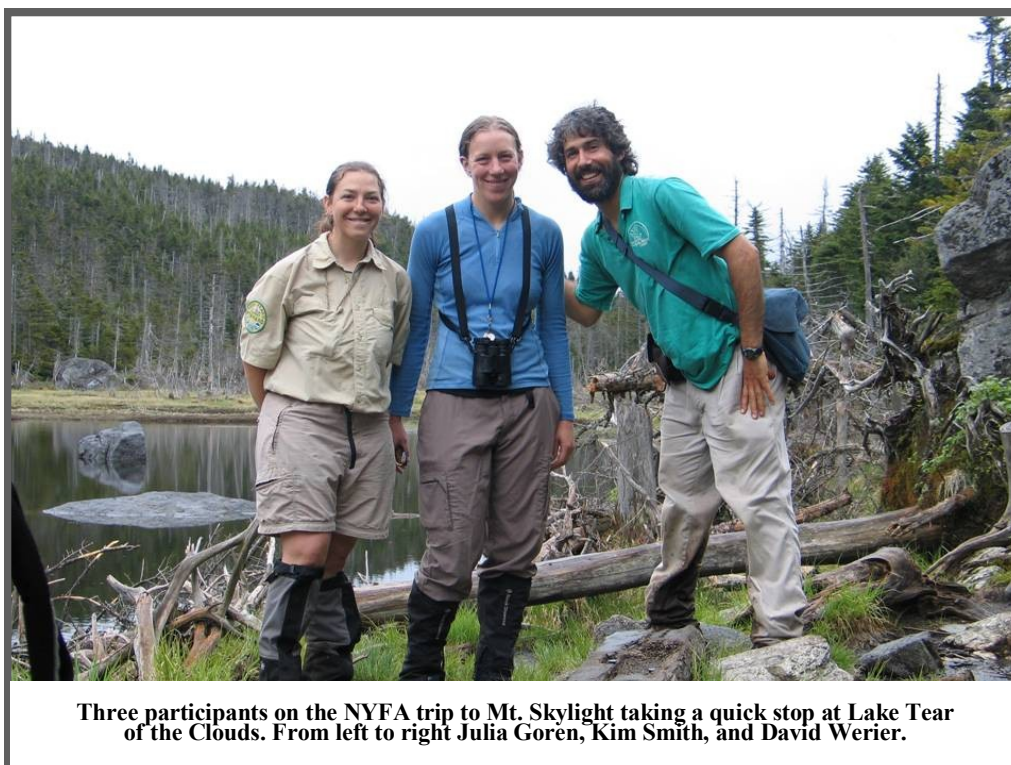
We also could not hold ourselves back from admiring the NYS rarity *Viburnum edule* (squashberry) in full bloom. At first we only saw plants in bud but eventually we came across some in full bloom. *Viburnum edule* is another northern woody shrub of boreal to sub-boreal areas that prefers growing along the edges of streams which is where we observed it growing.



We arrived on the top of Mt. Skylight and had some lunch when the weather started to turn. Thankfully, the rain mostly held off for a few hours while we botanized the alpine area. The diversity was not tremendous but the species were interesting being primarily species restricted to alpine habitat, which is extremely limited in New York. Some highlights from the alpine area included *Loiseleuria procumbens* (now *Kalmia procumbens*) – alpine azalea in flower (Mt. Skylight is the only site in New York for this species); the elusive and subtle *Geocaulon lividum* (false toadflax), which is a northern relative of *Comandra umbellata* (bastard toadflax); and of course *Diapensia lapponica* (Lapland Diapensia) in bloom. The way down was long and included some rain.

We made it back to the trail head with not quite enough light to sign out at the register without a flashlight.





Species observed on top of Mt. Skylight include (21 genera):

Abies balsamea
Andromeda polifolia
Anthoxanthum monticola
Betula cordifolia
Chamaedaphne calyculata
Coptis trifolia
Diapensia lapponica
Empetrum nigrum
 ssp. *hermaphroditum*
Eriophorum vaginatum
Geocaulon lividum
Kalmia polifolia
Loiseleuria procumbens
Minuartia groenlandica
Picea mariana
Rhododendron groenlandicum
Rhododendron lapponicum
Salix uva-ursi
Sibbaldiopsis tridentata
Solidago leiocarpa
Spinulum canadense
Trichophorum cespitosum
Vaccinium angustifolium
Vaccinium oxycoccus
Vaccinium uliginosum

Other species observed while hiking to the summit include (38 genera):

Abies balsamea
Acer spicatum
Amelanchier bartramiana
Aralia nudicaulis
Athyrium filix-femina
 ssp. *angustum*
Betula cordifolia
Calamagrostis canadensis
Carex canescens
Carex deflexa
Carex trisperma
Clintonia borealis
Coptis trifolia
Cornus canadensis
Cypripedium acaule
Dendrolycopodium dendroideum
Dryopteris campyloptera
Dryopteris campyloptera
Equisetum sylvaticum
Gaultheria hispidula
Gentiana linearis
Geum macrophyllum
Gymnocarpium dryopteris
Hieracium sp.
Linnaea borealis
Luzula parviflora
Maianthemum canadense
Oclemena acuminata
Osmunda claytoniana
Oxalis montana
Phegopteris connectilis
Picea mariana
Picea rubens
Prunus pensylvanica
Ribes glandulosum
Rubus pubescens
Solidago macrophylla
Sorbus americana
Sorbus decora
Streptopus amplexifolius
Streptopus lanceolatus
Taraxacum officinale
Vaccinium angustifolium
Veratrum viride
Viburnum edule
Viburnum lantanoides

Genera Quest 2009

By Steve Young

Mendon Ponds/Auburn Trail Trip Sets New Genera Quest Record

The NYFA trip to Mendon Ponds and the Auburn Trail in Railroad Mills on August 22 set a new one-day record for genera seen at 258! The old record was 243 at Alley Pond Park in Queens in 2008. The Mendon area is very diverse with eskers, ponds, marshes, a kettlehole sphagnum bog and a fen. We saw



Happy plant hunters: Steve Young, Ken Hull, Carol Southby, Georgianna Vyverberg, Steven Daniel, Megan Caves, Sarah Shute, Ed Fuchs, Christine Sevilla, Amy Kahn, Karen Schreiner. Not present for photo (Kim Hartquist).

229 genera in the park so it actually was less than what we saw in Alley Pond, but the walk along the Auburn Trail added 29 more genera for the grand total for the day. The full list of species is provided below and will be added to our website. Thanks go to the eager participants whose sharp eyes spotted all the beautiful plants we saw that day and our leader Steve Daniel who knows the plants in both areas very well.

List of plant seen at Mendon Ponds Park and Railroad Mills Auburn Trail on Aug 22, 2009

<i>Acer rubrum</i>	<i>Apocynum</i> sp.	<i>Calamagrostis canadensis</i>	<i>Chelone glabra</i>
<i>Acer saccharinum</i>	<i>Aquilegia canadensis</i>	<i>Calamagrostis stricta</i>	<i>Chenopodium album</i>
<i>Acer saccharum</i>	<i>Aralia nudicaulis</i>	ssp. <i>inexpansa</i>	<i>Chenopodium</i> sp.
<i>Achillea millefolium</i>	<i>Arctium minus</i>	<i>Calla palustris</i>	<i>Cichorium intybus</i> *
<i>Actaea pachypoda</i>	<i>Arrhenatherum elatius</i> *	<i>Callitriche palustris</i>	<i>Cicuta bulbifera</i>
<i>Actaea rubra</i>	<i>Artemisia vulgaris</i>	<i>Campanula aparinoides</i>	<i>Circaea lutetiana</i>
<i>Agalinis paupercula</i>	<i>Asclepias incarnata</i>	<i>Carex hystericina</i>	<i>Cirsium muticum</i>
<i>Agastache nepetoides</i> *	<i>Asclepias syriaca</i>	<i>Carex lacustris</i>	<i>Cirsium vulgare</i>
<i>Ageratina altissima</i>	<i>Asclepias tuberosa</i>	<i>Carex platyphylla</i>	<i>Cladium mariscoides</i>
<i>Agrimonia</i> sp.	<i>Asparagus officinalis</i> *	<i>Carex stricta</i>	<i>Clematis virginiana</i> *
<i>Agrostis</i> sp.	<i>Asplenium platyneuron</i>	<i>Carex trichocarpa</i> *	<i>Clinopodium vulgare</i>
<i>Alisma subcordatum</i>	<i>Athyrium filix-femina</i>	<i>Carpinus caroliniana</i>	<i>Collinsonia canadensis</i>
<i>Alliaria petiolata</i>	<i>Aureolaria pedicularia</i>	<i>Carya caroliniana</i>	<i>Coptis trifolia</i>
<i>Alnus incana</i> ssp. <i>racemosa</i>	<i>Aureolaria virginica</i>	<i>Carya glabra</i>	<i>Cornus amomum</i>
<i>Ambrosia artemisiifolia</i>	<i>Berberis thunbergii</i>	<i>Carya ovata</i>	<i>Cornus florida</i>
<i>Amelanchier arborea</i>	<i>Berteroa incana</i>	<i>Castanea dentata</i>	<i>Cornus rugosa</i>
<i>Amphicarpaea bracteata</i>	<i>Betula alleghaniensis</i>	<i>Caulophyllum thalictroides</i>	<i>Coronilla varia</i> *
<i>Andromeda polifolia</i>	<i>Bidens cernua</i> *	<i>Ceanothus americanus</i>	<i>Corylus americana</i>
var. <i>glaucophylla</i>	<i>Bidens connata</i>	<i>Celastrus scandens</i>	<i>Craetagus</i> sp.
<i>Anemone virginiana</i>	<i>Boechnera (Arabis) sp.</i>	<i>Celtis occidentalis</i> *	<i>Cuscuta ?gronovii</i>
<i>Angelica atropurpurea</i> *	<i>Boehmeria cylindrica</i>	<i>Centaurea stoebe</i>	<i>Cynanchum rossicum</i>
<i>Antennaria neglecta</i>	<i>Bromus ciliatus</i>	ssp. <i>micranthos</i>	<i>Cyperus bipartitus</i>
<i>Anthoxanthum odoratum</i>	<i>Bromus inermis</i>	<i>Cephalanthus occidentalis</i>	<i>Dactylis glomeratus</i>
<i>Apios americana</i>	<i>Bulbostylis capillaris</i> *	<i>Chamaedaphne calyculata</i>	<i>Danthonia spicata</i>

(Cont.) List of plant seen at Mendon Ponds Park and Railroad Mills Auburn Trail on Aug 22, 2009

* = Railroad Mills plants

<i>Dasiphora fruticosa</i>	<i>Jeffersonia diphylla*</i>	<i>Phytolacca americana</i>	<i>Solidago juncea</i>
<i>Daucus carota</i>	<i>Juglans nigra*</i>	<i>Picea mariana</i>	<i>Solidago patula</i>
<i>Decodon verticillatus</i>	<i>Juncus brachycephalus</i>	<i>Picris hieracioides</i>	<i>Solidago rugosa</i>
<i>Dennstaedtia punctilobula</i>	<i>Juncus effusus</i>	<i>Pilea pumila</i>	<i>Solidago squarrosa</i>
<i>Desmodium canadense</i>	<i>Juncus tenuis</i>	<i>Pilosella (Hieracium) sp.</i>	<i>Solidago uliginosa</i>
<i>Desmodium nudiflorum</i>	<i>Larix laricina</i>	<i>Pinus strobus</i>	<i>Sonchus arvensis</i>
<i>Desmodium cuspidatum</i>	<i>Lechea villosa</i>	<i>Plantago lanceolata</i>	<i>Sorghastrum nutans</i>
<i>Desmodium ?perplexum</i>	<i>Leersia oryzoides</i>	<i>Plantago major</i>	<i>Sparganium ?androcladum</i>
<i>Dianthus armeria</i>	<i>Leersia virginica</i>	<i>Platanthera ?grandiflora</i>	<i>Spiranthes cernua</i>
<i>Digitaria ischaemum*</i>	<i>Lemna minor</i>	<i>Poa compressa*</i>	<i>Symphotrichum boreale</i>
<i>Digitaria (Leptoloma) cognata</i>	<i>Leonurus cardiaca</i>	<i>Poa ?pratensis</i>	<i>Symphotrichum lateriflorum</i>
<i>Dipsacus fullonum*</i>	<i>Lespedeza intermedia</i>	<i>Podophyllum peltatum</i>	<i>Symphotrichum lowrieianum</i>
<i>Doellingeria umbellata</i>	<i>Leucanthemum vulgare</i>	<i>Platanthera ?grandiflora</i>	<i>Symphotrichum</i>
<i>Drosera intermedia</i>	<i>Lindera benzoin</i>	<i>Polygonum ?aviculare</i>	<i> prenanthoides</i>
<i>Dryopteris cristata</i>	<i>Liparis loeselii</i>	<i>Polystichum acrostichoides</i>	<i>Symphotrichum puniceum</i>
<i>Dryopteris arginata</i>	<i>Liriodendron tulipifera*</i>	<i>Populus deltoides*</i>	<i>Symplocarpus foetidus</i>
<i>Dulichium arundinaceum</i>	<i>Lobelia inflata</i>	<i>Populus grandidentata</i>	<i>Taenidia integerrima</i>
<i>Echinochloa sp.</i>	<i>Lobelia kalmii</i>	<i>Populus tremuloides</i>	<i>Taraxacum officinale</i>
<i>Echinocystis lobata*</i>	<i>Lobelia siphilitica*</i>	<i>Potentilla canadensis</i>	<i>Thalictrum dioicum</i>
<i>Elaeagnus umbellata</i>	<i>Lonicera morrowii</i>	<i>Potentilla recta</i>	<i>Thalictrum pubescens</i>
<i>Eleocharis rostellata</i>	<i>Lycopus americanus</i>	<i>Prenanthes sp.</i>	<i>Thalictrum thalictroides</i>
<i>Eleocharis sp.</i>	<i>Lycopus uniflora</i>	<i>Prunella vulgaris</i>	<i>Thelypteris noveboracensis</i>
<i>Eleusine indica*</i>	<i>Lythrum salicaria</i>	<i>Prunus serotina</i>	<i>Thelypteris palustris</i>
<i>Elymus hystrix</i>	<i>Maianthemum canadense</i>	<i>Prunus virginiana</i>	<i>Tilia americana</i>
<i>Elymus riparius*</i>	<i>Maianthemum racemosum</i>	<i>Pteridium aquilinum</i>	<i>Toxicodendron radicans</i>
<i>Elymus trachycaulus</i>	<i>Malus sp.*</i>	<i>Quercus alba</i>	<i>Toxicodendron vernix</i>
<i>Epigaea repens</i>	<i>Matteuccia struthopteris</i>	<i>Quercus rubra</i>	<i>Tragopogon pratensis</i>
<i>Epilobium sp.</i>	<i>Medicago lupulina</i>	<i>Quercus velutina</i>	<i>Triadenum virginianum</i>
<i>Epipactis helleborine</i>	<i>Medicago lupulina</i>	<i>Ranunculus sp.</i>	<i>Tridens flava</i>
<i>Equisetum arvense</i>	<i>Melilotus alba</i>	<i>Rhamnus cathartica</i>	<i>Trifolium repens</i>
<i>Eragrostis sp.*</i>	<i>Menispermum canadense*</i>	<i>Rhododendron</i>	<i>Triglochin palustris</i>
<i>Erechtites hieracifolia*</i>	<i>Mentha arvensis</i>	<i> perichlymenoides</i>	<i>Tussilago farfara</i>
<i>Erigeron strigosus</i>	<i>Mitchella repens</i>	<i>Rhus typhina*</i>	<i>Typha angustifolia</i>
<i>Eriophorum virginicum</i>	<i>Monarda fistulosa*</i>	<i>Rhynchospora alba</i>	<i>Typha latifolia</i>
<i>Eupatorium perfoliatum</i>	<i>Monotropa hypopithys</i>	<i>Rhynchospora capillacea</i>	<i>Ulmus rubra</i>
<i>Eurybia divaricata</i>	<i>Monotropa uniflora</i>	<i>Robinia pseudo-acacia*</i>	<i>Urtica dioica</i>
<i>Eurybia macrophylla</i>	<i>Muhlenbergia glomerata</i>	<i>Rosa multiflora</i>	<i>Utricularia gibba</i>
<i>Euthamia graminifolia</i>	<i>Muhlenbergia schreberi*</i>	<i>Rosa palustris</i>	<i>Utricularia intermedia</i>
<i>Eutrochium maculatum</i>	<i>Myosotis scirpoides</i>	<i>Rubus sp.</i>	<i>Utricularia sp.</i>
<i>Fagus grandifolia</i>	<i>Myrica pensylvanica</i>	<i>Rudbeckia laciniata</i>	<i>Uvularia perfoliata</i>
<i>Fallopia convolvulus*</i>	<i>Myriophyllum sp.</i>	<i>Rumex acetosella</i>	<i>Vaccinium angustifolium</i>
<i>Fragaria virginiana</i>	<i>Nemopanthus mucronata</i>	<i>Salix ?alba*</i>	<i>Vaccinium corymbosum</i>
<i>Galium boreale</i>	<i>Nymphaea odorata</i>	<i>Salix sp.</i>	<i>Vaccinium macrocarpon</i>
<i>Galium circaezans</i>	<i>Nyssa sylvatica</i>	<i>Sanguisorba canadensis</i>	<i>Vaccinium oxycoccus</i>
<i>Gaultheria procumbens</i>	<i>Oligoneuron ohioense</i>	<i>Sanicula odorata</i>	<i>Vaccinium pallidum</i>
<i>Gaylussacia baccata</i>	<i>Onoclea sensibilis</i>	<i>Saponaria officinalis</i>	<i>Vaccinium stamineum</i>
<i>Geranium maculatum</i>	<i>Oryzopsis asperifolia</i>	<i>Sarracenia purpurea</i>	<i>Verbascum thapsus</i>
<i>Geum aleppicum</i>	<i>Osmorhiza sp.</i>	<i>Sassafras albidum</i>	<i>Verbena hastata*</i>
<i>Geum canadense</i>	<i>Osmunda cinnamomea</i>	<i>Scheuchzeria palustris</i>	<i>Verbena urticifolia</i>
<i>Glyceria striata</i>	<i>Osmunda regalis</i>	<i>Schizachyrium scoparium</i>	<i>Veronica officinalis</i>
<i>Goodyera sp.</i>	<i>Ostrya virginiana</i>	<i>Schoenoplectus</i>	<i>Viburnum acerifolium</i>
<i>Hackelia virginiana</i>	<i>Oxalis stricta</i>	<i> tabernaemontani</i>	<i> var. lucidum</i>
<i>Hamamelis virginiana</i>	<i>Packera aurea</i>	<i>Scirpus atrovirens</i>	<i>Viola palmata</i>
<i>Helianthus decapetalus</i>	<i>Panicum sp.</i>	<i>Scrophularia marilandica*</i>	<i>Viola pubescens</i>
<i>Heliopsis helianthoides*</i>	<i>Parnassia glauca</i>	<i>Scutellaria galericulata</i>	<i>Viola sp.</i>
<i>Hepatica nobilis var. obtusa</i>	<i>Parthenocissus quinquefolia</i>	<i>Scutellaria lateriflora</i>	<i>Vitis aestivalis</i>
<i>Hesperis matronalis*</i>	<i>Paspalum setaceum</i>	<i>Setaria sp.</i>	<i>Vitis riparia</i>
<i>Holcus lanatus</i>	<i>Pedicularis lanceolata</i>	<i>Silene latifolia</i>	<i>Woodwardia virginica</i>
<i>Hypericum perforatum</i>	<i>Peltandra virginica</i>	<i>Smilax herbacea</i>	<i>Zanthoxylum americana*</i>
<i>Hypericum punctatum*</i>	<i>Persicaria amphibia</i>	<i>Smilax herbacea</i>	<i>Zizia aurea</i>
<i>Ilex verticillata</i>	<i>Persicaria virginiana</i>	<i>Solidago altissima</i>	
<i>Impatiens capensis</i>	<i>Persicaria ?hydropiper</i>	<i>Solidago arguta</i>	
<i>Impatiens pallida*</i>	<i>Phalaris arundinacea</i>	<i>Solidago bicolor</i>	
<i>Iris versicolor</i>	<i>Phleum pratense</i>	<i>Solidago caesia</i>	
	<i>Phlox paniculata*</i>	<i>Solidago canadensis</i>	
	<i>Phragmites australis</i>		

Genera Quest Napeague Trip Avoids the Rain

By Steve Young

The tropical storm on Friday September 11 threatened to cancel the field trip to Napeague on Saturday but the rain ended by Saturday morning and allowed a group of hardy plant enthusiasts to look at plants in the dunes, swales and salt marsh. The search for *Schizaea pusilla* ended without success and it marks the third year in a row that the plants have not been found. We hope they return soon! A final plant list is below. We documented a total of 141 genera at three sites. The photographs were taken on the trip by botanist Kim Smith from the New York Natural Heritage Program. Participants were: Eric Lamont, Kim

Smith, Julie Lundgren, Rich Kelly, Steven Daniel, Bill Miller and daughter Lauren, Mike Feder, Leon Dalva and Al Lindberg. Our next newsletter in December will summarize all the General Quest trips to date and what we have found.



Sea-pink (*Sabatia stellaris*) is a state-listed threatened species.



Northern blazing-star (*Liatris scariosa* ssp. *novae-angliae*) is a state-listed threatened species.



Field trip participants at Napeague Meadows.

More NYFA Happenings

Meet the New NYFA Board Members

CHRIS MARTINE, Assistant Professor, SUNY Plattsburgh

B.S. Natural Resource Management (1996); Cook College, Rutgers University

M.S. Ecology and Evolution (2001); Rutgers University



Ph.D. Botany (2006); University of Connecticut

Chris spent five years as a conservation educator working for the NJ Forest Service and the Mercer County (NJ) Soil Conservation District before heading to Storrs, CT for his PhD work. He has been on the Biological Sciences faculty at Plattsburgh State since 2006, where he teaches courses in field botany, plant systematics, plant biology, and science communications; and where he continues to build a new campus herbarium. Chris is currently conducting research in plant reproductive biology, systematics/taxonomy, and invasive species ecology. He is faculty advisor to the SUNY Plattsburgh Student Chapter of the Botanical Society of America and serves on the editorial board of the Plant Science Bulletin.

See his faculty page at: <http://web.plattsburgh.edu/academics/biology/faculty/>

martine.php

RICHARD M RING, Botanist, NYS Natural Heritage Program

BA Biology, Earlham College MS Terrestrial Ecology, University of Michigan

Rich is a botanist and ecologist who has worked chiefly on landscape ecology, the habitat requirements of breeding passerine birds, and rare species distribution and conservation. Previously he has pursued these interests across ridge, swale, and tussock for the Appalachian Mountain Club, the Pennsylvania Natural Heritage Program, and the Alaska Bird Observatory. Raised in Washington County, New York, he began seeking rare plant species across the state for the New York Natural Heritage Program in 2006.



Northeast Natural History Conference XI and NYFA Annual Meeting

The eleventh Northeast Natural History Conference is planned to be held at the Empire State Plaza Convention Center in Albany, NY on April 12–13, 2010. This conference is a forum for researchers to present current information on the varied aspects of natural history for the Northeastern United States and adjacent Canada.

NYFA will hold our annual meeting in conjunction with the Conference. Details will be forthcoming, but for now, please mark your calendars, send us any suggestions you may have, and consider volunteering to help organize the meeting!

Herbarium Spotlight

SUNY Plattsburgh Herbarium

By Chris Martine

The dissolution of small institutional herbaria has been a disturbing recent trend, but SUNY Plattsburgh is now moving in the opposite direction. The SUNY Plattsburgh Herbarium is the first formalized collection of preserved plant specimens in the history of the campus. Established in the fall of 2006 with funding from the College of Arts and Sciences, the collection has since grown to nearly 5,000 specimens. This number includes the herbarium of the Miner Institute (transferred in spring 2007) and G.K. Gruending's extensive collections of Lake Champlain wetland plants. The herbarium has also grown through new local collections and the generosity of established herbaria who responded to a request for help in building the nascent herbarium. Institutions that provided gift specimens include the Brooklyn Botanic Garden, University of New Hampshire, University of Connecticut, University of Saskatchewan, University of Georgia, UC-Davis, UC-Berkeley, Auburn, Western Illinois University, University of Nebraska – Omaha, and the University of Vermont.

To date, the primary use of the herbarium is as a teaching resource, for both direct course usage and for training students in biological curation. Several students, and one volunteer from the local Master Gardeners, have worked part-time in the herbarium while learning curatorial skills. Field collection, mounting, and management techniques are also incorporated into the botanical curriculum as appropriate, and students have contributed specimens as course assignments.

The associated faculty takes seriously the importance of maintaining the herbarium as a repository for voucher specimens. Presently, the herbarium houses research vouchers from systematics work on Australian eggplant relatives (including paratypes) by Dr. Chris Martine, ethnopharmacology studies by Dr. Don Sligh, forest ecology work by Dr. Ken Adams, efforts to track regional threats by invasive species, and local diversity surveys conducted by undergraduate and Masters-level students.

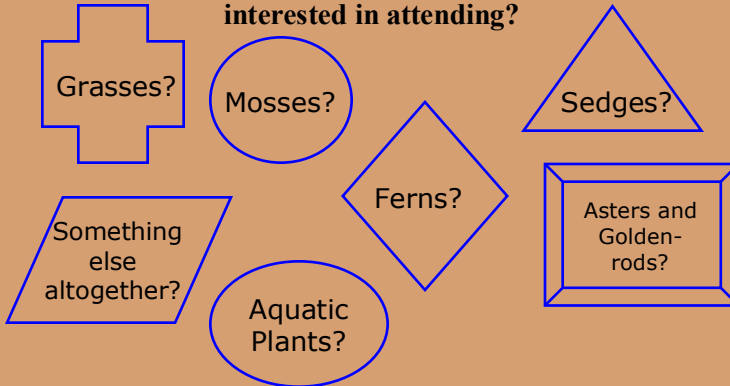
During the spring of 2008, herbarium curator Martine was invited to Michigan State to represent the SUNY Plattsburgh Herbarium during an NSF-sponsored workshop on the "opportunities and challenges of small collections." Dr. Martine, who is in the fortunate and rather unusual position of building a new herbarium (rather than breaking one down), was elected as a Core Participant in the Collections WEB RCN project, thus linking the SUNY Plattsburgh Herbarium to a national network of biological collections.

Upcoming projects include entering the collection into a specimen database (Specify), but the primary activity is continuing to build the collection into the best representation of the flora of far northeastern New York State. This effort is made easier by the energy and effort of local partners, particularly the college's student chapter of the Botanical Society of America. Submission of new collections is welcome and encouraged. Contact: Chris Martine, Dept. Biological Sciences, SUNY Plattsburgh, 101 Broad Street, Plattsburgh, NY 12901.

FOR YOUR CONSIDERATION

Please Be An Active Part of NYFA's Planning Process For 2010

What kind of Plant Identification workshop are YOU most interested in attending?



What other NYFA activities are you interested in attending in the future?

How would you like to be more involved in our society?

Voice your opinion by sending us an email to:

Connie Tedesco at TEDECL17@oneonta.edu

NYFA Merchandise

Our new website www.nyflora.org links to the Cafe Press site where we have many items for sale with our logo. Shirts, hats, mugs and even buttons. Take a look and proudly wear your NYFA logo. A percentage of the proceeds from each item helps us continue with our projects to study and protect our native flora.



Upcoming Events

Upcoming Biodiversity Research Institute Lecture

Since 2005, the New York State has organized and sponsored a lecture series that is free to the public and is held at the New York State Museum in Albany on Wednesdays at noon in the Carole F. Huxley Theater. A recent addition to the fall 2009 series is entitled *Forgotten Floras: Making the Case for Vouchered Plant Collections*, which will be presented by Dr. Donna Vogler, of the SUNY-Oneonta on Wednesday October 28th. The following is a description of the upcoming lecture:

In 2004, a species-area curve analysis revealed that at least 10 counties in the state documented fewer than half the plant species than predicted. Five years later, Otsego, Montgomery and Fulton counties were surveyed, generating more than 1,000 new records, including several rare and some newly invasive plants. Dr. Donna Vogler will discuss the major findings of those efforts and the role of voucher-based natural history collections in the increasingly molecular and digital world of biology.

The Newly Elected Slate of NYFA Officers

Ed Frantz – President: Term Expires: 2010

Steve Young – Treasurer: Term Expires: 2012

Currently Vacant– Vice-President

Priscilla Titus – Newsletter Ed. Term Expires: 2011

Troy Weldy – Past President: Term Expires: 2012

David Werier – Secretary: Term Expires: 2010

Directors

Michael Corey-2010

Bruce Gilman -2011

Christopher T. Martine - 2011

Joseph McMullen - 2011

Gerry Moore - 2010

Andrew Nelson - 2012

Richard Ring - 2012

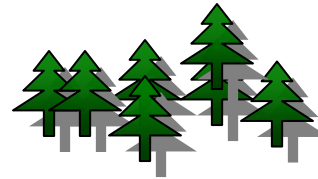
Connie Tedesco - 2011

Meg Wilkinson - 2010



Go Green with an Electronic Newsletter

If you don't need to renew at this time and would like to receive the newsletter electronically in .pdf format, please send an e-mail to young@nynhp.org and put "NYFA electronic newsletter" in the subject line. We appreciate your efforts to save paper, money, and time by receiving your newsletter electronically. An electronic membership has the added advantage of delivery before paper copies are sent out and includes full color photographs. To date more than 30% of our members receive the newsletter electronically. In the future, we hope to convert most of our members to the electronic newsletter format!



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