Long Island Botanical Society

Vol. 23 No. 1 | The Quarterly Newsletter | Winter 2013

A Brief Survey of Long Island Orchids

David Taft, East Northport, NY (d.j.taft@att.net)

[Ed. Note. – All orchid images in this article were photographed on Long Island by the author. Creating a theme for this issue of the newsletter, Eric Lamont has contributed a summary of recent Long Island orchid sightings, beginning on page 3.]

Figure 1. *Cypripedium acaule* (Pink Ladies' Slipper)

Over the last two dozen years or more, I've set out to identify the locations and remaining species of orchids found within New York City and the greater metropolitan area. Geologically speaking, the two boroughs of Brooklyn and Queens are parts of Long Island, a fact that seems lost on residents on both sides of the Queens/Nassau border. The greater metropolitan area also includes the rest of Long Island, Westchester and Putnam counties, parts of the Catskills and much of New Jersey. Development pressures, pollution, misuse of land, and other issues influence the particular plants found, and their abundance. Ironically, the "open" areas in the outer parts of the region may be more threatened than those within New York City where many of the debates about conservation efforts and proper land use have been resolved, for better or worse.

Orchids, as a group, are tough, and though adapted to specific environmental conditions, can still be found in suitable habitats throughout the region. Contrary to common belief, some species are not shy about growing in damaged environments; in fact some specialize in colonizing disturbed areas. I have seen them poking through gratings of abandoned shopping carts, and growing along streams no one would dream of drinking from. I've even seen them "mixing it up" with *Phragmites* and porcelain berry. These are by no means ideal situations, and in many cases are merely examples of transitions from one "valuable" environmental status to a less valuable one, the orchids reduced to unfortunate hangers-on. I would also add that many species of orchids specialize in continued unchanged conditions, and obviously do not thrive when competition increases, or clearing introduces increased light levels. Orchids often play the role of canaries in the coal mine, however it is important to point out that their predicament is also not a total loss; much can be learned by studying their distribution patterns. It is wise not to "write-off" areas of urbanization, as the issues associated with crowding of natural resources are ever-present, and the necessity for us as a society to work out the complex balance between human demands and natural resources is ever more critical. Issues such as increasing demand for recreational access, direct protection of valuable resources, historic uses, non-native and native invasives, and simple education, are all local and global issues when examined closely. Exacerbating this, as an island, Long Island is a contained system, with finite resources. The loss of species locally may mean their permanent loss unless seeds or other means of reintroduction are available. In short, if there is anything I have learned in my many years as a local naturalist and working with the National Park Service, it is this: It is far better to protect something to begin with than to try to restore it.

The list below is presented alphabetically and is not intended to be complete, but rather a survey of orchids I have encountered on Long Island, their current condition and perhaps a few notes regarding their potential future. Where possible, I have given count numbers; in cases of very abundant orchids, no counts have been made. I have tried to capture the general

(Continued on pg 5)

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

Society News

Superstorm Sandy cancels LIBS meeting. The 13 November 2012 general meeting was cancelled because Muttontown Preserve was still without electricity. Andy Greller was scheduled to speak that evening and his talk has been rescheduled to April 2013.

LIBS By-Laws revision passed. The membership unanimously voted to accept the revision at the 11 December 2012 general meeting. Sincere appreciation is expressed to Carol Johnston, Lois Lindberg, and Barbara Conolly for working on the revision.

LIBS 2013 membership renewal due. Prompt renewal helps the Society update and process its records, and it saves volunteer time and costs for follow-up notices. Accept our thanks in advance for promptly renewing your membership.

The first annual **Long Island Natural History Conference** was held on 16 November 2012 at Brookhaven National Lab. Approximately 185 naturalists attended, including several LIBS members. It was a great time to catch up with old friends and make new contacts in the field of natural history. There were 8 presentations that included all manner of local flora and fauna such as otters, horseshoe crabs, leopard frogs, the biodiversity of Plum Island, and John Turner's Atlantic white cedar talk. World famous naturalist Peter Alden gave the keynote address on "Changes in our Flora and Fauna." The following day featured field trips for river otter sign and for white cedars at Cranberry Bog and Sears-Bellows County Parks.

A new **Field Guide to the Flora of Montauk** is being prepared by LIBS members Larry Penny and Vicki Bustamante. The guide will be a follow-up of Norman Taylor's (1923) classic publication on the flora of Montauk, subtitled "*A Study of Grassland and Forest.*" Larry writes: "Taylor probably picked Montauk because it was largely undeveloped and had the second largest prairie on Long Island, and it was topographically varied and bathed with seawater on three sides. Montauk had just about every kind of habitat found elsewhere on Long Island with the exception of pine barrens. It had stuff along the ocean that the rest of Long Island's oceanfront expanse lacked, namely, tall bluffs, stuffed with clays and glacial erratics. Behind the bluffs was a dwarf forest, a heath land, not unlike those for which Ireland and the British Isles are known. Many of the area's early European inhabitants, who came from heath lands in the Old World, identified these spots as moors." What would Taylor think if he saw Montauk today? Larry speculates: "If Norman Taylor were with us today, he might not believe what he experienced. If he were alive and botanizing Montauk in July or August of 2012, he might have tossed it in. If you're a naturalist, it's better to be early than late."

Join LIBS today!
Annual Membership is $20 payable to:
Long Island Botanical Society

Mail your dues to:
Carol Johnston, LIBS Treasurer
347 Duck Pond Road
Locust Valley, NY 11560
NOTE: Membership renewals are due in January

2012 Orchid Sightings from Long Island, NY

Eric Lamont, President, LIBS

Field botanists on Long Island continue to locate populations of native orchids never before documented in the literature or in herbaria. This news indicates that the island still provides suitable habitat for organisms requiring near-pristine ecological conditions for survival. It also illustrates the importance of getting out in the field and contributing to our knowledge of natural history. This report includes sightings (presented chronologically) of previously undocumented orchid populations and provides updates on the status of some historical and extant populations.

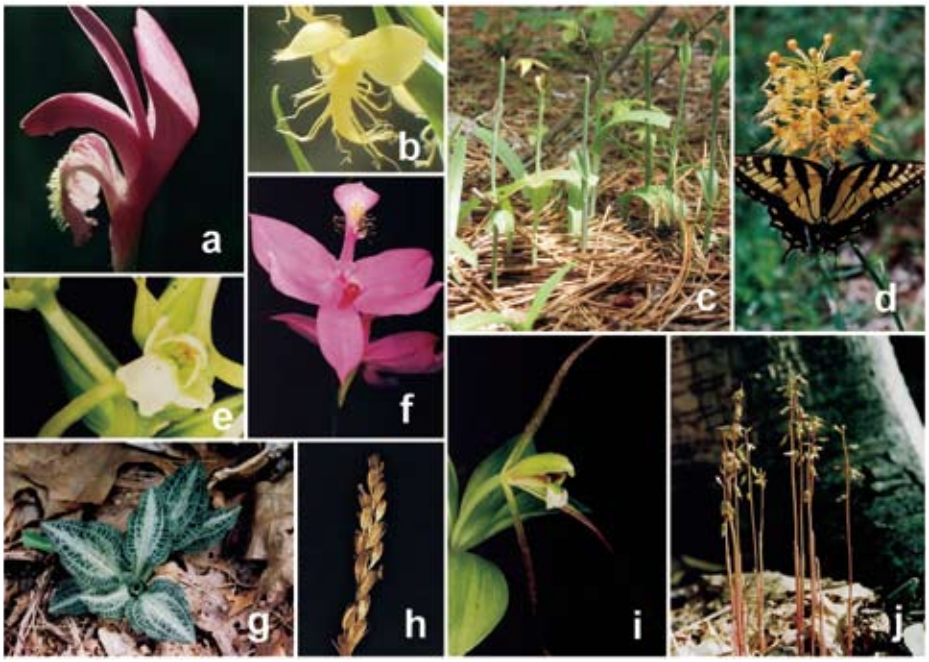

Figure 1. Long Island native orchids. Photographs by Tom Nelson except where noted. a. *Arethusa bulbosa*, b. *Platanthera pallida* [E. Lamont], c. Deer damage to orchids [E. Lamont], d. *Platanthera ciliaris*, e. *Platanthera clavellata*, f. *Calopogon tuberosus*, g. *Goodyera pubescens*, h. *Platanthera lacera* (seed capsules), i. *Isotria verticillata*, j. *Corallorhiza odontorhiza*.

On 1 June 2012, Jim Ash and Eric Lamont spent a day in the field trying to re-locate *Arethusa bulbosa* (dragon's-mouth; Fig. 1a) in the vicinity of Water Mill on the South Fork. This showy orchid was collected on 29 May 1923 by F. A. Ward from "wet sphagnum bogs and islands along west shore of Lake Neatawanta, ½ mile north of Watermill" [voucher at New York State Museum Herbarium, Albany (NYS)]. The lake is now called Mill Pond. On 3 June 1951, G. H. Peters collected *Arethusa* from a "deep sphagnum swamp, Watermill" [voucher at Planting Fields Arboretum Herbarium (OBPF)]. Armed with this information, Jim and Eric first searched for suitable habitat in the vicinity of Mill Pond. After bushwhacking throughout the region for a few hours, suitable habitat for *Arethusa* was not found. The wetlands in the immediate vicinity of Mill Pond are now dominated by red maple swamp, with small, shady pockets of sphagnum scattered throughout. *Arethusa* is a sun-loving orchid that historically inhabited open, sphagnum-dominated marshes, fens, and wet meadows on Long Island. More than two dozen populations of *Arethusa* used to occur on the south shore of Long Island, but today only a few scattered individuals are known from Montauk. Habitat destruction and the succession of open marshes into shrublands and swamp forest are major causes for the decline of *Arethusa* on Long Island.

On 20 July 2012, Bob McGrath reported: "I just came from the Quogue Wildlife Refuge. ALL of the white-fringed orchid (*Platanthera blephariglottis*) flowers are gone! I located some plants without flower heads but I couldn't even locate most of the individuals. Nobody was around to ask at the refuge but I will be back there again soon and will ask. I was just there in June and it looked like it was going to be a great year. What a pity. If it was deer, they were thorough." For more information on *P. blephariglottis* at Quogue Wildlife Refuge see LIBS newsletter (2001), vol. 11, pp. 44-47.

On 21 July 2012, Jim Goltz of New Brunswick, Canada and Eric Lamont visited several orchid sites on the South Fork, the most noteworthy being the large *Platanthera pallida* (pale fringed orchid; Fig. 1b) population in Napeague. Close to 1000 flowering individuals usually emerge each summer, but the number has been decreasing in recent years because the plants are being eaten by white-tailed deer (Fig. 1c). LIBS and the Torrey Botanical Society already have published reports on this problem but still, nothing has been done. 2012 may have been the worst year yet; more than 80% of the flowering plants had been eaten by 21 July. A prominent national environmental organization is responsible for the "management agreement" of this site owned by the Town of East Hampton. What needs to be done to protect these rare orchids? A tall fence surrounding the property would be a good start. Jim and Eric also observed dozens of flowering *Spiranthes lacera* var. *gracilis* (southern slender ladies-tresses) on low, undulating dunes blanketed with

(Cont. on page 4)

(Orchid Sightings cont. from page 3)

Arctostaphylos uva-ursi (bearberry) on the south side of Cranberry Hole Road in Napeague. Also among the dunes were more than 60 fruiting individuals of *Calopogon tuberosus* (tuberous grass-pink; Fig. 1f) in a wet swale dominated by *Pseudolycopodiella caroliniana* (Carolina clubmoss) and other bog clubmosses and graminoids. Finally, one sterile leaf of *Platanthera ciliaris* (yellow fringed orchid; Fig. 1d) was located in the exclosure adjacent to Barnes Hole Road in Amagansett; in the late 1980s, more than 100 flowering individuals adorned this same roadside (see LIBS newsletter (1992), vol. 2, no. 6, pp. 4-5).

On 27 July 2012, Al Lindberg and Rich Kelly found and photographed one plant of *Platanthera blephariglottis* var. *blephariglottis* (northern white fringed orchid) not far from the Carmans River in Wertheim National Wildlife Refuge, Shirley. This occurrence is a new record for southern Brookhaven Township, Suffolk County. During the past 100 years, populations of *P. blephariglottis* on Long Island have severely declined; of the more than 30 documented populations from the island, only about half remain.

On 30 July 2012, Bob McGrath reported: "I found half a dozen individuals of *Platanthera pallida* in the region east of the Walking Dunes on the South Fork. This area is between the stabilized dune to the far east and the active dune that people ascend when entering the site from Napeague Harbor Road. I also saw the largest number of individuals of *Pogonia ophioglossoides* (rose pogonia) that I can recall in the swale region of the active dune earlier in June. Some boggy pockets had dozens of flowers in bloom, truly memorable. *Pogonia* was also found at Cranberry Bog County Nature Preserve in June; nine plants were found along the shore of the Little Peconic River that feeds into Sweezy Pond. *Calopogon tuberosus* (Fig. 1f) was also in evidence in good numbers at the Walking Dunes swale and also at the abandoned cranberry bogs at Swan Pond [Calverton, Suffolk Co.] in June. While not nearly as common as the species once was at Swan Pond, a dozen or so plants could still be seen in the open pockets of the bog south of the golf course and also just east along River Road. Sadly no *Pogonia* was located there. A single individual of *Isotria verticillata* (large whorled pogonia; Fig. 1i) was found in Caleb Smith State Park along with three developing *Platanthera clavellata* (club-spur orchid; Fig. 1e) back in May. A recent return visit revealed that the three *clavellata* flowers had been browsed by deer."

On 3 Aug 2012, Mike Feder and Rich Kelly located more than 30 flowering individuals of *Platanthera clavellata* (Fig. 1e) at Bill Richards Memorial Park, adjacent to Blydenburgh County Park, in Smithtown Township. The plants were scattered around the pond north of the parking lot; that is, the smaller pond southeast of the much larger Stump Pond. *Platanthera clavellata* had not been reported from this vicinity since 23 Aug 1935, when Stanley Cain collected a specimen from a "bog mat, Hauppauge Bog" [voucher at The New York Botanical Garden (NY)].

On 5 Aug 2012, Al Lindberg, Rich Kelly, and Rich Ryder found a population of *Spiranthes lacera* var. *gracilis* at Stillwell Woods County Preserve in Syosset. Seven individuals were observed along a sandy trail bordering oak woods to the north. This occurrence is a new record for this region of North Hempstead Township, Nassau County. One hundred years ago, Nassau County provided habitat that supported 25 native orchid species but today only seven species are known from the county.

On 6 Sept 2012, Polly Weigand found and photographed a single individual of *Platanthera lacera* (ragged fringed orchid) in an old field dominated by *Andropogon virginicus* (broom-sedge) at Pine Meadows County Park, located at the far western end of the Dwarf Pine Plains northwest of Westhampton. The robust plant was past prime bloom, with maturing fruits (Fig. 1h). This occurrence is a new record for this region of Southampton Township, Suffolk County. The closest population occurs further east at Quogue Wildlife Refuge. The Pine Meadows site is noteworthy because the habitat is drier than usual for this species; *P. lacera* usually inhabits wet meadows, marshes, and springy, mucky, herb-dominated openings in swamps.

On 6 Oct 2012, Al Lindberg led a LIBS field trip to Muttontown Preserve in Nassau County. The group of botanists was in the large hemlock grove west of the walled gardens and Al mentioned that *Goodyera pubescens* (downy rattlesnake plantain; Fig. 1g) used to occur there but had not been seen in more than a decade. Within a few minutes Mike Feder found two evergreen leaves of this species, with the most handsomely marked foliage of any of our native orchids. It's interesting to note that Al Lindberg has been regularly monitoring this *Goodyera* population for more than 35 years and from about 2000 to 2012 the plants remained dormant underground and did not produce any above-ground vegetative structures. Other orchids in our region, like *Isotria medeoloides* (small whorled pogonia), also have extended periods of underground dormancy, lasting up to 20 years. Historically, *G. pubescens* was known from seven localities in Nassau County, but today only two are known.

On 25 Oct 2012, Mary Laura and Eric Lamont surveyed the *Corallorhiza odontorhiza* (autumn coralroot; Fig. 1j) population at Hubbard Creek Park, Suffolk County. This hard-to-spot orchid was first located at this site in November 2001 by Skip and Jane Blanchard (see LIBS newsletter (2001), vol. 11, pp. 4-5). In the early to mid-2000s, the population consisted of approximately 400 individuals. By 2010, numbers had decreased to around 100 individuals and in 2012, 31 individuals were observed.

(Orchid Survey cont. from page 1)

abundance (or rarity) of several species in descriptive terms as these may still be of some value, even when specific counts are not available.

My thanks to my many orchid-loving companions for information we have shared over the years, and of course, for the muddy, sandy, and exciting times spent together in the field. I hope to continue sharing with them for years to come. Particular thanks go out to Jim Ash, Skip Blanchard, Rich Kelly, and Eric Lamont for their great good humor, patience, and knowledge of Long Island and its environs.

Calopogon tuberosus
Grass Pink

An orchid with a history of wide distribution throughout Long Island, *Calopogon tuberosus* may possibly occur hidden in one of Nassau County's more acid wetlands, but I have not been able to confirm this. It is still quite abundant in several locations along the outwash plain of the south shore of Long Island in Suffolk County, and where present, may be considered abundant. In the filming of a PBS Nature special "Obsession With Orchids" (PBS, Nature, 2000), I and several invited LIBS members discussed the plight of a colony of *Calopogon* and *Pogonia* orchids at the Walking Dunes of Napeague. The concern at the time was *Phragmites*. On a recent trip in 2011 I found that though *Phragmites* had become, in fact, a far greater presence in the interdunal swales, a still greater threat was the steady succession of native species such as bayberry, cherry, and American beach grass. Having said this, though the consequent shading and crowding has taken its toll on the orchids, the plants are still present in reasonable numbers. In several other areas at the site, where environmental conditions have allowed a wet, fully exposed bowl to develop, the orchids are present in very good numbers. Other colonies of the plant on Long Island are truly remarkable. One site nearer to Amagansett was still completely intact with thousands of mature blooms when LIBS member Jim Ash and I traveled there on June 22, 2011. Interestingly, *Pogonia* is not present at this site. *Calopogon* and *Pogonia* can frequently be found growing together and have an overlapping bloom season.

Corallorhiza odontorhiza
Autumn Coralroot

The initial rediscovery of this species by LIBS members Skip and Jane Blanchard after decades of absence was greeted with great interest by the local botanical community. The sandy trail in Flanders along which the plants grew had only recently been re-graded and the common thinking was that this orchid, which is reputed to appreciate light disturbance, benefitted enormously from the work. Counts of the plant around 2005 were in the hundreds. Since that time, the plant has consistently appeared at the site in stable but diminished numbers. Several LIBS members have reported its disappearance from the area. However on October 7, 2011 I located 77 of these obscure orchids on a relatively brief walk through the woods with my family and on September 23, 2012, on a similar casual hike, counted 29 plants in just over an hour and a half. Like so many orchids, there seem to be hundreds of suitable sites for this plant on Long Island, and yet no other occurrences have been recorded recently. This is probably attributable as much to genuine rarity, as to the odd bloom season and non-descript nature of the plant. Lacking leaves, or even open flowers, a large plant might reach 12" tall, easy to overlook, even for botanists searching the woods for blooms in October.

Cypripedium acaule
Moccasin Flower, Pink Ladies' Slipper

This beautiful native is still found in good numbers at dozens of sites. The plant is as adaptable as it is showy, and seems to find suitable growing conditions in wet or dry soils, interdunal sands, full sun, deep shade, and most combinations of the above, provided it finds very acidic soils. Historically,

(Cont. on page 6)

(Orchid Survey cont. from page 5)

Cypripedium acaule was found on all of Long Island including what are now the boroughs of Brooklyn and Queens. The plant has been reported to me by reliable sources from isolated individuals as far west as Queens. However, despite many attempts to verify this over several years, I have not been able to locate this species west of Nassau County. *Cypripedium acaule* is well suited to the acid heath woods associated with the terminal moraines of Long Island, and might even be considered "frequent" in isolated pockets. I believe it is only a matter of time before contemporary examples are located in Queens. The typical flower color for *Cypripedium* ranges from a very delicate shell pink to rich magenta. On May 12, 2010 and again on May 23, 2012 I stumbled upon the stunning white form of the flower (forma *alba*) in western Suffolk County. These albinistic flowers are reputed to be far more common in the northern parts of the orchid's range, but obviously are still occasionally encountered on Long Island.

Goodyera pubescens
Rattlesnake Plantain

A handsome plant in any season, this orchid has become more and more difficult to locate on Long Island, for reasons that are unclear. Reasonable colonies still exist, but many smaller populations have vanished. For example, plants located at Greenport in the past have disappeared, as have several individuals in East Hampton (pers. comm. Jim Ash). Plants reported infrequently but with regularity from the Connetquot River State Park and Preserve seem to have vanished as well. In all cases thus far, efforts to relocate individual plants, smaller colonies, or to find nearby outliers have proven unproductive. One small group which I discovered within yards of the Northern State Parkway seemed doomed as its plants (two with flower spikes) withered during the mid-summer drought of 2011. The tiny colony had not recovered by spring of 2012, however at the site in late August 2012 the plants had rebounded and had put out three small but healthy rosettes. Though evergreen, the small plants are easily covered by snow, and locating new populations can be challenging even in winter when few nearby plants are green.

Isotria verticillata
Large Whorled Pogonia

My friend Mike Hicks in Maine, comfortable with huge colonies of *Platanthera grandiflora* and *P. psycodes* (the large and small purple fringed orchids) and *Listera cordata*, complains that he has seen only one or two of these strikingly unusual orchids. By contrast, one of the most exciting discoveries upon my move to mid-Suffolk county several years ago was the relative abundance of this species in this area of Long Island. To Mike, I have only to offer, "The grass is always greener…" Remarkably well suited to conditions in the dry heath woods on both of Long Island's glacial moraines where low bush blueberry, huckleberry, spotted wintergreen, and re-sprouting American chestnuts can be found, this orchid may give *Spiranthes cernua* a run for the most commonly encountered orchid in this part of Long Island. Though I have not found it beyond the eastern edge of Nassau County, it appears again within New York City, making searches of woodlands in western Nassau, and Queens particularly important. I believe the plant is likely to exist in any number of small pocket parks where dry oak woods are still relatively healthy. A close relative, the federally threatened *Isotria medeoloides*, listed historically for Long Island, has been the subject of several intensive searches by LIBS president Eric Lamont during the past 30 years. I too have made several efforts over several years to track down old sites and potential new locations. Unfortunately, no plants of *I. medeoloides* have been located to date. The work has, however resulted in several new locations for *I. verticillata*, some virtually in people's back yards, or almost to the shoulders of the Northern State Parkway and the Long Island Expressway. So much seemingly suitable habitat still exists for the very rare *Isotria medeoloides*, that it seems just a matter of time and good fortune before another site is located.

Liparis loeselii
Loesel's Twayblade

I discovered this obscure orchid on September 18, 2009 in southern Queens. It marks the first sighting for western Long Island since Fanny Mulford collected a specimen on June 27, 1896 in the Rockaways, approximately 113 years prior. The population consisted of eighteen plants, six with ripening seed

capsules, but several individuals located near the original colony during later visits that season, increased the count to 24. In 2010, 12 plants were located, but the site was already very overgrown, and I did not wish to risk disturbing the orchids further in order to get a more complete count. In 2011, 16 plants were located, six of which bore ripe capsules by September. I undertook clearing the immediate vicinity surrounding the plants in late winter of 2012, but by June of 2012, the field was very badly overgrown again. Again, localized, careful removal of competing vegetation was completed, but the colony which now consists of 11 plants, did not flower in 2012. A radical mowing must be considered for the site if the colony is to continue.

Listera australis
Southern Twayblade

This tiny Long Island native can still be found at its well-documented site at the Connetquot River State Park and Preserve. Numbers are still good and the site seems healthy. A smaller site further east on Long Island documented by Jim Ash has not been relocated in several years. This plant's tiny size and the very inhospitable growing conditions it prefers make it likely that other small colonies have been overlooked, and may still be located on Long Island. Blooming season was almost two weeks early in 2012, most probably due to the mild winter and warm spring. Numbers also seemed to be slightly lower than in past years, but not markedly so.

Malaxis unifolia
Green Adder's Mouth

One of the most troubling orchids on Long Island, *Malaxis unifolia's* single known site is an unprotected roadside which is mowed with such vehemence and regularity that plants do not have much chance to reproduce sexually. I have come to check the site far earlier in the season than is traditionally recommended due to this mowing, and fortunately have discovered that the plants begin to flower much earlier than is generally reported. In 2012 mowing was so severe at the site that several formerly productive slopes were completely denuded by the mower blades. On several slopes, the mowers took out even the roots of plants as they reached mineral earth. Despite these radical mowings, counts seem to be fairly consistent in the last several years. In this case, consistency is not necessarily a good thing particularly when considering the unlikely prospects for the orchid's sexual reproduction at the site.

2008 = 3 plants (2 fertile)
2009 = 5 plants (1 fertile but badly damaged by insect herbivory)
2010 = 2 plants (one fertile but flowering spike cut off by mowers along with half of one of the leaves by 7/15/11)
2011 = 13 plants (3 flowers, by August 5, 2011 all spikes and several leaves destroyed by mowing)
2012 = 7 plants located (2 flowering spikes). Site mowed so severely just prior to second visit on 7/1/12 bare soil was all that remained on several formerly productive slopes. Re-located only 2 sterile leaves

Considering the plant's adaptability to a variety of habitats it is difficult to understand why searches of other similar – or dissimilar - habitats have revealed no additional plants. But ultimately, it is probably the plant's tiny size and cryptic coloration that are the reason additional sites for the green adder's mouth remain elusive.

(Cont. on page 8)

(Orchid Survey cont. from page 7)

Platanthera blephariglottis
White Fringed Orchid

I am frequently surprised at the durability of this species, which is still very much present where suitable conditions are found on Long Island. Though it prefers full sun in wet boggy areas, I have regularly found sterile leaves and occasional flowering individuals in deep shade, most often where pines grow in wet situations. In 2010 I located 132 sterile leaves in deep shade at a county preserve near Riverhead. No flowering was observed that year or in 2011, but in 2012 two plants in spike were noted. Though both spikes' development was terminated by deer prematurely, their identity was incontrovertible – from the size of the plants and leaves, and the color of buds just a day or two prior to opening, I have no doubt that these were *P. blephariglottis*. As I understand it, this species has not been reported from the preserve since 1973. The orchids at Quogue Wildlife Refuge are an example of orchid conservation success. In 1997 a plan was implemented at the refuge to restore habitat for the white fringed orchid. It was here that in 2011 I witnessed one of the greatest blooms of the plant that I have ever experienced. In the one small clearing alone there were 123 flowering orchids – no count was made of the many nearby sterile plants. In 2012, despite a very promising start I observed on a spring trip to the site, I understand that deer or other herbivores snatched away a similar banner year for *P. blephariglottis* blooms. The Connetquot River State Park and Preserve still hosts a reasonable number of plants in wet areas, both shaded and sunny. In 2012, together with Maria Mucaria Stankowski, an officer with the Long Island Orchid Society, I tracked down an older record of *Platanthera blephariglottis* in Nassau County not far from the Sunrise Highway. Like so many records ten or more years old, the site had changed a great deal, and not for the better. Much to my surprise, 11 orchid leaves were found, including one plant flowering beautifully in the shade of pines at the edge of a wet meadow. *Platanthera blephariglottis* is a survivor.

Platanthera ciliaris
Yellow Fringed Orchid

[No image available.] Unfortunately, it is hard not to be pessimistic about the future of this plant on Long Island. The single known colony in East Hampton has been reduced to just a few plants. I last observed and photographed a flowering plant at that site on August 1, 2007, and by 2011 only five weak, sterile leaves were observed. Though I did not have the pleasure of knowing the site when the plant was truly abundant, my first experiences at the site were in the late 1980's when 25 to 30 plants blooming along the roadsides was not an unusual occurrence. Human population growth, resulting in increased salting of roads and poorly timed road mowings are generally blamed for the relatively rapid loss of this plant.

Platanthera clavellata
Club Spur Orchid

Western and middle Suffolk County are prime habitat for this small and unassuming orchid, which seems to frequent locations with flowing freshwater creeks, small upwellings, and spring-fed pools, usually in association with sphagnum mosses. The plants are small, but the flowers have a peculiar charm. The flowers are held at a 45 degree angle, and are bright chartreuse green. Strangely, they stand out surprisingly well against the backdrop of intense summer greenery in the shady deep woods they prefer. I have located the plant along many of the tributaries of the Nissequogue River and though I have not surveyed it as extensively on the south shore of Long Island, I suspect it exists along the upper reaches of the Connetquot River as well. Farther east, the colony in East Hampton appears to be stable, though 2012 was a poor flower year for the site (pers. comm. Jim Ash).

Platanthera cristata
Crested Yellow Orchid

Never abundant in my time exploring the orchids of Long Island, this brightly colored flower had once been secure in suitable habitats, but has become increasingly rare. Small but stable populations exist at Connetquot River State Park and Preserve despite heavy predation by deer, and the *pallida* form is still abundant on far eastern Long Island. It has been many years

since the plant was seen in the Hempstead Plains, where records indicate it had once been found in great numbers. The plants found in East Hampton had a poor showing in 2012, with no flowers recorded (pers. comm. Jim Ash). To provide a relative sense of abundance, I recorded a good year at this south shore site in 2007, and that was a year in which five mature plants were in bloom. Low but consistent numbers have been the recent history of the *Platanthera cristata* at the site.

Platanthera flava var. *herbiola*
Northern Tubercled Orchid

The reputation of the Oyster Bay site where this orchid is still so well known among Long Island orchid enthusiasts is due in large part to LIBS member Al Lindberg's successful restoration efforts. Sadly, budget cuts, Al's retirement from the county park system and other factors have once again tipped the balance toward a *Phragmites*-dominated landscape. Several areas of the site still produce great numbers of *Platanthera flava*, however the spread of *Phragmites*, if not checked, will certainly reduce their numbers and may eventually eliminate the orchids and many other rarities from the site. Due to the fragile nature of the soils at the site, I have been reluctant to intrude deeply, but in spring of 2012 several areas within the site produced counts measured in the dozens of plants. In winter of 2011 I presented the story of this meadow to the Greater New York Orchid Society in an effort to interest members of the local conservation community to undertake a project similar to Al's in order to remove the *Phragmites* from key growing areas at the site. Necessary permissions have been acquired verbally in order to begin work. Presently the site still boasts good numbers of *Platanthera flava* var. *herbiola*. Other rarities located in the field include *Platanthera lacera* and *Liparis loeselii*, as well as Canada burnet, Turk's cap lily, and cardinal flower.

Platanthera lacera
Ragged Fringed Orchid

Often called a "blue collar" fringed orchid, what this plant lacks in vibrant color it easily makes up in form and elegance. Cool green and white will never go out of style in orchid flowers. *Platanthera lacera* can be found in wet meadows where it frequently grows in full sun. It is also a plant that can be found in young woodlands, provided the soils are damp and enough light penetrates. My July 2012 discovery of the species on Fire Island National Seashore may be a new record for the site, and is currently being researched. This year I was also instrumental in the discovery of several colonies located on public lands throughout southern Queens, and Brooklyn. I suspect more are likely, considering the species' habitat preference and tolerance of disturbance and competition. *Platanthera lacera* is only the second native orchid species documented for the borough of Brooklyn in over a hundred years, and its numbers were surprising; a total of 182 plants were located. The last time this species was collected in Brooklyn was in 1867, 145 years ago.

Pogonia ophioglossoides
Snakemouth Orchid, Rose Pogonia

Even in relative terms, this orchid can be considered abundant where conditions suit its needs. A highly attractive flower and quite showy by native standards, *Pogonia* can be found in most places where full sun and sphagnum combine. Areas of the eastern south shore of Long Island still glisten with hundreds of *Pogonia* flowers in mid to late June and into July in some years. Unfortunately habitat loss in Brooklyn and Queens make it an unlikely find in the minute wilds of Long Island's furthest west extremes, but there are several areas of Nassau County that are certainly worth checking. Habitats

(Cont. on page 10)

(Orchid Survey cont. from page 9)

such as the sphagnum wetlands associated with this plant are extremely fragile at best and are reliant on many factors to keep them stable. For this reason *Pogonia* should not be considered secure even when observed in good numbers.

Spiranthes cernua
Nodding Ladies' Tresses

The nodding ladies' tresses is an abundant orchid, well suited to wet or dry open fields. Frequently discovered as a happy accident on fall walks after the main bloom season of more popular plants, it responds favorably to mowing and light disturbance. My exciting discovery of this plant in Brooklyn is probably the first sighting of a native Brooklyn orchid in over a hundred years. The last documented specimen of *Spiranthes cernua* in Brooklyn was collected in 1889, a full 122 years from its most recent date of collection in 2011. The site held 100 blooming plants in 2011. The plant still grows abundantly in Queens (including unlikely places such as Kennedy Airport, and the Rockaway Peninsula) and across Long Island to the very tips of its forks. Interestingly, many of the plants located in the Brooklyn colony produced cleistogomous flowers which were not fully formed, a trait which is believed to have originated with crossings to a Midwestern species, *Spiranthes magnicamporum* (pers. comm. Charles Sheviak).

Spiranthes ochroleuca
Yellow Nodding Ladies' Tresses

[No image available.] On repeated visits in 2005 and 2006, LIBS member Jim Ash and I collected the necessary green seed pods from a site just west of the town of Montauk to mail to Albany's State Museum's *Spiranthes* and *Platanthera* expert, Charles (Chuck) Sheviak. We hoped to confirm the identity of a group of plants long held to be *Spiranthes ochroleuca*. *Spiranthes cernua* is technically identified by the apomictic seed pods (replacement of the normal sexual reproduction in the flower by asexual reproduction). All of the dozens of seed capsules on seven or eight spikes we collected turned out to be *S. cernua*. Other sites for *Spiranthes ochroleuca* are reported from Long Island, and I hope to return this species of late-blooming *Spiranthes* to the list of known orchids of Long Island soon.

Spiranthes tuberosa
Little Pearl Twist

It is my hope that this beautiful, tiny species can still be found in Queens and/or Brooklyn. The species' needs are simple: poor, well-drained soils with minimal competition. The most difficult potential requirement is that the plant seems to prefer little disturbance of the soil itself, so older, mowed fields are excellent, but those that have been filled or disturbed in other ways seem not to host this tiny orchid. Fortunately there are several sites where the plant can be observed. One such site in Bethpage was mentioned to me by Rich Kelly of LIBS. My first attempts to locate the plant there were met with little success, but finally, in the late summer of 2010 I was able to count a single flowering stem of the orchid at the far northeastern edge of a mowed field. In 2011 another single spike was observed. This year, 2012, five individual flower spikes (mostly spent) were observed on August 18. The plant is also present at several sites in the Hamptons where it grows in similar situations - mowed areas over largely undisturbed soils. It is often observed in cemeteries throughout its range, earning it the unusual common name of "cemetery orchid."

Spiranthes vernalis
Spring Blooming Spiranthes

Driving in my neighborhood, I'd passed an interesting power line cut over and over again. Finally, on a day I needed a walk badly, but was pressed for time, I chose to check out the "cut." I parked my car and walked the site. What greeted me was remarkable. Butterfly weed (*Asclepias tuberosa*)

was abundant and in full bloom. I came upon a much less showy group of related flowers, *Asclepias viridiflora* (the green milkweed), a plant on the New York State List of endangered species and according to representatives of the NYS DEC, the only current location for the plant in Suffolk County. I'd have been happy to stop with just these two species, but it was only slightly further along that I saw the first of what would turn out to be 46 spikes of *Spiranthes vernalis*, the spring blooming *Spiranthes*, another plant on New York State's endangered plants list. The only other location I have found this *Spiranthes* species is at Fire Island National Seashore (among the dunes, the mosquitoes, and the green head flies in early August). The plants in the power line cut have been confirmed by Chuck Sheviak, and differ only slightly from those at Fire Island. The plants collected at the power line have a far greater amount of yellow in the throat. The Fire Island count of *S. vernalis* seems to fluctuate widely. In 2008, I observed 13 flower spikes; in August of 2011 approximately 445 blooming plants were counted. In 2012 the number was 63 blooming plants and the specific locations of the plants had radically altered – perhaps in response to overwashes from Hurricane Irene the fall prior. Sadly, but perhaps temporarily, the sites for this plant at Fire Island have been washed over and destroyed by Hurricane Sandy.

Tipularia discolor
Crippled Cranefly Orchid

A genuine rarity, *Tipularia discolor* is found on extreme eastern Long Island, the only currently known colony of the plant in New York State. It has become a personal tradition to drive out to the site on one of the "warmer" winter days either before or after the snows, to count the very visible leaves in the wintery woods. These leaves are beautifully marked with purple spots and a deep purple reverse, which are in stunning contrast to the rest of the austere winter woods. These leaves die back in spring, challenging the naturalist to locate the very beautiful, but cryptically colored flowers in mid-summer. In 2012 I originally noted only one flowering plant, well past the peak of bloom. These flowers are interesting because of their asymmetry, which is unusual among orchids. They truly look like a flying crane fly. Interestingly, the single plant, though finished with blooming, had a fertilized seed capsule. On a later fall visit on November 17, 2012 I located a second plant I'd missed on my initial 2012 visit with ripened seed capsules as well. In my experience these seed capsules do not last long, and a count of four fertilized pods is good evidence that some sexual reproduction still occurs within the colony. Though rare in New York State, the plant becomes far more abundant further south.

Leaf and flower counts for the last six years are:

3/10/07	10 leaves
7/30/08	1 flowering plant
12/25/08	42 leaves
7/24/09	no flowering plants
11/29/09	8 leaves
12/22/10	66 leaves & 2 dried capsules
3/23/11	67 leaves
7/17/11	5 flowering plants
10/10/11	61 leaves
8/5/12	1 flowering plant
11/17/12	67 leaves (and an additional spike containing three ripe seed capsules)

Roy Latham reported on a colony of *Tipularia discolor* in Montauk in the 1920s. Like others from LIBS, I have traveled to the locale several times to attempt to re-locate this population. Many dozens of acres of seemingly suitable woodland habitat exist, so it seems likely that *Tipularia* will eventually be found again on Long Island's South Fork, but so far, no one has been able to re-locate it.

November 30, 2012

Letter to the Editor:

Have others mentioned to you a botanically-noticeable effect of "Sandy" yet? That is, the complete browning of the needles on white pines at the South Shore, and asymmetrical damage on the pines even in mid-Island? The asymmetry being browning on the south side of the pines. I see significant browning even north of the LIE, although the pines on my Campus are only lightly touched. I would posit, of course, salt spray carried on the wind, and since there was not much rain with "Sandy," it did not wash quickly off. I did not note like damage on any other evergreens (casual observation) and I would expect none would be evident even later on the pitch pines, since they grow OK on Fire Island normally.

I hope the browned-pines will put out fresh flushes come spring. And why would they not, assuming the buds for next year's needles are in place? If not, I suspect that a lot of these trees are gone for good.

Ray Welch

Long Island Botanical Society
PO Box 507
Aquebogue, NY 11931

Upcoming Programs

January and February: No meeting!

March 12, 2013* Tuesday, 7:30 PM
David Werier: "Rare or Rarely Identified Non-native Species on Long Island." In 2012, David conducted research for the Long Island Invasive Species Management Area (LIISMA) on a number of populations of rare or underreported non-native species throughout the LIISMA region (Long Island and NYC excluding the Bronx). This research took him to all parts of the region from Fishers Island to Fire Island to Staten Island and beyond, as well as to various types of sites from pristine natural areas to urban garden beds. This presentation will cover how he conducted the research, the fascinating stories that resulted, details on the species he found, and their current status within this part of New York State. David is a consulting botanist and ecologist working out of the Ithaca, NY area. His interests include New York State floristics, taxonomy of "cryptic" taxa, and spending time in the field.

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

April 9, 2013* Tuesday, 7:30 PM
Andy Greller: "Leapin' Lemurs! The Natural History of Madagascar." Drawing on the personal experience of an ecotour that visited some key spots for biodiversity, Andy scoured the web for the most illustrative examples of the bizarre plant and animal life on that troubled island. He presents an illustrated talk that puts it all into ecological perspective. Andy is Vice President of LIBS, Past President of the Torrey Botanical Society, and Professor Emeritus of Biology at Queens College - CUNY.

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