It is a pleasure to share with members of the LI Botanical Society results of an ongoing effort to assess and rank the invasive potential of non-native plant species. LIBS members, and the LIBS Atlas, are playing an important role in the assessment effort. In addition, LIBS members are critical to early detection efforts by finding and identifying new invasive plant species. Your botanical expertise is a much appreciated and valuable resource.

Do you remember the Invasive Plant Council of New York (IPC), which grew out of a small interagency ad hoc group that was organized in 1994 by Steve Young (NY Natural Heritage Program) and Tom Lyons (NYS Office of Parks)? The group quickly grew thanks to help from Bob Zaremba (The Nature Conservancy), Pam Otis (NYS Office of Parks), and many others. Do you recall the IPC’s draft list of the “Top 20” most invasive plant species in NY State? That list was derived from observations by qualified botanists in 1996, but had no formal procedure or documentation to justify placing species on the list. As a member of the IPC Board 2003-2006, I was eager to work with stakeholders (e.g., the nursery industry, public land managers, local botanists) to develop and apply a formal, scientifically based procedure for invasive plant listing -- but then the New York State Invasive Species Task Force was created in 2004. IPC decided to wait for possible creation of a State list. However, the final report of the NYS Invasive Species Task Force (released in November 2005) discussed different types of lists but did not recommend legislation [http://www.dec.ny.gov/animals/6989.html]. The listing effort languished while the core mission of the IPC (education, guidance and coordination) was gradually fulfilled by the New York State Invasive Species Task Force. Having accomplished its mission, the IPC Board voted to close IPC in December 2007. New York remained one of the few US states without invasive/noxious plant regulations (other states without plant regulations include NJ and RI).

Meanwhile, homeowners in Suffolk County were complaining vociferously to their legislators about invasive plant problems. In particular, a green soup of invasive aquatic plants prevented homeowners from swimming in Yaphank (Lower) Lake, an impoundment on the Carmans River. These complaints

(Continued on pg 19)
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.

Visit the Society's Web site www.libotanical.org

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Society News

LIBS President Eric Lamont has retired from public school teaching after 32 years of service. Eric taught Biology and Earth Science at Riverhead High School. His students received official recognition from County Executive Robert Gaffney at a Biodiversity Conference at Brookhaven National Lab for saving a population of white fringed orchid (Platanthera blephariglottis) from extirpation at Quogue Wildlife Refuge.

New LIBS Field Trip Chair. James Mickley, a Ph.D. student in the Department of Ecology and Evolution at Stony Brook University, has agreed to serve as chair of the Field Trip Committee. Dave Laby recently stepped down from that position and LIBS extends its sincere appreciation to Dave for his service during the past two years.

NY Heritage Botanist Position Axed. Steve Young's position as Chief Botanist for the New York Natural Heritage Program has not been funded in the upcoming NYS budget and LIBS is outraged. Steve and LIBS have worked closely together during past years and Steve's expertise on the State flora is essential to land management practices and assessment of biodiversity. LIBS has written to DEC Commissioner Peter Grannis to explain the importance of the Heritage Botanist and how necessary it is to reinstate the position in the budget.

Tidal Marshes of Long Island, New York. LIBS has proposed to partner with the Torrey Botanical Society in publishing this 150 page manuscript as Volume 26 of the Memoirs of the Torrey Botanical Society. The Executive Board appointed Andy Greller to present the offer to the Torrey Council at their May 2009 meeting. Torrey has agreed to publish the manuscript in association with LIBS, if it passes peer-review. If all goes well, the manuscript will go to the printer this August.

The bill to transfer Pilgrim State Hospital land to the Edgewood Oak Brush Preserve. Andy Greller has written another set of letters to NYS officials supporting the effort to preserve the unprotected Oak Brush Plains at the Pilgrim State Hospital grounds. Benefits of acquiring and transferring the land to the Oak Brush Plain State Preserve include preserving essential habitat, providing land for recreational purposes, and securing land that will be valuable for Special Groundwater Protection Areas. LIBS has been active in documenting the unusual flora and vegetation of the Oak Brush Plains. These shrubby heath-oak brush thickets constitute the largest single area of its kind on Long Island and indeed it is a unique biological entity in the New York area. Nor has such an ecosystem been documented for the rest of eastern North America, to our knowledge.

Seeking information.....

Jessica Gurevitch is looking for spotted knapweed populations (Centaurea maculosa, which has a number of synonyms) or for any other Centaurea species. I’d appreciate exact locations if possible. Please e-mail me at Jessica.Gurevitch@stonybrook.edu. Populations on Long Island or anywhere in the eastern U.S. would be helpful. Thanks in advance.

Adam Laybourn is working on a project to quantify the amount of hybridization in eastern red oaks. I am looking for help recognizing hybrids in the field. Please e-mail me at alaybourn@gmail.com.
culminated in September 2005, when the Suffolk County Legislature approved the establishment of a “Water and Land Invasives Control Task Force” (http://www.co.suffolk.ny.us/Home/departments/EnvironmentandEnergy/DivisionofWaterQualityImprovement/WaterandLandInvasiveSpeciesAdvisoryBoard.aspx). Their final report, released in December 2006, included a list of 63 invasive plant species. Legislation passed in February 2007 prohibited 56 of these species from sale beginning in January 2009, with the remaining 7 species to become illegal in January 2011. Nassau County also wanted to eradicate invasive plants from its woods and waterways, which Tom Suozzi called “biological pollution.” Nassau County adopted the same list of 63 species, and passed similar prohibition legislation in November 2007 (http://www.nassaucounty.ny.gov/agencies/legis/documents/2007.11.22.pdf). Another group of problematic, but presumably less invasive, species was placed on an informal “manage” list. Public land managers were advised not to plant these species in parks, preserves and natural areas.

The “list of 63,” and the “manage” list, were based in part on a list I had compiled starting in 2001 to help guide early detection recommendations by the LI Invasive Species Management Area (LIISMA). Though based on scientific principles, a formal procedure vetted by a broad group of experts had not been used. Several widely used landscape species were omitted from the counties’ legal lists due to objections by the nursery industry that these species (or cultivars of these species) were not proven to be invasive.

Clearly, it was time to finally develop and apply a formal ranking protocol for assessing invasiveness of plant species, involving all stakeholders. In late 2007 The Nature Conservancy (TNC), with the approval of LIISMA, contracted with the Brooklyn Botanic Garden (BBG) to help TNC develop a protocol, and use it to assess approximately 140 plant species on the Do Not Sell and Manage lists. At last I had the opportunity to apply scientific rigor to the development of invasive plant lists. My partners in protocol development were Gerry Moore, Director of Science at BBG, and Troy Weldy, Director of Ecological Management for TNC in Eastern NY.

We decided to design the ranking system so that it could be used by the State of New York, if the State so chose. Several ranking systems already existed, but Gerry, Troy and I felt that none were completely suitable for both assessing and predicting negative impacts to natural systems in New York State due to differences in scale, purpose and emphasis. So, we created a ranking system that incorporates components from other systems, primarily the system adopted in Alaska (Carlson et al. 2007), the system developed by NatureServe (Morse et al. 2004; Randall et al. 2008), and plant characteristics used by Williams and Newfield (2002).

The purpose of the New York Invasive Plant Ranking System we developed is to assess the invasive nature of non-native plant species that are established in NYS, and also to assess the potential invasiveness of species that are new arrivals or are not yet present. This ranking system is designed to be repeatable, based on the best available science, clearly explained and fully documented. Consequences to the native species and natural ecosystems of New York are the focus of the ranking system. Under the auspices of LIISMA, a “Scientific Review Committee” (SRC) was established, composed of botanists, horticulture professionals, ecologists, public land managers, and representatives from Cornell Cooperative Extension, the NYS Farm Bureau, and the nursery industry. For a list of members see “LIISMA Scientific Review Committee” at http://nyis.info/PlantAssessments/Assets/LIISMA_SRC.pdf.

On the web:

Back issues of this newsletter are available on the Long Island Botanical Society website at http://libotanical.org/newsletters.html.

The URL for the new New York Flora Association Blog is http://nyflora.wordpress.com/, Active since April, this site includes links to job postings (for Giant Hogweed Hotline personnel) and requests for information (from the Eastern North American Yarrow Study) and much, much more.

Marilyn Jordan recommends that we check out the link to NYC Parks’ Greenbelt Native Plant Center: a valuable resource for information and native plants as alternatives to invasive non-natives. http://www.nycgovparks.org/sub-about/parks_divisions/gnpc/index.html

Kathy Schwager reports that The Long Island Invasive Species Management Area (LIISMA) website is up and running. Check out www.liisnatives.org.

Announcements:

A conference on Invasive Species in Coastal Dunes & Maritime Forests will be held on July 16-17 at Georgian Court University in Lakewood, NJ. See http://www.georgian.edu/dunes/index.htm.

The 24th annual Muttontown Butterfly Count will be held on July 18, 2009. Contact Rich Kelly on 516-354-6506 for more info.

At the New York Botanical Gardens: Georg Ehret: The Greatest Botanical Artist of the 1700s. This important exhibit will be open to the public through July 19.


“Wicked Plants at Brooklyn Botanic Garden” will be open to the public through September 6, 2009. This exhibit was inspired by the release of author Amy Stewart’s Wicked Plants: The Weed That Killed Lincoln’s Mother and Other Botanical Atrocities.
The SRC has been meeting monthly (Figure 1) since March 2008 to review, edit and approve assessments of species prepared by BBG. New York State’s Office of Invasive Species Coordination adopted our ranking system and assessment results in August 2008, and is now developing recommendations for a statewide invasive plant species list to be considered by the NYS legislature in 2010.

For the purpose of the New York Invasive Plant Ranking System, an invasive plant species is a species that is: 1) not native to the ecosystem under consideration, and 2) whose introduction causes or is likely to cause economic or environmental harm or harm to human health. Verifiable documentation is required for New York based on determinations of the NY Flora Atlas. Furthermore, for purposes of this Invasive Plant Ranking System, invasive plants are non-native species that have spread into native or minimally managed plant systems in New York. These plants cause economic or environmental harm by developing self-sustaining populations and becoming dominant and/or disruptive to those systems. As defined in the ranking system, “species” includes all synonyms, subspecies, varieties, forms, and cultivars of that species unless proven otherwise by a process of scientific evaluation.

At the present time there are no protocols or criteria for assessing the invasiveness of cultivars independent of the species to which they belong. Such a protocol is needed, and individuals with the appropriate expertise should address this issue in the future. Hybrids (crosses between different parent species) are assessed individually and separately from the parent species wherever taxonomically possible, since their invasiveness may differ from that of the parent species. An exception should be made if the taxonomy of the species and hybrids is uncertain, and species and hybrids cannot be clearly distinguished in the field. In such cases it is not feasible to distinguish species and hybrids, and they can only be assessed as a single unit.

Species ranking is a two-stage process. First a species is ranked at a statewide level. The state ranking form contains a series of questions in four broad categories. Scores are given to each question, and the overall point total determines the invasiveness category for NYS. Verifiable documentation is required for answers to each question, but species can be evaluated even when some information is lacking. Ranking forms and results of species assessments are available at http://nyis.info/Resources/IS_Risk_Assessment.aspx.

The maximum possible total for a species, if all questions can be answered, is 100 points. If some questions could not be answered, the “New York Invasiveness Rank” is based on the “Relative maximum score” (points accrued as a percent of the maximum possible points for answered questions). If the total answered points possible are fewer than 70, an invasiveness rank cannot be assigned. SRC members voted to carry scores to two decimal places not to suggest precision, but to aid in assigning ranks for species with scores that fall within one point of a threshold between ranks.

<table>
<thead>
<tr>
<th>New York Invasiveness Rank</th>
<th>Relative Maximum Score</th>
</tr>
</thead>
<tbody>
<tr>
<td>Very High</td>
<td>&gt; 80.00</td>
</tr>
<tr>
<td>High</td>
<td>70.00-80.00</td>
</tr>
<tr>
<td>Moderate</td>
<td>50.00-69.99</td>
</tr>
<tr>
<td>Low</td>
<td>40.00-49.99</td>
</tr>
<tr>
<td>Insignificant</td>
<td>&lt;40.00</td>
</tr>
</tbody>
</table>

The second stage is ranking the species for the eight regions in NY designated as “Partnerships for Regional Invasive Species Management” (PRISMs). Factors considered include distribution and likelihood of establishment based on suitability of habitats and climate in the PRISM. NY State and Long Island (LIISMA) PRISM ranking forms are completed by BBG. PRISM ranking forms will be completed by members of the other seven PRISMs as their capacity allows.

As of May 13, 2009, 117 species had been reviewed. Results for the species on the Do Not Sell list are shown in Table 1. These results agree well with invasiveness assessments conducted in Connecticut and Massachusetts using different protocols. Invasiveness ranks for species, and information compiled in the assessment forms, are useful not only for legal listing but also for guiding landscape plans and planting, prioritizing species for control, revealing research needs, supporting research proposals, and more.

**Literature Cited:**


Table 1. Suffolk and Nassau Counties’ Do Not Sell plant list
Invasiveness ranks and scores determined by LIISMA’s Scientific Review Committee
Species assessments are available on http://nyis.info/Resources/IS_Risk_Assessment.aspx

<table>
<thead>
<tr>
<th>Scientific Name</th>
<th>Common Name</th>
<th>NY Rank</th>
<th>Score</th>
<th>Date legally prohibited</th>
<th>Proposed revisions</th>
</tr>
</thead>
</table>

1 Long Island Invasive Species Management Area. [http://nyis.info/LIISMA/Legislation.aspx](http://nyis.info/LIISMA/Legislation.aspx)
2 VH=Very High invasive; H=High; M=Moderate; L=Low; I=Insignificant; U=Unknown; NA=Not Assessable
3 Suffolk County, as of May, 2009. (Nassau County’s Invasive Species Committee will meet in June.)
4 except cultivars ‘crimson king’, ‘royal red’ banned effective 1/1/2016
5 a complete list of synonyms has been omitted here
I was very interested in the two articles on pitcher plants (Sarracenia purpurea) that appeared in the Fall 2008 issue of the LIBS Newsletter (Gray 2008, Lamont 2008). Of particular interest was Henry Conard's (1935) report of pitcher plants from the vicinity of Lake Ronkonkoma; I wondered if the species was still extant there, more than 70 years after Conard's sighting. So in early February 2009, I ventured out into the freshwater marshes and bogs north of Lake Ronkonkoma in search of Sarracenia.

Fortunately, the wetlands north of Lake Ronkonkoma have been preserved by Suffolk County as part of Lake Ronkonkoma County Park. And although the area has been somewhat altered by the construction of dikes, and phragmites reed (Phragmites australis) dominates some areas, large pockets of relatively undisturbed wetlands still occur there. A large Sphagnum mat remains intact near the center of the bog, and supports leatherleaf (Chamaedaphne calyculata) and a luxuriant growth of large cranberry (Vaccinium macrocarpon).

Nestled within the Sphagnum and cranberry were several small crowns of Sarracenia purpurea. After crashing through the ice I decided to cut my mid-winter visit short, but I had achieved my goal: pitcher plants persist at Lake Ronkonkoma. A visit to the site during the summer season will probably reveal additional plants.

Here are some additional personal observations of Sarracenia from the past 10 years:

1) Swan Pond – There are still good numbers of pitcher plants scattered along the eastern edges of the pond where the Sphagnum creates hummocks that can support leatherleaf. The winter of 2000 is the last time I surveyed these bogs and counted three fairly sizable crowns.

2) The bogs behind the Evan Griffing Court Center - This region is part of Cranberry Bog County Nature Preserve. Sizable crowns of Sarracenia occur throughout the area, especially in the areas behind Cheney Pond all the way to bogs west of Cedar Pond. This area is quite extensive and the population is doing quite well, as of 2005.

3) The bog north of the power line and west of Nugent Drive [southwest of Riverhead] - This bog is not far from Nugent Drive. It is long and dumbbell shaped with a well developed bog mat in the center. In 2008, crowns of pitcher plants grew in the center and along the shores. There are also a few other kettles scattered throughout this region of the Manorville Hills (directly south and a little east of this bog) that I found plants in during the 1980's. I haven’t “bushwhacked” back to them in years but I see no reason why they wouldn’t still be there.

4) The bog preserved inside the Tanger Outlets in Riverhead - This is the Andrew Sabin Nature Preserve that was set aside to protect the Tiger Salamander population that breeds there. In 2003, a small population of pitcher plants occurred in a bog mat in the center of the pond.

5) Birch Creek and Owl Pond in Flanders – In 2008, pitcher plants grow along the shores of Birch Creek in the hummocks of Sphagnum and in the extensive Atlantic White Cedar bog behind Owl Pond (which feeds into Birch Creek) west of Spiney Road.

6) Peconic River - There is one small cove along the river west of where the LIRR crosses the river that still supports (as of 2008) very good numbers of pitcher plants. I access it by canoe off the main body of the river. Crowns are easily visible along the shore of the cove.

The Peconic River region as a whole west of Connecticut Avenue to Wading River Manorville Road is extensive and ideal for pitcher plants. I would bet that it grows in good numbers throughout that region although I have not been in there to confirm it. Two summers ago I had a teacher taking a class of mine who used to visit the Babylon Gun Club as a child. She shared with me that she vividly remembers seeing pitcher plants all along the boggy shores of the main pond there when they went ice skating in the winter. That was about forty years ago when she was a child. Again, I see no reason why those populations wouldn’t still be there.

References Cited:


Plant Sightings

*Corydalis sempervirens*, pink corydalis (Fumariaceae, the Fumitory Family; formerly included in the Papaveraceae, the Poppy Family). This delicate, showy spring wildflower is very rare on Long Island; the LIBS draft atlas of vascular plants records it from only one unspecified locality in Suffolk County. On 30 May 2009, George Dadone found a naturally occurring population of pink corydalis at the former Pilgrim State Hospital property in Edgewood. Rich Kelly, Donald House, and Paul and Mary Beth Tomko accompanied George.

*Silene caroliniana ssp. pensylvanica*, wild pink (Caryophyllaceae, the Pink Family). Rich Kelly, Donald House, et al. observed a small population of this state-listed, rare plant at the former Pilgrim State Hospital property in Edgewood on 30 May 2009. Steve Young of NYNHP has been closely monitoring this species in New York and has reported a decline in occurrences possibly due to browsing by herbivores.

*Euphorbia ipecacuanhae*, ipecac spurge (Euphorbiaceae, the Spurge Family). This species is at its northern range limit on Long Island; in New York, it is known only from Suffolk County where it usually occurs in extremely nutrient poor, well drained, dry sandy soils. Usually, occurrences on L.I. consist of very few individuals (fewer than a dozen widely scattered individuals). On 30 May 2009, Rich Kelly, Donald House, et al. observed three widely scattered individuals of ipecac spurge at the former Pilgrim State Hospital property in Edgewood.

*Viola pedata*, bird’s foot violet (Violaceae, the Violet Family). On 31 May 2009, John Heidecker observed a large colony of bird’s foot violet in full flower growing in sandy soil along Grumman Blvd. in Calverton, a short distance from the Swan Lake Golf Course. Thirty years ago, this showy violet was relatively common throughout regions of Long Island, but today it is rarely observed. The decline of this species on L.I. is mostly attributed to habitat destruction, road expansion and maintenance projects, and chemical herbicides applied along the borders of railroad tracks.

### FIELD TRIPS

#### AUGUST 29, 2009 (SATURDAY) 10 AM

*Floyd Bennett Field, Brooklyn, Kings Co., NY*

Trip leader: Rich Kelly

This site has a wide variety of interesting escaped weed species, combined with local native coastal species. Bring lunch, a hat, water, suntan lotion, and insect repellent. We will never be very far from the cars, so you will not need to carry your lunch. (This is a joint trip with the Torrey Botanical Club.)

**Directions:** From the Belt Parkway, take Flatbush Avenue south. Turn left to enter at the traffic light, which is just in front of the bridge tollbooths. Meet at the parking lot on the right, immediately past the entrance booth.

#### SEPTEMBER 12, 2009 (SATURDAY)

9:30 AM – 4:30 PM

*Napeague Area Parks, Napeague, Suffolk Co., NY*

Trip leader: Steve Young

We will explore the beautiful beaches, dunes and swales of Napeague Beach State Park in the morning and continue with the dunes and salt marsh of Napeague Meadows State Park. We will look for the beach genera of *Ammophila, Cakile*, and *Salola* and the dune and swale genera of *Hudsonia, Arctostaphylos, Polygonella, Rhoea, Pityopsis, Schizania* and *Pseudophytopedilia* among others. In the marsh, we should see the uncommon *Vimbritis*, *Salicornia, Suaeda*, and *Salathia*. Bring comfortable shoes for walking on sand that may get wet. Pack a lunch for eating at Hither Hills and long pants and insect spray for the mosquitoes and ticks. Bring plenty of water and sunscreen if it’s hot. See you on the island!

**Directions:** For the first stop, take Montauk Highway east from Beach Hampton and go just under 1 mile from Cranberry Hole Road and park along the south side of Montauk Highway just after Whalers Lane. Our next stop will be Napeague Beach State Park where we will park on the south side of Montauk Highway 0.7 miles east of Shipwreck Lane at the park entrance sign and walk to the beach. After lunch at Hither Hills State Park Campground, our third stop will be Napeague Meadows State Park where we will park along Napeague Meadow Road just south of Cranberry Hole Road.

#### OCTOBER 24, 2009 (SATURDAY) 10 AM

*William Cullen Bryant Preserve, Roslyn Harbor, Nassau Co., NY*

Trip leader: Dr. Andy Greller

We will look for escaping Chinese conifers from the *Pinetum* while also doing a little hiking. Bring a lunch and liquids, strong shoes or hiking boots, and a conifer guide. Participants can opt for morning only or both morning and afternoon. (This is a joint trip with the Torrey Botanical Club.)

**Directions:** Take the LIE to Glen Cove Road; go north toward Glen Cove; make a left at 25A (aka Northern Blvd/ North Hempstead Tpke.); go about 1/2 mile and look for signs on right to Nassau County Museum of Art. Turn right at the sign and proceed under the LIRR tracks and past the gate house (there may be a small fee for parking); park in the main parking lot. Meet on the steps of the Frick mansion.
**Upcoming Programs**

**September 8, 2009**

*Lois Lindberg: “Wildflowers of the Northeast - Folklore and More.”* Many of our common wildflowers are easily identified, but it’s often the story behind their names that fascinates people. This program will cover wildflowers from Long Island, the Catskills, and New England, and will highlight the history, origin of names, and folklore that surrounds them. Come and get re-acquainted with some old botanical favorites. Lois is a naturalist and long-time LIBS member.

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

**October 13, 2009**

*Mary Beth and Paul Tomko: “The Edgewood Oak-Brush Plains Preserve.”* The Edgewood Oak-Brush Plains State Preserve is the second largest remnant of pitch pine/scrub oak in NY and the only such area on Long Island. The past, present, and future of this unique habitat, which lies in western Suffolk County, will be presented. Mary Beth and Paul represent The Friends of the Edgewood Oak-Brush Plains Preserve.

*Location: Museum of Long Island Natural Sciences, Earth and Space Science Building, Gil Hanson Room (Room 123), SUNY at Stony Brook, Stony Brook*

*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

Join LIBS today!

**Annual Membership is $20 payable to:**

*Long Island Botanical Society*

Mail your dues to:

*Lois Lindberg, Membership Chairperson*

6170 Northern Blvd.

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