



Long Island Botanical Society

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The Quarterly Newsletter

Fall 2017

The Blackjack Oak-dominated Maritime Low Forest of Sunken Meadow (Governor Alfred E. Smith) State Park, Kings Park, Suffolk County, New York:

A field trip report of June 3, 2013, with additional observations, May 20, 2016

by Andrew M. Greller, Professor Emeritus, Queens College

On an overcast day with a slight breeze, I walked the ¾-mile boardwalk at Sunken Meadow State Park. The boardwalk separates the beach of augmented sand from a low sand-dune ridge that appears to support natural vegetation (Fig. 1). Most of the dune system is forested. The width of the vegetative cover is about 50 m, N-S. Portions of the dunes have “blow-outs” in various stages of vegetative recovery. The northern edge of the vegetation, adjacent to the boardwalk, was planted with *Pinus thunbergii* (Japanese black pine). It is regularly trimmed to prevent direct contact of the exercise walkers with the vegetation. The pine has persisted in places and has naturalized in the wooded portions of the dunes and on the sea cliff to the east.

The following types of vegetation can be observed from the boardwalk:

- Blackjack oak low forest, to about 3--5m tall; found at the front slope of the dune ridge
- Tall forest, to about 8m tall, of *Quercus velutina*, *Prunus serotina* and *Sassafras albidum*, at the dune crest
- Maritime shrubland
- Maritime grassland
- Maritime dunes

The latter three types are seen in the blow-out areas of the dunes.

Description of the Blackjack Oak Low Forest

The forest is dominated by oak species, especially *Quercus marilandica*, the blackjack oak, which ranges in size from 3 to 5m tall (Fig. 2, 3). Other oaks seen here are: *Quercus stellata*, *Q. ilicifolia*, *Q. coccinea*, *Q. velutina* and a number of hybrids. [Ed. Note: Common names for species referenced here may be found in Table 1.] Among the hybrids *Quercus x brittonii* (*Q. marilandica* x *Q. ilicifolia*), is especially common. Other *Quercus* species encountered were *Q. phellos* and *Q. palustris*. These appear to be escapes from local cultivation. The tallest trees are specimens of *Quercus velutina*, *Prunus serotina* and *Sassafras albidum*. These grow at the crest and

on the lee side of the dune ridge. Other trees observed are *Betula populifolia*, *Amelanchier laevis* and *Juniperus virginiana*. *Robinia pseudoacacia* and *Ailanthus altissima* are observed in areas where native trees were removed, near the western end of the boardwalk.

Woody vines occur in and around the low forest, comprising the following species: *Toxicodendron radicans*, which occasionally forms nearly complete cover in treeless areas; *Parthenocissus quinquefolia*, also very common; and *Smilax glauca* and *S.*



Figure 1. Habitat of blackjack oak low forest at Sunken Meadow State Park. *Quercus marilandica* and other oaks form a continuous stand; *Prunus serotina* shrub (front, center); *Juniperus virginiana* (tall, left rear); *Arctostaphylos uva-ursi* mat (center right), on bare sand. [Photo by A. Greller, May 20, 2016]

(Continued on page 27)

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 Orchid Work Day: Saturday, 2 December 2017, 10am, at Quogue Wildlife Refuge. In a continuing effort to manage habitat for the white-fringed orchid (*Platanthera blephariglottis*) and rose pogonia (*Pogonia ophioglossoides*), LIBS will again team up with other environmental groups and cut back woody vegetation from an open freshwater wetland. If you want to help save the orchids please contact Eric Lamont at elamont@optonline.net. Hope to see you at the Refuge!

Andrew M. Greller honored: LIBS vice-president was presented the Distinguished Service Award by the Torrey Botanical Society for his decades of service. Andy has been a member of the society for 50 years! The presentation took place during the Torrey Botanical Society 150th Anniversary Symposium at the New York Botanical Garden on 15 September 2017. The Torrey Botanical Society is the oldest botanical organization in the New World.

Catalogue of the Vascular Plants of New York State, by David Werier, is scheduled for publication in November 2017 as volume 27 of *Memoirs of the Torrey Botanical Society*. The *Catalogue's* introduction includes a summary of the past and present status of botany in New York, starting with John Torrey's publications in the 1840s. The annotated species list (3,518 species, 134 additional infraspecific taxa, and 261 hybrids growing outside of cultivation in the state) contains scientific names, common names, synonyms, native status, naturalized status for non-natives, voucher information, state rarity ranks, and notes on certain species. Additionally, a list of taxa excluded from the flora is presented (excluded list) as well as a list of taxa that very likely occur, should occur, or soon may occur in the state (expected list). Thirty pages of references are a testament to the extensive research involved in preparation of this scholarly treatise. The *Catalogue* will be available through the Torrey Botanical Society's web site (www.torreybotanical.org).

The New York Botanical Garden presents two summits this autumn:

1) *Saving the American Ash Summit*; Friday, 13 Oct 2017, 10am–12:30pm. In this landmark summit, experts discuss the natural and cultural history of the ash (*Fraxinus*), and the deadly crisis it faces today. The ash is threatened by an invasive beetle, the emerald ash borer, discovered near Detroit in 2001 and now moving rapidly eastward through New York, New England, and Canada. The summit will examine a genus in peril, as well as ways that homeowners, nature enthusiasts, and forest resource managers can work to save these beloved trees.

2) *Invasive Species Summit: Restoration and Long-Term Management*; Friday, 3 Nov 2017, 10am–4pm. A rogues gallery of invasive species is disrupting natural ecosystems and displacing native plants and animals throughout our region. Five experts will discuss current trends in ecological restoration and share the tools and techniques they use to protect and preserve our imperiled native biodiversity.

Both summits will take place at Ross Hall, NYBG. Register online at nybg.org/adulted or by phone at 718-817-8747 (a small fee is required for each summit).

(Blackjack Oak continued from cover)



Figure 3. *Quercus marilandica*, showing leaves, in blackjack oak low forest. [Photo by A. Greller, June 3, 2013]

Figure 2. Continuous blackjack oak low forest at center of picture. *Morella (Myrica) pensylvanica* shrubs and *Deschampsia flexuosa* grass at center foreground; *Juniperus virginiana* shrub at extreme left, center; *Quercus marilandica* x *Q. ilicifolia* hybrid (*Q. x brittonii*) shrub at extreme right. [Photo by A. Greller, June 3, 2013]

rotundifolia. *Lonicera japonica* occurs in human-disturbed, open areas. Shrubs occur in the woodland and also dominate the vegetation in open places. Especially common shrubs are *Morella (Myrica) pensylvanica* and *Prunus maritima*. *Amelanchier laevis* is also common and grows to small-tree size. These shrubs are often found with vines that form the ground cover under them. A few herbs are seen in the forest: *Polygonatum biflorum*, *Maianthemum stellatum*, and *M. canadense* are prominent, with a few species of moss growing beneath them (Fig. 4). In areas devoid of shrubs and trees are found grassland stands of *Deschampsia flexuosa*. Also found with *Deschampsia* is *Arctostaphylos uva-ursi*, which can form a dense groundcover; also *Rosa virginiana* and *R. rugosa* (in bare sand); scattered *Nuttallanthus (Linaria) canadensis* occur here as well. Occasionally, in open portions of the dunes, one finds plants typical of sandy shores such as *Solidago sempervirens* and *Ammophila breviligulata*.

(Continued on page 28)

(Blackjack Oak continued from page 27)

This is the only oak forest I know on Long Island that is dominated by *Quercus marilandica*, which is otherwise found scattered through dry oak woods or co-dominates with *Quercus stellata* in Plainview, at the edge of what was the Hempstead Plains. This blackjack oak stand deserves recognition as a community confined to a dune system on the maritime-influenced fringe of land that borders the northern coast of Long Island.

Figure 4. Understory herbs and shrubs of blackjack oak low forest. *Polygonatum biflorum* has white bell-like flowers from an arching stem. *Morella* (*Myrica*) *pensylvanica* leaves are seen around the *Polygonatum* stems. [Photo by A. Greller, June 3, 2016]



Table 1. Plant List of Blackjack Oak Forest for June 3, 2013

<i>Ailanthus altissima</i> (tree of heaven)	<i>Prunus serotina</i> (wild black cherry)
<i>Amelanchier laevis</i> (smooth shadbush)	<i>Quercus coccinea</i> (scarlet oak)
<i>Arabis lyrata</i> (lyre-leaved rock cress)	<i>Quercus ilicifolia</i> (scrub oak, bear oak)
<i>Arctostaphylos uva-ursi</i> (bearberry)	<i>Quercus marilandica</i> (blackjack oak)
<i>Betula populifolia</i> (gray birch)	<i>Quercus palustris</i> (pin oak)
<i>Deschampsia flexuosa</i> (common hair grass)	<i>Quercus phellos</i> (willow oak)
<i>Hieracium</i> sp. (hawkweed)	<i>Quercus stellata</i> (post oak)
<i>Ilex opaca</i> (American holly)	<i>Quercus velutina</i> (black oak)
<i>Juniperus virginiana</i> (eastern red cedar)	<i>Quercus x brittonii</i> (Britton's oak)
<i>Lactuca</i> sp. (lettuce)	<i>Robinia hispida</i> (bristly locust)
<i>Lonicera japonica</i> (Japanese honeysuckle)	<i>Robinia pseudoacacia</i> (black locust)
<i>Lonicera morrowii</i> (Morrow's honeysuckle)	<i>Rosa rugosa</i> (Japanese rose)
<i>Maianthemum canadense</i> (Canada mayflower)	<i>Rosa virginiana</i> (Virginia rose)
<i>Maianthemum stellatum</i> (starry Solomon's seal)	<i>Rubus enslenii</i> (southern dewberry)
<i>Morella pensylvanica</i> (bayberry)	<i>Sassafras albidum</i> (sassafras)
<i>Nuttallanthus canadensis</i> (oldfield toad flax)	<i>Smilax glauca</i> (white-leaved greenbrier)
<i>Parthenocissus quinquefolia</i> (Virginia creeper)	<i>Smilax rotundifolia</i> (common greenbrier)
<i>Pinus thunbergii</i> (persisting after cultivation and escaping) (Japanese black pine)	<i>Solidago sempervirens</i> (northern seaside goldenrod)
<i>Polygonatum biflorum</i> (Solomon's seal)	<i>Toxicodendron radicans</i> (poison ivy)
<i>Prunus maritima</i> (beach plum)	<i>Viburnum dilatatum</i> (linden viburnum)

“YE BOTANISTS of OLDE?”

by MaryLaura Lamont

At a meeting of ye trustees, on ye 4th day of august, 1746:
 Present, John Hallock, John Smith, Richard Floyd, Capt. Elezer Hawkings,
 Andrew Miller, Selah Strong:

“Whereas we are creadeably informed that the Inhabetants of Brookhaven do frequently destroy the Bay beerys within the Township, by gatheathering them before they are groone to perfection, therefore, at this meeting, it was voted and agreed on by us, the said Trustees, that whosoever shall or may be found gathering any Bay beerys before the Twentieth day of September, except on their own lands, shall forfeit Twenty Shillings to be recovred before any one of his majesty’s Justices within the said Town by the oath of one creadabel witness, the one half of ye said penalty to the complainant, the other half to be paid to the Town Treasurer for the use of the poor of the parish of the Town aforesaid.” *

The above statement about the delightful aromatic bayberry was taken from the Town Record Book of Brookhaven, and is unedited, hence all the old-fashioned spelling complete with errors. The early townspeople wrote the way they spoke, and it is interesting to sound the words out phonetically and simulate their older English way of pronunciation.

The berries of the shrub were much prized by the early townspeople. When thousands of the tiny berries were boiled in large containers of water their coatings would yield an excellent wax which was then skimmed off the water’s surface. The wax was used to make the famous bayberry candles which were the best candles for the time period. They burned long and clean and were not smoky and smelly like the more commonly used beef-tallow candles. They scented the room with a lovely desirable aroma and that was important when folks didn’t bathe much and air flow in houses might be limited. It was a long, time-consuming task to collect the berries, as they are so small. It takes about 10lbs of these little gray-colored waxy berries to yield about a pound of wax. Often the children of the early families were sent out to collect the berries. Since the task of collecting the berries and then making the candles was so lengthy the settlers instead often added bay wax to regular tallow candles to make them smell better.

Today, bayberry (*Morella pensylvanica*, or *Myrica pensylvanica*) is a New York State-protected species, and hardly a soul collects them, except for a few species of birds that devour the waxy fruits. Thousands of migrating tree swallows on their journey south can strip a bayberry thicket of its fruit within a half hour! Yellow-rumped warblers can winter farther north than other warblers because they have the unique ability to digest the wax from the berries. Bayberry appears commonly in several state-

protected ecological communities such as maritime dunes, maritime shrubland and successional shrubland, as well as old-field habitats. Bayberry is a shrub typically found on poorer soils; you can find it growing in almost pure sand. Found on the roots of the shrubs are nodules that contain nitrogen-fixing organisms that help the plants grow in nutrient-poor soils. In seaside environments, the thicker waxy leaves help protect the plants from desiccation caused by the salt-laden sea winds. The plants can grow to be 10 feet tall and the trunk can be thick on older shrubs, causing them to resemble small trees. At times they grow so tightly together that they can be impenetrable; these thickets can serve as excellent nesting spots for birds, protecting them against predators. The glands on the undersides of the leaves contain oils that give off a wonderful aroma, as the berries do. Crushing a leaf or berry or breaking off a twig is a pleasant olfactory experience. The shrubs are either females or males, hence dioecious, and, of course, only the females bear the fruits.

I wonder how much money early Brookhaven townspeople—the “creadable witness”—earned for reporting their neighbors who took berries before September 20th, and how much money the Town made for the poor of the area. That is not recorded, or those records were lost. Twenty shillings was a lot of money in those days. I doubt the folks who were collecting the bayberries for candle-making could afford the hefty fine. As time went on, the long process of making the candles fell out of favor as other methods and products became available. Or, maybe the Town of Brookhaven rule worked after all!

* “Records: Town of Brookhaven up to 1800” as compiled by the town clerk, Patchogue, printed at the office of the “Advance” 1880; page 160.

A Brief History of the Effort to Preserve Hauppauge Springs

by John E. Potente and John Turner
Long Island Botanical Society

Hauppauge Springs, one of two headwater systems of the Nissequogue River, once were a part of a large swath of virgin land north and south of where Veterans Memorial Highway now cuts through Hauppauge. The area is referred to as “Hauppauge Springs” because the water bubbles or “springs” up out of the ground. This water is discharged from the Upper Glacial Aquifer, the uppermost aquifer that makes up Long Island’s groundwater system, and it flows into the swampy wetlands situated on the south side of the highway and then north to become part of the main river. When the highway was sited and paved, culverts were placed under it to allow passage of the spring water. Although parts of the Springs area were preserved in Caleb Smith State Park and Blydenburgh County Park, large areas were developed into the New York State Office Building and the Suffolk County Office Building Complex. A number of residential subdivisions and a golf course were also developed there. The remaining undeveloped area in the vicinity of Old Willets Path and Veterans Memorial Highway has long lingered in limbo.

In the 1980s, the Town of Smithtown acquired land buffering the springs along Old Willets Path. Former Suffolk County legislator William Holtz (D) later moved to salvage the remainder of the Hauppauge Springs. He introduced a resolution for acquisition of additional parcels of spring-rich land. These were then placed on the Suffolk County Master Plan acquisition list.

In 1999, John Black and John Potente, both of the Long Island Botanical Society, met with former Suffolk County Legislator Andrew Crecca (R) to urge the inclusion of another undeveloped upland buffer parcel for the springs. Surprisingly their plea was accepted. A proposal was promptly written, reviewed and presented to the legislature, which passed it unanimously. This authorized the Suffolk County Department of Real Estate to approach the owners for purchase of the land. That was 18 years ago.

In early 2000, John Potente organized a meeting at the New York State DEC facility in Serauket to formulate an approach to protecting the remainder of undeveloped land comprising and abutting the Hauppauge Springs (Potente 2005). The largest undeveloped portion consisted of 40 acres to the southeast of the corner of Old Willets Path and Veterans Memorial Highway (Fig. 1). At the end of the meeting the group was organized into the Hauppauge Springs Coalition with six member environmental organizations, one of which was the Long Island Botanical Society. By 2005 there were 25 member organizations and although there were, as yet, no official land transfers, there had been much publicity in local papers and the coalition was

responsible for sustaining meetings, appraisals, and negotiations between Suffolk County and the owners.

In the autumn of 2001, John Potente led a walk through the springs for the Long Island Botanical Society, at which time the Society performed an inventory of plants of the area. At that time there were 7 parcels considered for purchase and/or consolidation into a passive preserve: 2 parcels along Veterans Highway, 2 parcels belonging to the Town of Smithtown, 2 parcels further upland, and a nearby recharge basin.

If we fast-forward to the present, we can announce that Suffolk County has purchased three properties that are part of the Hauppauge Springs complex (green dots in Fig. 1), bringing five properties into public ownership. The two parcels most recently acquired are along Veterans Memorial Highway: a 4.5-acre wetland property and a 1.9-acre piece that contains much of a small pond that is part of the headwaters.

The purchase of this eastern parcel helps to safeguard a key ecological feature—one of western Long Island’s few remaining stands of Atlantic white cedar (*Chamaecyparis thyoides*), a State-rare evergreen tree. This tree, once commercially important to Long Island, now has its stronghold in the Pine Barrens of eastern Suffolk County. The beautiful dark green columnar trees are growing along the western edge of the pond and can be seen from the edge of the highway.

The remaining parcel, an 8.4-acre property sandwiched between the others (red dot in Fig 1), is now in contract, and Suffolk County is expected to close on the purchase within the coming months. With this purchase, the acquisitions will be complete, and 41 acres will be permanently preserved here, helping to protect one of the two headwater systems of the Nissequogue River.

Several County officials played roles in making these latest acquisitions happen. Suffolk County Executive Steve Bellone (D) supported several resolutions that moved the purchases forward, and Suffolk County Legislator Leslie Kennedy (R) played a key role in introducing the resolutions and helping to clean up the property.

With this news the future of the Nissequogue River has been made just a little bit brighter.

Reference Cited

Potente, J. E. 2005. The Hauppauge Spring. Quart. Newslett. Long Island Bot. Soc. 15(4): 29, 31-32.



Figure 1. Aerial view of the Hauppauge Springs area (2016).

The open space project area is outlined in green and is bounded by Veterans Memorial Highway and Suffolk County Police Department 4th Precinct Offices to the north. The two properties with small dots are owned by the Town of Smithtown. The property with the large green dot at the eastern boundary was acquired by Suffolk County two years ago. The two properties with the large green dots along the highway to the north are the County's most recent acquisitions. The easternmost of these two properties contains a stand of Atlantic white cedar, visible from the highway. The property with the red dot is the remaining privately-owned parcel that the County is in contract to buy and should close on in the next couple of months. [Screenshot from Suffolk County GIS Viewer, accessed 9/21/17.]



FIELD TRIP

October 14, 2017 (Saturday) 9 AM

Caumsett State Historic Park Preserve

Grassland Restoration Site

Suffolk County, NY

Trip Leader: Sue Feustel

In 2010 The Caumsett Foundation and NYS Parks Regional Environmental Office initiated a project to remove invasive plants on a 30-acre site and remediate with native grasses and wildflowers. The site was plowed and disked during the summer months from 2011 through May of 2015, and native grasses and wildflowers were then planted. October is a perfect time to view the restoration site, which attracts migrating birds and butterflies, now in its third growing season.

We will walk the perimeter of the site and then venture within the grassland to get a closer look at the vegetation. After visiting the restoration site we will turn our attention to the managed Baltimore Checkerspot butterfly area, which

is adjacent to the grassland restoration site.

A detailed account of the grassland restoration site is being developed on the Caumsettprojects.org web page. This site is now “live” and I encourage you to visit it.

Directions: Caumsett State Park is located on Lloyd Neck in Huntington. Take West Neck Road north from 25A (Main St.) in Huntington Village. Continue north on West Neck Road, driving over the causeway. At this point the road becomes Lloyd Harbor Lane. The park entrance will be on the left after Lloyd Lane. A parking fee of \$8 will be in effect, unless you have a NYS Empire Pass. Meet by the visitor kiosk near the toll booth.

Please bring water/snack, tick/insect repellent and wear long pants and sturdy footwear.

If you need more details, contact Sue Feustel at suefeustel@optonline.net

UPCOMING PROGRAMS

October 10, 2017* Tuesday, 7:30 PM

Andrew Greller: "The Vegetation of Central Mexico."

This talk will cover the plant life of Guanajuato State, Mexico. It will highlight the cacti, thorn scrub, and fir forests. Andy is VP of LIBS and Professor Emeritus in the Biology Department of Queens College. He has published many articles in peer-reviewed journals on vegetation ecology.

Location: Bill Paterson Nature Center
Muttontown Preserve, East Norwich

November 14, 2017* Tuesday, 7:30 PM

Carolyn Flynn: "Historical Changes in the Vegetation of the Lands of the Nissequogue River Corridor."

Since early in the history of humankind, the nature of local vegetation and geology has influenced how land is used. More recently, human activity has in turn greatly impacted native vegetation. We will discuss how land was used, from Native American times up to the present, and examine historic vegetation maps to explore how the north shore lands of western Suffolk County have changed. Carolyn is an environmental educator. In both professional and volunteer capacities, she strives to share with groups of all ages a sense of stewardship and

a love of the natural world and its cycles. She holds a BS in Forest Botany from SUNY College of Environmental Science and Forestry in Syracuse.

Location: Earth and Space Science Building
Gil Hanson Room (Room 123)
Stony Brook University, Stony Brook

December 12, 2017* Tuesday, 7:30 PM

Members Night: Members are welcome to bring photos, stories, specimens, and tales of peculiar sightings of favorite plants. This is a great opportunity to show what you have found while exploring on Long Island or elsewhere. Please call Rich Kelly (516-354-6506) in advance to advise as to the approximate number of images/slides that you would like to show and preferred medium of presentation. Thanks.

Location: Bill Paterson Nature Center
Muttontown Preserve, East Norwich

**Reminder - no meetings in January or February.
Next meeting March 13, 2018.**

* 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