



Long Island Botanical Society

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Flora Survey of Rocky Point Marsh, Queens County, New York

Richard Kelly (vze2dxmi1@verizon.net) and Yevgeniya Gregor (grudnikov@gmail.com)

Long Island Botanical Society & Gateway National Recreation Area (RK)
and Gateway National Recreation Area (YG)

Introduction

During the growing season of 2013 a flora survey was conducted by Richard (Rich) Kelly and Yevgeniya (Genie) Gregor at the Rocky Point Marsh, Fort Tilden, Queens County, NY. Rich and Genie were official volunteers of Gateway National Recreation Area (NRA). From 2010 to 2013 Gateway personnel and volunteers conducted a major cleanup operation at Rocky Point Marsh (RPM), with the hope of rejuvenating the area. It was felt that a flora survey should be conducted to provide a baseline for long range study of the health of the marsh and to gauge the long-range success of the cleanup.

Background

Rocky Point Marsh is a brackish pocket marsh of slightly more than 3 acres (with the total survey area, including adjacent land, being approximately 60 meters wide and 210 meters long) along Rockaway Inlet, near the mouth of Jamaica Bay (Figure AA). It is near the very western end of Fort Tilden and just east of the Breezy Point community. Administratively, it falls under the Jamaica Bay Unit of Gateway National Recreation Area within the National Park Service.

The marsh basin is bounded by an upland area of maritime shrub forest to the east, west, and southwest, and by an abandoned road on higher ground to the south. Prior to November 2012, the site had one small inlet through



Figure1. Location of Rocky Point Marsh (from Google Maps).

which tidal water could enter the basin. Over time, a large volume of debris had accumulated at RPM, including many large and heavy pieces (planks, docks), as well as a thick layer of dead grass, composed mostly of common reed (*Phragmites australis*), effectively crushing and suffocating most of the marsh. Vast portions of the marsh were largely dominated by the common reed, with isolated stands of smooth cordgrass (*Spartina alterniflora*) on the edges of the most frequently flooded parts of the low marsh zone and apparently stable mats of saltmeadow cordgrass (*Spartina patens*) in the high marsh.

Even prior to Superstorm Sandy, it had been decided to attempt cleaning RPM with the idea of letting the marsh vegetation recover on its own. In November 2010, a volunteer-led project had begun, with the aim of removing the debris and maintaining the site. Trash removal allowed regular flooding of previously congested areas of the low marsh and permitted higher tides to reach the high marsh.

The cleanup efforts at RPM were recognized by the U.S. Environmental Protection Agency - Region 2, which gave an Environmental Quality Award in April 2012. The awardees

were collectively known as the "Rocky Point Marsh Makers."

Beyond the physical cleanup, in the late spring and early summer of 2012, Genie selected two small patches of tall, dense stands of

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Long Island Botanical Society

Founded: 1986 • Incorporated: 1989

The Long Island Botanical Society is dedicated to the promotion of field botany and a greater understanding of the plants that grow wild on Long Island, New York.

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Margaret Conover

margaret.conover@gmail.com

with special thanks to

Skip & Jane Blanchard

Webmaster

Donald House libsweb@yahoo.com

Society News

At the November meeting, LIBS members elected the following slate of officers to serve a 2-year term:

President: Eric Lamont

Vice-President: Andrew Greller

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Volunteers Needed!

Coffin Woods Preserve (North Shore Wildlife Sanctuary) in Locust Valley has just been awarded a grant by LIISMA (The Long Island Invasive Species Management Area) to eradicate an infestation of hardy kiwi vine (*Actinidia arguta*). [See article on page 7.] A group of skilled volunteers (who know a native plant from an invasive) is being recruited to monitor the eradication at this site throughout the 2014 growing season. Volunteers will document new growth, remove plants as they begin to regrow, and determine if further efforts are needed. An hour or so on a Saturday would be so appreciated. Al Lindberg will be the liaison between the volunteers and the North Shore Wildlife Sanctuary. Please contact him at ajlindberg@verizon.net or Carol Johnston at johnjohnston2@optonline.net.

Announcing the Creation of the Long Island Botanical Society Speakers' Registry

LIBS' website will soon include a registry of LIBS members willing to present a talk or lead a field trip for garden clubs, libraries, and other groups.

Members who wish to participate should email Donald House libsweb@yahoo.com and include the following:

A document: a résumé or promotional flyer that includes your contact information and a complete list of your programs. Format and length of the flyer are up to you. This promotional document will be linked to the website as a pdf.

A description: Your name, affiliation, and expertise, to appear on the website as the hotlink to your promotional document. (Limited to 100 characters.)

This list of participating members will appear on a separate page of the website, prefaced with the following statement: *This registry is a list of members of the Long Island Botanical Society who have submitted their names as potential speakers and field trip leaders. LIBS has not reviewed nor is it responsible for the content of presentations. Interested parties should contact speakers directly.*

We hope that at least 10 members will participate in the registry. If you have any questions, contact Margaret Conover at Margaret.conover@gmail.com

(Flora Survey cont. from cover)

common reed to attack. One of the patches was located at the edge of a frequently inundated area, while the other was adjacent to an area that experienced only sporadic shallow flooding. Neither of the two patches received tidal water, due to the high density of the stands as well as litter buildup. It was felt that removing the common reed, as a distinct activity, would further benefit the health of the marsh. The stems were cut to about 10 cm above ground and removed from the site, along with a large amount of small debris that had been trapped within the stands. This was done in order to expedite water flow to the cleared area, which was expected to suppress the future growth of the common reed because these plants are intolerant of salt water. In 2013, a dense stand of smooth cordgrass established (or re-established) in the first of the two selected patches, replacing the common reed. While the effort did not lead to eradication of the common reed in the second patch, it resulted in growth that was visibly less dense than previously, and with a lower stem height of the plant. In addition, the common reed was interspersed with smooth cordgrass that was not seen previously in the area. These promising results justify continuation of physical removal of common reed.

A setback to the cleanup occurred when Superstorm Sandy hit the area in late October 2012. Another layer of debris was brought onshore by the storm, and littered the recently cleaned area. The superstorm created an additional small inlet or channel to the east of the original one, and it is now the more open of the two channels. The eastern channel is potentially allowing a larger volume of water to enter the marsh, although no evaluation of the tidal prism has been performed. In the summer of 2013, a major post-hurricane cleanup operation took place. It was coordinated by Gateway NRA and carried out by the Student Conservation Association.

Methods

In 2013, Rich and Genie visited RPM on seven occasions, the dates being spread across the warmer months to allow for seasonal changes of the vegetation. The initial survey of the flora on April 18th was followed by visits in each of the following calendar months. Two visits were made in September, ending the survey on September 26th. Each visit consisted of approximately three to four hours on site, and a generalized route was developed and followed for all visits. No attempt was made to formally map the area or take GPS coordinates. Species occurrence was noted, but relative abundance was estimated just from general impression not formal methods. Photos were taken of selected plants by Genie, and she took reference specimens of most of the species that flowered during the survey period. These specimens will be prepared and deposited in the Gateway herbarium at Fort Wadsworth, Staten Island. This herbarium is under the supervision of Michael Byer, the Botanist for Gateway NRA.

Nomenclature used here follows Haines (2011) for all included species, or the New York Flora Atlas (Weldy et al. 2013) for those not in Haines.

Results

A total of 104 different kinds of plants were found (Table 1). Of these, 93 were positively identified, and 3 others had specimens taken to ultimately aid in the identification process.

In total, Genie collected specimens of 68 species, many of which were in flower. Over the months, 56 species were seen in bloom, and 11 species (some overlap with flowering species) were in fruit. Although the salt marsh proper did not hold a great diversity of species, many were seen close to the marsh, and the list contains only 29 species which were seen along entrance paths, edge habitats, and nearby uplands. The plants represented 33 different families. Not surprisingly, the largest families, in terms of species, were Asteraceae (21 species), Poaceae (14), and Amaranthaceae (11).

Smooth cordgrass (*Spartina alterniflora*) formed a monoculture in the wetter areas of the marsh, especially bordering the small outflow area of the eastern inlet that floods and holds water on larger high tides. In general, the marsh is landlocked at smaller high tides, due to the presence of a slightly raised sand beach at the inlets.

Of no great surprise, much common reed (*Phragmites australis*) was found landward of the smooth cordgrass. Other typical species found on the higher marsh were saltmeadow cordgrass (*Spartina patens*), saltgrass (*Distichlis spicata*), maritime marsh-elder (*Iva frutescens*), perennial glasswort (*Salicornia ambigua*), common glasswort (*Salicornia depressa*), and Carolina sea-lavender (*Limonium carolinianum*), all of which were quite common. Eastern false willow (*Baccharis halimifolia*) was surprisingly sparse along the edge of the marsh, and the two September visits did not yield any perennial saltmarsh American-aster (*Symphotrichum tenui-*



Figure 2. American beach grass in the foreground. [Photo by Y. Gregor.]

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**Table 1. Plants identified at Rocky Point Marsh,
Fort Tilden, Queens, NY**

<i>Ailanthus altissima</i>	<i>Euphorbia cyparissias</i>	<i>Pyracantha</i> sp.
<i>Ambrosia artemisiifolia</i>	<i>Euphorbia maculata</i>	<i>Reynoutria japonica</i> var. <i>japonica</i>
<i>Ammophila breviligulata</i>	<i>Euphorbia polygonifolia</i>	<i>Rhus copallinum</i>
<i>Aristida</i> cf. <i>oligantha</i>	<i>Euphorbia</i> sp.	<i>Rhus glabra</i>
<i>Artemisia</i> sp.	<i>Fallopia</i> sp. (<i>cilinode/convolvulus</i>)	<i>Rhus hirta</i>
<i>Artemisia vulgaris</i>	<i>Froelichia gracilis</i>	<i>Robinia hispida</i>
<i>Asclepias syriaca</i>	<i>Gleditsia triacanthos</i>	<i>Rosa multiflora</i>
<i>Asparagus officinalis</i>	<i>Helianthus</i> sp.	<i>Rosa rugosa</i>
<i>Atriplex</i> sp.	<i>Heterotheca subaxillaris</i>	<i>Rumex acetosella</i>
<i>Baccharis halimifolia</i>	<i>Ipomoea</i> sp.	<i>Rumex crispus</i>
<i>Berteroa incana</i>	<i>Iva frutescens</i>	<i>Salicornia ambigua</i>
<i>Bidens</i> sp.	<i>Juncus tenuis</i>	<i>Salicornia depressa</i>
<i>Bromus tectorum</i>	<i>Juniperus virginiana</i>	<i>Salsola kali</i>
<i>Cakile edentula</i>	<i>Lactuca</i> sp.	<i>Saponaria officinalis</i>
<i>Calystegia sepium</i>	<i>Lechea maritima</i>	<i>Scleranthus annuus</i>
<i>Carex</i> cf. <i>extensa</i>	<i>Limonium carolinianum</i>	<i>Senecio vulgaris</i>
<i>Celastrus orbiculatus</i>	<i>Lonicera japonica</i>	<i>Solidago sempervirens</i>
<i>Cenchrus</i> cf. <i>tribuloides</i>	<i>Medicago lupulina</i>	<i>Sonchus oleraceus</i>
<i>Cenchrus longispinus</i>	<i>Melilotus albus</i>	<i>Sonchus</i> sp.
<i>Centaurea stoebe</i> ssp. <i>micranthos</i>	<i>Melilotus officinalis</i>	<i>Spartina alterniflora</i>
<i>Cerastium fontanum</i>	<i>Morella carolinensis</i>	<i>Spartina patens</i>
<i>Chenopodium album</i>	<i>Nipponanthemum nipponicum</i>	<i>Strophostyles helvola</i>
<i>Chenopodium</i> sp.	<i>Nuttallanthus canadensis</i>	<i>Suaeda</i> sp. A
<i>Clematis terniflora</i>	<i>Oenothera laciniata</i>	<i>Suaeda</i> sp. B
<i>Coreopsis lanceolata</i>	<i>Oenothera parviflora</i>	<i>Symphyotrichum dumosum</i>
<i>Corynephorus canescens</i>	<i>Panicum virgatum</i>	<i>Taraxacum officinale</i>
<i>Cycloloma atriplicifolium</i>	<i>Parthenocissus</i> cf. <i>quinquefolia</i>	<i>Teucrium canadense</i>
<i>Cyperus</i> sp.	<i>Phragmites australis</i>	<i>Toxicodendron radicans</i>
<i>Daucus carota</i>	<i>Plantago lanceolata</i>	<i>Tradescantia ohioensis</i>
<i>Digitaria</i> sp.	<i>Poa annua</i>	<i>Trifolium campestre</i>
<i>Distichlis spicata</i>	<i>Polygonum articulatum</i>	<i>Verbascum thapsus</i>
<i>Dysphania ambrosioides</i>	<i>Populus alba</i>	<i>Veronica</i> sp.
<i>Elaeagnus umbellata</i> var. <i>parviflora</i>	<i>Prunus maritima</i>	<i>Xanthium strumarium</i>
<i>Eragrostis spectabilis</i>	<i>Prunus serotina</i>	<i>Yucca filamentosa</i>
<i>Erigeron canadensis</i>	<i>Pseudognaphalium obtusifolium</i>	

(*Flora Survey cont. from page 3*)

folium). The visits may have been too early in this particular year, as the latter species was seen in abundance elsewhere on Long Island on later dates.

A moderate amount of American beach grass (*Ammophila breviligulata*) (Figure 2) graced the upper beach. This sandy area held other typical seashore species including long-spined sandspur (*Cenchrus longispinus*), American sea-rocket (*Cakile edentula*), winged-pigweed (*Cycloloma atriplicifolium*), slender cotton-weed (*Froelichia gracilis*), and saltwort (*Salsola kali*).

Dryer areas nearby had camphor false golden-aster (*Heterotheca subaxillaris*), lance-leaved tickseed (*Coreopsis lanceolata*), coastal jointed knotweed (*Polygonum articulatum*), Nippon-daisy (*Nipponanthemum nipponicum*), small-flowered evening-primrose (*Oenothera parviflora*), oldfield-toadflax (*Nuttallanthus canadensis*), small bayberry (*Morella carolinensis*), Adam's-needle (*Yucca filamentosa*), and oldfield three-awn (*Aristida* cf. *oligantha*). Long-bracted sedge (*Carex* cf. *extensa*) was common in a nearby swale.

Cut-leaved evening-primrose (*Oenothera laciniata*), categorized as S1 (Endangered) in New York State, was found during the 2013 surveys. This rare species had earlier been pointed out at Fort Tilden by Mike Feder in 2012.

No discussion of plants can be complete these days without covering the topic of non-natives and invasives. In the current survey, approximately 47% of the species are listed as non-native in the USDA PLANTS Database (2013). Although this percentage is somewhat high compared to others that we have heard about recently, perhaps it is not surprising for this site. After all, Fort Tilden is near areas that have been inhabited for centuries, with large population densities, and near one of the largest port complexes in the world.

Getting past the previously discussed common reed, RPM is home to a veritable rogues gallery of infamous invasives. Some of the more noxious of those species are tree-of-heaven (*Ailanthus altissima*), Asian bittersweet (*Celastrus orbiculatus*), autumn-olive (*Elaeagnus umbellata* var. *parviflora*), Japanese knotweed (*Reynoutria japonica* var. *japonica*), Japanese honeysuckle (*Lonicera japonica*), white poplar (*Populus alba*), and rambler rose (*Rosa multiflora*). Virginia-creeper (*Parthenocissus* cf. *quinquefolia*) (Figure 3) is also present. Although this last is a native plant, it has been seen to be problematic, along with Asian bittersweet, in nearby areas of Fort Tilden where it climbs and covers trees, growing in profusion.



Figure 3. Virginia creeper [Photo by Y. Gregor.]



Figure 4. Seaside goldenrod [Photo by Y. Gregor.]

Discussion and Conclusions

Nothing of great rarity was positively confirmed during the current survey, but a nice variety of local specialty plants was found. Perhaps the size of RPM is somewhat limiting in terms of its botanical variety and scope. It is also possible that RPM suffers from a difficult location, with its only opening to the bay facing north, directly exposed to northerly or northeasterly winds. This, along with its position near the mouth of Rockaway Inlet, probably enables an inordinate amount of floating debris to get caught there.

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(Flora Survey cont. from page 5)



Figure 5. *Helianthus* sp. and variegated fritillary
[Photo by D. Gregor.]



Figure 6. Glasswort sp. [Photo by Y. Gregor.]



Figure 7. Winged sumac [Photo by Y. Gregor.]

The large-scale removal of debris allowed the marsh to breathe and the stands of smooth cordgrass to flourish. Aside from suffocating the marsh during lulls in weather and tidal activity, the sometimes enormous pieces of wooden debris present at RPM could have abraded the marsh vegetation every time a large tide moved them around.

The targeted removal of common reed was a second successful activity at RPM. Smooth cordgrass, maritime marsh-elder, perennial glasswort, and common glasswort were all seen to expand considerably after Genie's hand removal of the common reed. This is yet another example of a common reed eradication effort, performed by hand, on Long Island that had positive results. We reference the relatively recent successful program at Flagg Meadow, Nassau County by Al Lindberg (1997, 1999). Given a fighting chance, many plants do have the ability to resurrect themselves from the oppressive presence of "less desirable" species.

A number of bird species were observed during the survey, but nothing of significance, relative to the location or the particular vegetation that was present. An Eastern Willet was observed in active display mode, and may have actually bred on the salt marsh during 2013.

Acknowledgments

Others visiting the marsh and providing assistance on various occasions during the 2013 survey were Becky Gregor, Danko Gregor, Kim-Nora Moses, and Tony Luscombe. Tony is a Biological Technician at Gateway, and is the volunteer supervisor for all involved. We thank Michael Byer for reviewing the manuscript and for help with identification problems among the voucher specimens.

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LIBS Members Awarded Grant for Hardy Kiwi Eradication

Carol Johnston and Louise Harrison have been working on a grant application for North Shore Wildlife Sanctuary to partner with LIBS to eradicate the non-native hardy kiwi (*Actinidia arguta*) from Coffin Woods Preserve in Matinecock. In December 2013, the grant was awarded by LIISMA. The grant comes with the understanding that LIBS members, as skilled volunteers, will help monitor the eradication site on a



Figure 1. Hardy kiwi vine. Inset: male flower. [Photo by L. Lindberg.]

weekly basis and that LIBS will keep members informed of this effort, and the lessons learned. Portledge School, which adjoins the Preserve, will also be involved, with their 11th and 12th grade classes studying the eradication site during the month of May and comparing it with a site of the same size elsewhere in the woods. Al Lindberg will be the liaison with LIBS botanists, photographers, and Portledge School students and teachers. He will oversee the post-clearing monitoring of the site to insure quality control, handle publicity for the project, and prepare the final report.

Barbara Conolly and Lois Lindberg discovered this population of hardy kiwi at Coffin Woods Preserve in June 2011. According to Steve Young (pers. comm.), who observed the population in 2013, it covers approximately 2000 m² in a tulip tree/mixed hardwood forest that has been degraded

with other invasive species. There it forms a groundcover and climbs over shrubs and up a number of large tulip trees (*Liriodendron tulipifera*). Young saw no fruits although some of the vines had male flowers that the Lindbergs were able to photograph (Figure 1). Some of the trees covered by the kiwi were toppled by hurricane Sandy in 2012. Grier and Grier (1929)

reported *A. arguta* as being cultivated on three estates in northeastern Nassau County and adjacent Suffolk County, which is in the general region of the Coffin Woods Preserve. Young (pers. comm.) is concerned that *A. arguta* is becoming a problematic invasive species at least in some areas based on surveys he conducted in 2013.

[Ed. Note: According to Andy Greller, "*Actinidia arguta* was [also] planted around the old tennis court at Caumsett State Park. It is so dense that you can no longer see the fenced tennis court. I was looking for reproduction but I have never found a fruit on it. The flowers are either all male or sterile on that specimen. Maybe it is escaping elsewhere, but it has not spread by sexual reproduction at Caumsett."]

[Skip Blanchard writes that *Actinidia arguta* was pointed out to him over two decades ago on the C.W. Post Campus in Brookville (the former Marjorie Merriweather Post estate "Hillwood"). His chemist colleague Bob Schaffrath had learned about it from then-Post botanist Hugh Loveland. The plant was scrambling in trees around an abandoned ball court south of the Post Administration Building, and was fruit-bearing (and tasty). About a decade ago the plant was eradicated during the demolition of the ball court, but there are woods nearby to the south into which it could have seeded.]



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NOTE:
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Literature Cited

Grier, N. M. and C. R. Grier. 1929. A list of plants growing under cultivation in the vicinity of Cold Spring Harbor, N.Y. Amer. Midl. Naturalist 11: 389-434.

LIBS Members Survey Moore's Woods for Rare Orchid

By Eric Lamont and David Taft

On 8 November 2013, David Taft, Larry Penny, Vicki Bustamante, Jean Held, and Eric Lamont searched for the rare crane-fly orchid (*Tipularia discolor*) in a region of mesic forest dominated by American beech (*Fagus grandifolia*) and mountain laurel (*Kalmia latifolia*) in Greenport. The group (Figure 1) found a total of 46 leaves (Figure 2) and several dried fruiting spikes (Figure 3) of this rare orchid at the species' only known locality in New York.

Tipularia's beautiful purple-spotted leaves are hibernal; emerging in winter to capitalize on sunlight penetrating the woodland's then-leafless canopy. These leaves wither and

disappear in the late spring, and for months there is little if any evidence of the plant. In July, tall slim stems with small, asymmetrical, cryptically colored flowers emerge from the ground. Surveys for this plant are generally conducted in fall and winter because the leaves are far easier to locate than the delicate flower spikes.

After searching the beech woods, the group found the rare cat-tail sedge (*Carex typhina*) growing along the edge of a trail (Figure 4). Other notable observations include a very fresh angle-wing butterfly (probably a question mark), a box turtle, and pinesap (*Monotropa hypopitys*).



Figure 1. From left to right: Eric Lamont, Jean Held, David Taft, and Larry Penny at Moore's Woods, Greenport. [Photo by V. Bustamante.]



Figure 2. Leaves of the crane-fly orchid (*Tipularia discolor*) at Moore's Woods, Greenport. [Photo by E. Lamont.]

Figure 3. Fruit capsules of the rare crane-fly orchid (*Tipularia discolor*) at Moore's Woods, Greenport. [Photo by E. Lamont.]



Figure 4. Fruiting spike of the rare cat-tail sedge (*Carex typhina*) at Moore's Woods, Greenport. [Photo by E. Lamont.]

A Unique Plant Sighting



[See text for figure legends. All photos by V. Bustamante.]

My intent had been to find goat's rue (*Tephrosia virginiana*) seed when I drove into what I thought was a shortcut out of the Wainscott Hess gas station to connect to Wainscott NW road. However I quickly realized that this wasn't a street but an entrance into the private property of a commercial sand and gravel pit. While I was maneuvering to turn around, a scattering of unusual looking plants on both sides of the driveway caught my attention. They were scruffy, twiggy and about 18"-24" tall and round (Figure a). They just *looked* like they didn't belong, like out-of-towners. I jumped out and grabbed a sample.

Once home I identified it to be one of the "tumbleweeds," *Cycloloma atriplicifolium* (winged pigweed). The stems are green and photosynthetic while the leaves are grayish, few and small (Figure b). The tiny and copious single-seeded fruits (Figure c) are winged, and under a hand lens this resembles a tiny fringe of translucent crepe paper, like a ballerina's tutu. The centers of the fruits have a white star shape which is formed by the edges of the incurved perianth lobes and which ages to purple (Figure d).

You never know when you will run into a "life plant." This one tumbled east a long way from its native territory: the central United States west of the Mississippi River. What a curious oddity.

--Vicki Bustamante, September 2013



No Flowers in Heaven

Ray Welch, October 2013

As I was idly sitting at my breakfast today, glancing at an astronomy magazine I get, it came to me that, along with various people (Cassiopea, Perseus), there are a lot of constellations named after animals, both real (Canis Major, Leo, Cancer) and mythical (Pegasus, Draco), and I wondered, of the eighty-eight named constellations, how many were "animal," so I brought out a book that lists them, and counted. I think just half (forty-four) if I put down Centaurus as an animal, not a person. And some, mostly those named late, are bland "things," such as Circinus (the Compass—the geometrical kind), and Antlia (the Air Pump). BUT, there's not a single botanical item on the list. Too late to fix that, I guess. What would I put up there? Oh, "Orchis" (a little double-entendre there, foot in both camps), "Zea Major," "Helianthemum."

LIBS Helps to Document a Rare Ecological Community at North Fork Preserve

By Eric Lamont

In 2011, Suffolk County and Riverhead Township purchased the 300+ acre site in Northville known as the North Fork Preserve (NFP). Since then, LIBS has been working with various government biologists, ecologists, and elected officials to map the freshwater wetlands and identify the different ecological communities on site. This is a report on some recent activities.

On 25 October 2013, Eric Lamont and John Turner (LIBS co-chair, Conservation Committee) spent a day in the field at NFP mapping wetlands with Rob Marsh, Dan Lewis, and Kevin Jennings, all biologists working for New York State Department of Environmental Conservation. The group also surveyed swamplands (Figure 1) dominated by swamp white oak (*Quercus bicolor*), red maple (*Acer rubrum*), and blackgum (*Nyssa sylvatica*), also known as tupelo.



Figure 1. Measuring an old swamp white oak (*Quercus bicolor*) at North Fork Preserve, Northville. John Turner and Rob Marsh hold meter stick as Dan Lewis reads the measurement. Kevin Jennings records GPS data. [Photo by E. Lamont.]

On 13 November 2013, ecologist Greg Edinger of the New York Natural Heritage Program (NYNHP) spent the day at NFP measuring various ecological variables at the rare swamp white oak swamp (Figure 2) and at two other rare ecological communities on site: red maple-blackgum swamp and coastal oak-beech forest. On 18 December 2013, Greg summarized the first results of his studies of the swamp white oak swamp. Below is an excerpt from his email to Eric:

“I met with the other ecologists yesterday and we arrived at a consensus on how to treat swamp white oak swamps in NY. We will retain the “perched swamp white oak swamp” name

and concept for occurrences on hills over bedrock . . . (expect most occurrences to be inland). Occurrences that are on sandy soils and often underlain by a clay lens, not over bedrock, and typically in a flatter landscape setting will be **classified as a new community in NY** [emphasis added]: “red maple-swamp white oak swamp” . . . (includes inland and coastal plain occurrences). . . . It will take some time over the winter to 1) review existing perched swamp white oak swamp occurrences, 2) review other red maple swamp occurrences, 3) review observation point and plot data in our Field Form Database to identify and confirm examples of both types. We will have to write occurrence and ranking specifications, so we can separate this new type from existing types, come up with an S-rank for NY, and rank the quality of known occurrences. To that end, if you know of any leads for more sites with significant amounts of *Quercus bicolor* please let me know.”



Figure 2. Greg Edinger records data at North Fork Preserve's rare “red maple-swamp white oak swamp.” [Photo by E. Lamont.]

“In summary, the community at North Fork Preserve will be entered into the NYNHP database as an occurrence of red maple-swamp white oak swamp. The community will probably have a state rank of S1 or S2 or S1S2 (similar to our red maple-blackgum swamp or red maple-sweetgum swamp). The occurrence will probably be ranked B (given its size, past and present human disturbances, invasive plants, and landscape context). . . . I will keep you posted with my progress.”

[Ed. Note: For more information see Eric's article “Notes on the Swamps and Forests of North Fork Preserve, Suffolk County, NY” in the Summer 2013 issue of this newsletter, pg. 32-33.]

New State Invasive Species Regulations

by Marilyn Jordan

The New York State Department of Environmental Conservation (NYS DEC) released on October 24, 2013 its proposed invasive species regulations. Included are lists of invasive species that are Prohibited – cannot be sold or “*knowingly possessed with the intent to sell, import, purchase...*” and Regulated “*... which shall be legal to possess, sell, purchase, propagate and transport but may not be knowingly introduced into a free-living state; and require a permit for research, education and other approved activities...*” Regulated species may be sold but only with a permanent label that informs consumers that the species is harmful and provides instructions for care and how to prevent the spread of the species into a free-living state. Regulations pertaining to invasive species are to take effect six months after notice of adoption in the State Register. Regulations allow for possible future exemptions for non-invasive cultivars of prohibited or regulated plant species.

NYS DEC and NYS Department of Agriculture and Markets are to be commended for their groundbreaking regulations which were developed with input from stakeholders from the horticulture industry and environmental groups. The listing process relied on a combination of scientifically-based ecological invasiveness assessments and socio-economic assessments of harm or benefits. Invasiveness assessments of plant species were carried out by the Brooklyn Botanic Garden and the Long Island Invasive Species Management Area (LIISMA) Scientific Review Committee which was funded and chaired by The Nature Conservancy.

Invasive plant laws and lists of Do Not Sell plant species were first developed by Nassau and Suffolk Counties on Long Island beginning in 2007. These counties are to be commended for taking a leadership role regarding the harm caused by invasive species. The new NYS law “grandfathers” the laws and lists developed by Nassau and Suffolk Counties only, which may be more restrictive than the NYS law but not less restrictive. Implications are as follows:

Nassau and Suffolk Counties must prohibit ALL species that NYS prohibits regardless of invasiveness rank for LIISMA. Thus nine species must be added to the Nassau and Suffolk Counties Do Not Sell list including the two species of running bamboo that have raised so much controversy on Long Island and elsewhere: *Phyllostachys aureosulcata* (yellow groove bamboo) and *P. aurea* (golden bamboo). Although these bamboo species don't escape from cultivation into natural areas they can be damaging to properties in landscaped settings. The other species are *Achyranthes japonica* (Japanese chaff

flower), *Arthraxon hispidus* (arthraxon), *Dipsacus laciniatus* (cut-leaf teasel), *Euphorbia esula* (leafy spurge), *Lysimachia vulgaris* (garden loosestrife), *Caulerpa taxifolia* (killer alga), and *Heracleum mantegazzianum* (giant hogweed; assessed Moderate for Long Island but should be prohibited because it is a Federal noxious weed).

Several common horticultural species prohibited by Nassau and Suffolk Counties will also be prohibited by NYS, including *Berberis thunbergii* (Japanese barberry; includes all hybrids with other *Berberis* species) with a one year grace period, *Ampelopsis brevipedunculata* (porcelain berry), *Acer pseudoplatanus* (sycamore maple), *Iris pseudacorus* (yellow iris) and more.

On the flip side, six horticulturally important invasive plant species included on the NYS Regulated list (may sell but with label) are and may remain prohibited (cannot be sold) by Nassau and Suffolk Counties: *Acer platanoides* (Norway maple), *Euonymus alatus* (burning bush), *Euonymus fortunei* var. *radicans* (winter creeper), *Miscanthus sinensis* (Chinese silver grass), *Robinia pseudoacacia* (black locust), *Clematis terniflora* (Japanese virgin's bower, also called autumn clematis). One species prohibited by Nassau and Suffolk Counties is not prohibited or regulated by NYS: *Phalaris arundinacea* (Eurasian genotype of reed canary-grass).

There were four locations for public hearings in NYS: Albany, Buffalo, Syracuse and Stony Brook. The public hearing date for Long Island was Tues. Dec. 17 at the DEC offices in Stony Brook. The DEC and Department of Agriculture and Markets will revise the Regulations in response to public comments which could take several months. The final revised Regulations will then be published in the State Register. Regulations will take effect six months after notice of adoption in the State Register.

Statements, petition instructions and dates of public hearings: <http://www.dec.ny.gov/regulations/2359.html>

Lists of prohibited and regulated species and instructions on obtaining permits to possess invasive species for educational and research uses: <http://www.dec.ny.gov/regulations/93848.html>

Penalties for violations: <http://www.dec.ny.gov/regulations/93900.html>

UPCOMING PROGRAMS

January and February: No meeting!

March 11, 2014* Tuesday, 7:30 PM
Mike Feder: "Interesting Plants from Around the World, Part 2." In his current reincarnated human form, Mike has been complementing his previous underwater existence by traversing the globe and taking note of its interesting flora. The lecture will focus on some interesting plants Mike has found along the way, as well as a few that he hasn't. Mike is the LIBS Field Trips Chair, an active member of the Torrey Botanical Society, a NYC Parks Department employee, and a true world traveler who has been to more countries than there are U.S. states.

Location: Bill Paterson Nature Center, Muttontown Preserve, East Norwich

April 8, 2014* Tuesday, 7:30 PM
Andy Greller: "Natural History of Romania, Including Birds of the Danube Delta" This eastern European country, with landscapes ranging from the beautiful Carpathian Mountains to the extensive marshes of the Danube Delta, has a recorded history going back to Roman times. It was part of the Roman Empire known as Dacia. Its folk traditions encompass a number of cultures, all with colorful costumes and many with colorful characters, such as Vlad the Impaler (Dracula to us). We take particular note of the variety of natural vegetation and the abundant bird and animal life. Andy is Vice President of LIBS, Past President of the Torrey Botanical Society, Professor Emeritus of Biology at Queens College - CUNY, and also our senior world traveler.

Location: Bill Paterson Nature Center, Muttontown Preserve, East Norwich

* Refreshments and informal talk begin at 7:30 p.m.
Formal meeting starts at 8:00 p.m.
Directions to Muttontown or Stony Brook: 516-354-6506