

Long Island Botanical Society

Vol. 29 No. 1

The Quarterly Newsletter

Winter 2019

Back from the Dead: The Rare Plants at Freeman Avenue, Islip

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Figure 1. From bare soil to a complex ecological community in 22 years. This 2017 photo reveals the high plant diversity at the Freeman Avenue site. Pyxies have delicate white flowers and moss-like evergreen leaves. Interspersed among the pyxies (left of center) is a “reindeer lichen” known as *Cladonia subtenuis*. Encircling the pyxies is a ring of wintergreen (aka teaberry) plants (*Gaultheria procumbens*), one with a red fruit. Dried needles of pitch pine (*Pinus rigida*) and dried oak (*Quercus* spp.) leaves decay and enrich the soil. Photo by John Turner, 12 April 2017.

Back in 1984, botanist Chris Mangels discovered many state-rare plants in an open sandy area with shrubs, forbs, graminoids, and bryophytes along Freeman Avenue in Islip, Suffolk County. Old aerial photographs dating back to 1938 show the area to be mostly shrubby with some trails through it³. It remained that way until the 1960s when clearing for a radio antenna for WLIE 540 increased the openness⁴.

By the 1980s, the area around the antenna had been cleared of trees and shrubs and was an open sandy/gravelly meadow

that became more mesic to wet on the western side bordering a pitch pine (*Pinus rigida*) woodland. Chris then contacted Bob Laskowski (who was knowledgeable about the Islip area) and Bob Zaremba (who, at the time, was a botanist for the Natural Heritage Program). Joe Beitel also visited the site because he had discovered a population of orange milkwort (*Polygala lutea*) in a small depression along Southern State Parkway just north of Freeman Avenue. (That population is now gone.)

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³ <https://bit.ly/2GxbMk8>

⁴ <https://www.historicaerials.com/viewer>

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 thanks Margaret Conover for 14 years of service as Editor of the *Newsletter*. Margaret is a co-founder of LIBS and was honored with LIBS' Distinguished Service Award in 2016. Currently, she lives with her husband David in Eugene, Oregon. Thanks so much, Margaret!

New publication by Eric Lamont. LIBS' president recently published a paper entitled: "*Ageratina roanensis* (Asteraceae), a new combination for an endemic species from the Southern Appalachian Mountains" in *Phytoneuron* 2018-77: 1-3. This species has been treated for many years as a variety of *Ageratina altissima* (common white snakeroot) but differs consistently from it in morphology and ecology.

New book on lichens: *Delmarva Lichens: An Illustrated Manual*, by James Lendemer and Nastassja Noell (2018). Covers 299 species (288 color photos) and includes almost all of Long Island's lichens. 350 pages, hardbound, with 36 color plates. Published as Volume 28 of *Memoirs of the Torrey Botanical Society*. \$30.00. Copies can be ordered from the web site of the Torrey Botanical Society.

Environmental concerns on Long Island. At recent LIBS meetings members have reported on local development projects that have negative impacts on the environment. Karen Blumer reported on an oozing illegal sediment spillage on the Carmens River, Brookhaven Township; Vicki Bustamante expressed concerns over a plan to develop Point Woods, Montauk; Rich Kelly reported on a project by New York State to build a new facility at Jones Beach West End and cited negative impacts to vegetation and wildlife including snowy owls, hognose snakes, and rare butterflies; Larry Penny wrote a passionate letter to government officials pleading against the construction of a miniature railroad ride through Moores Woods, Greenport, home to the rare crane fly orchid (*Tipularia discolor*) and sensitive wetlands; Eric Lamont has been reporting on negative impacts to the old growth forest and wetlands at North Fork Preserve by Suffolk County DPW and Parks Department; John Potente reported on the negative impacts of Suffolk County's methoprene spraying in the Accobonic marsh, in addition to 20,000 acres of tidal marshland throughout Suffolk County.

2019 Long Island Natural History Conference: Friday & Saturday, 22-23 March 2019, Brookhaven National Laboratory. Save the date.

Botany Seminars at NYBG, January to March 2019. The below Seminars will take place at the Mertz Library, The New York Botanical Garden, Bronx. For more info, email Czimmerman@nybg.org

Date	Time	Speaker	Topic
Jan. 18	11am-12pm	Barbara Thiers	North American Herbaria
Jan. 25	11am-12pm	Seamus O'Brien	In the Footsteps of Joseph Dalton Hooker
Feb. 1	11am-12pm	Sonja Duempelman	Seeing Trees: A History of Street Trees in New York City and Berlin
Mar. 7	11am-12pm	Richard Powers	The Overstory

LIBS Membership Renewals for 2019 are due. Mail your dues (\$25 individual, \$30 family) to **Carol Johnston, LIBS Treasurer, 347 Duck Pond Road, Locust Valley, NY 11560**. Thank you for promptly renewing your membership thus saving volunteer time and the cost for follow-up notices.

(Back from the Dead continued from cover)

In June 1985, Bob Zaremba formally surveyed the site and documented the rare plants that had been discovered the previous year: orange milkwort, whip nut sedge (*Scleria triglomerata*), pyxie moss (*Pyxidanthera barbulata*), and primrose-leaved violet (*Viola primulifolia* var. *primulifolia*). Subsequent surveys turned up showy aster (*Eurybia spectabilis*), New England blazing star (*Liatris scariosa* var. *novae-angliae*) on both sides of the road, and Elliott's goldenrod (*Solidago latissimifolia*). Presently, the site is the best in the state for orange milkwort and pyxie moss (Fig. 1) and, along with very small populations at Connetquot River State Park Preserve, the most northern locality in North America for both species.

It is somewhat of a mystery how these rare plants got here since the site was not in its present condition until the 1980s. A potential seed source for the rare plants may have been located

Botanists from Long Island, especially Eric Lamont, Bob McGrath, and Chris Mangels, as well as Natural Heritage Program botanists from Albany, continued to monitor the rare plants at Freeman Avenue until the week of 20 November 1995 when Chris and Bob Laskowski visited the site and found all the vegetation had been bulldozed so that the underground wires of the radio antenna could be replaced (Fig. 2a). The top layer of soil was bulldozed into piles along the edge of the site while the wires were replaced. We thought that the bulldozing was the end of the rare plants at Freeman Avenue and we were especially sad at the loss of the pixies and orange milkwort. Steve Young went out with Bob Laskowski and took photographs of the disturbance which had left nothing but barren, disturbed soil and bulldozer tracks. Our only hope was that the piles of soil would be spread out on the site after the work was done. It seems like that was in fact what was done, although none of us was there to see it happen.



In late 1996, Chris Mangels noted that some of the rare plants were reappearing. He saw more than 250 flowering plants of orange milkwort as well as scattered individuals of whip nut sedge and New England blazing star. Maybe not all was lost! By the spring of
(Continued on page 4)

Figure 2a. Left, Freeman Avenue site after the 1995 bulldozing. Bob Laskowski is standing at center of photo east of the antenna structure. Photo by Stephen Young, 7 Dec 1995.

Figure 2b. Below, Freeman Avenue site in 2014 showing the reestablishment of the coastal plain graminoid/forb plant assemblage. Photo by Stephen Young, 22 Jul 2014.

just across the street at the site of Long Island's first airport which consisted of a single grass runway built in 1928 and dedicated by Amelia Earhart. The 1938 aerial photograph mentioned above shows 25 acres of open grassland surrounding the runway, a possible seed source for today's rare plants. The airport was eventually developed into the famous Islip International Speedway which opened in 1947 and featured the figure 8 track that was popular on ABC's Wide World of Sports, as well as the country's first demolition derby. The mid-1980s saw the racetrack site redeveloped into an industrial complex.



(Back from the Dead, continued from page 3)

Table 1. Noteworthy Plants at the Freeman Avenue Site, Islip, Suffolk Co.

The Freeman Avenue site is a region of high plant diversity and provides habitat for rare plant species. The following annotated plant list is arranged in order of rarity.

Orange Milkwort (*Polygala lutea*). (Fig. 3e). S1-Endangered. One of only two known populations in New York. In good years, this population includes 1000s of individuals making it, by far, the largest and highest quality occurrence in the state. This population represents the most northern occurrence of the species in North America.

Pyxie Moss, Pyxies (*Pyxidantha barbulate*). (Fig. 3d). S1-Endangered. One of only two known populations in New York. This high quality population includes 1000s of individuals and represents the most northern occurrence of the species in North America. A second population at nearby Connetquot River State Park Preserve is small and reduced by succession. Pyxies are adapted to frequent fire and minimize heat damage by forming dense mats that hug the relatively cool ground.

Elliott's Goldenrod or Coastal Swamp Goldenrod (*Solidago latissimifolia*). S1-Endangered. One of only four populations known in New York and the 2nd best in terms of overall quality. This rare species is restricted to the Atlantic coastal plain and was long known by the name *Solidago elliotii*.

Whip Nut Sedge (*Scleria triglomerata*). S1-Threatened. This rare sedge is one of only nine populations known in New York and the 2nd best in terms of quality.

Primrose-leaved Violet (*Viola primulifolia* var. *primulifolia*). S2-Threatened. One of only 12 populations known in New York and the 5th best in terms of quality.

Showy Aster (*Eurybia spectabilis*). S2-Threatened. One of only 15 populations that occur mainly on Long Island.

Northern Blazing Star (*Liatris scariosa* var. *novae-angliae*). (Fig. 3c). S2-Threatened. One of only 19 populations that occur mainly on Long Island.

White-fringed Orchid (*Platanthera blephariglottis*). (Fig. 3a,b). Protected. Populations of this showy orchid have drastically declined on Long Island during the past 100 years largely due to habitat destruction by human activities.

Foxtail Bog-clubmoss (*Lycopodiella alopecuroides*). Protected. A coastal plain species whose distribution in New York is restricted to Long Island where it is near the northern limit of its range.

Slim-fruited Rush (*Juncus diffusissimus*). Native Pioneer. A southern species that recently migrated north to New York where it was first found in 2004 at the Freeman Avenue site.

1997 Chris observed a few clumps of pyxie moss and noted that the soil appeared to be favoring the reestablishment of the coastal plain graminoid/forb assemblage. It took only a few years before all of the rare plants were reestablished and since then the site has continued to be managed by the owners of the radio station as an early successional grassland/forb area where the rare plants continue to flourish (Fig. 2b).

New noteworthy plants continue to be found and monitored at the Freeman Avenue site. In 2004, a colony of slim-fruited rush (*Juncus diffusissimus*) was found in a moist open area along the northern edge of the site, the first report of the species in New York. A colony of white-fringed orchid (*Platanthera blephariglottis*) occurs on the western side of the property with other herbaceous flowering plants. Typically, a few dozen orchids flower each summer. The year 2018 was especially productive with 97 flowering individuals counted during a field visit by John Turner on 3 August 2018. Foxtail bog-clubmoss (*Lycopodiella alopecuroides*), a coastal plain species whose distribution in New York is restricted to Long Island, occurs in some wetter areas of the meadow.

A second, larger antenna was installed at the south end of the site about 12 years ago and the restoration of the area included the introduction of exotic wildflowers. Fortunately they have not persisted in any great numbers and the rare plants have not been negatively affected. The site is presently fenced and gated, so access to the rare plants is prohibited without permission.

Different styles of management over the years have resulted in too many shrubs coming into the area or too frequent mowing that did not allow the rare plants to fully grow. In 2018, there was no early mowing and some rare plants that had not been seen of late had recovered and were visible from the road. Maintaining the site as an open grassland/meadow provides a refuge for many species of native plants, butterflies, and other wildlife.

The Conservation Committee of LIBS has been working with the current owner of the property to consider a conservation easement to permanently protect the site and implement a mowing regime that promotes the protection of the rare plant species.

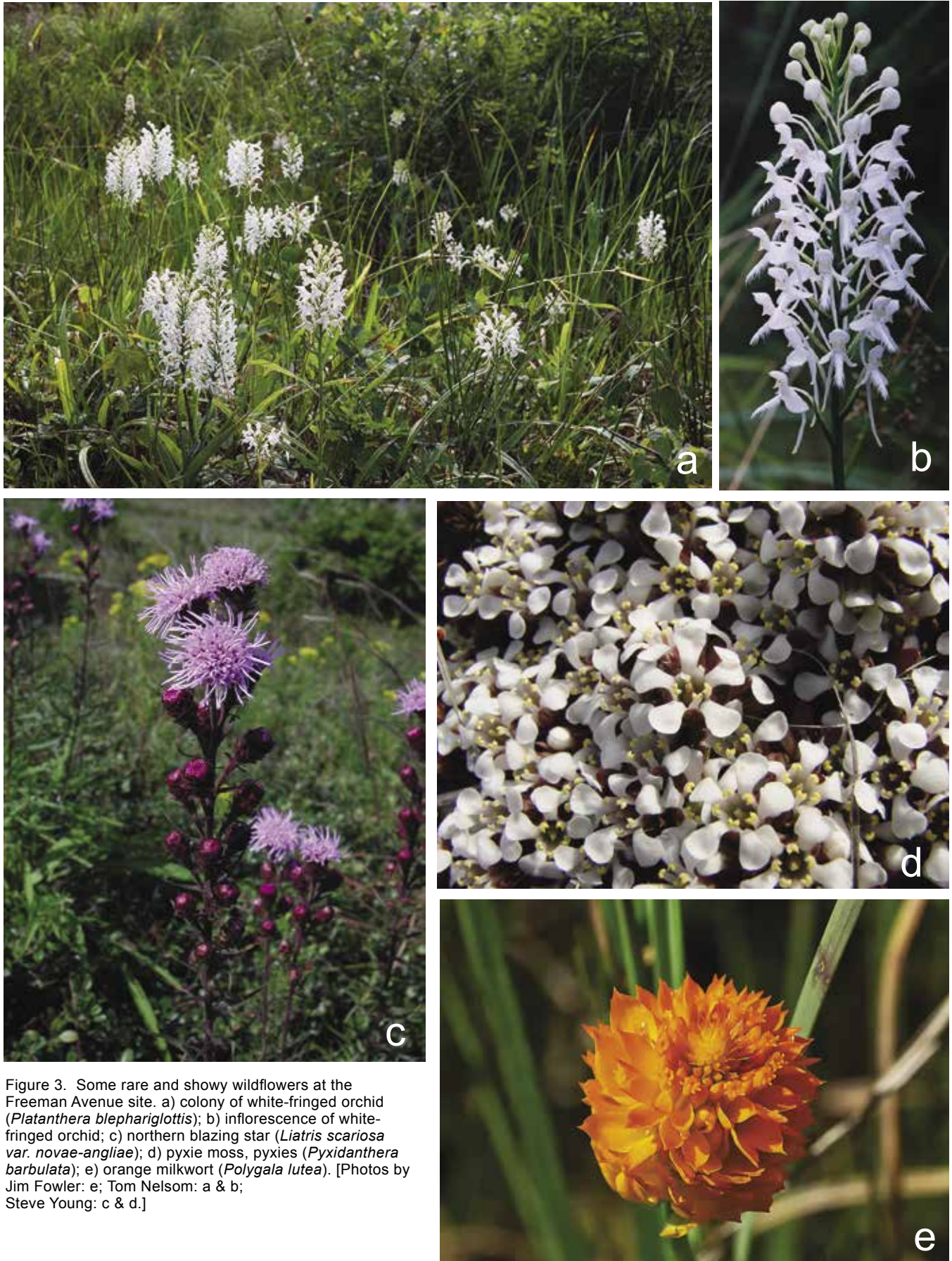


Figure 3. Some rare and showy wildflowers at the Freeman Avenue site. a) colony of white-fringed orchid (*Platanthera blephariglottis*); b) inflorescence of white-fringed orchid; c) northern blazing star (*Liatris scariosa* var. *novae-angliae*); d) pyxie moss, pyxies (*Pyxidantha barbulata*); e) orange milkwort (*Polygala lutea*). [Photos by Jim Fowler: e; Tom Nelsom: a & b; Steve Young: c & d.]

Plant Sightings

Compiled by Eric Lamont

The following species were reported and discussed at the 9 October 2018 LIBS membership meeting at Muttontown Preserve:

***Agalinis decemloba* [= *A. acuta*], sandplain agalinis.** (Orobanchaceae, the Broom-rape Family). (S1). Allan Lindberg reported he has not seen this species at Purcell Preserve (Hempstead Plains South), Nassau Co. since the 1990s but it still occurs at the Nassau Community College site (Hempstead Plains North). In New York, this species is only known from Nassau and Suffolk counties. *Agalinis decemloba* is one of only two federally endangered plants in New York.



Figure 1. *Tripidium ravennae* (Ravenna grass) and Eric Lamont at North Fork Preserve, Suffolk Co. Photo by MaryLaura Lamont, 10 Oct. 2018.

***Aureolaria pedicularia*, fern-leaved false foxglove.** (Orobanchaceae, the Broom-rape Family). Dave Taft observed this showy species at the Brentwood oak brush plains in September 2018. This native species has declined on Long Island during the past few decades due to negative impacts by human activities. Fern-leaved false foxglove is a partial plant parasite, using the roots of oaks (*Quercus*) as its preferred host.

***Eutrochium dubium* [= *Eupatorium dubium*], coastal plain Joe Pye weed.** (Asteraceae, the Aster Family). Rare in New York. Observed by MaryLaura and Eric Lamont on 3 Oct 2018 at Wertheim National Wildlife Refuge, Suffolk Co. A small colony was found growing in thick organic muck on the west side of Carmens River. Lois Lindberg also reported *E. dubium* from Shu Swamp Preserve, Nassau Co.

***Kummerowia striata* [= *Lespedeza striata*], Japanese clover.** (Fabaceae, the Legume Family). Not Native. New record for Nassau Co. Found by Bob Wernerehl (Mass. State Botanist) during the LIBS/NYFA field trip to Hempstead Plains on 8 September 2018. This species was first reported from New York (Suffolk Co.) by Eric Lamont in 1992.

***Lilium superbum*, Turk's cap lily.** (Liliaceae, the Lily Family). Protected. Observed in September 2018 by Karen Blumer and Marilyn England at North Fork Preserve, Suffolk Co. The colony is located in Long Swamp on the west side of the entrance road.

***Salicornia bigelovii*, Bigelow's glasswort.** (Amaranthaceae, the Amaranth Family). (S2S3). Steve Young reported "many 1000s" of individuals at the salt marsh at Caumsett State Historic Park Preserve, Lloyd Neck, Suffolk Co., making this population and

the one at Orient Beach State Park the two largest populations in New York.

***Spiranthes cernua* and *S. tuberosa*, ladies' tresses.** (Orchidaceae, the Orchid Family). Protected. For more than a decade, Dave Taft has been monitoring these two species at Connectquot River State Park Preserve, Suffolk Co.; in 2018 both species were observed at their usual localities. During the past few decades populations of *S. tuberosa* have declined on Long Island.

***Suaeda calceoliformis*, *S. linearis* (S1S2), and *S. maritima*, seablite.** (Amaranthaceae, the Amaranth Family). On 9 October 2018 Steve

Young observed these three species in the salt marsh at Caumsett State Historic Park Preserve, Lloyd Neck, Suffolk Co. Species of *Suaeda* can be difficult to identify; differences in mature seeds are a good way of distinguishing Long Island's four species.

***Tripidium ravennae*, Ravenna grass.** (Poaceae, the Grass Family). (Fig. 1). New record for Long Island. This tall (9–13 ft!), densely clumped ornamental grass from Eurasia was collected by Eric Lamont on 7 Oct 2018 in a successional old field at North Fork Preserve, Suffolk Co. The species was identified by Rob Soreng, US National Herbarium, Smithsonian Institution. Apparently, *T. ravennae* has been collected only once before in New York (New York Co., 20 Sep 2011, *Glenn & Harwood 13442*, BKL). It has relatively recently escaped cultivation in more than 13 US states, is expanding in some areas, and is considered invasive (Soreng, personal communication). It was described from Italy, is native around the Mediterranean Sea and eastward into middle Asia, and known in older literature as *Erianthus ravennae* and *Saccharum ravennae*.

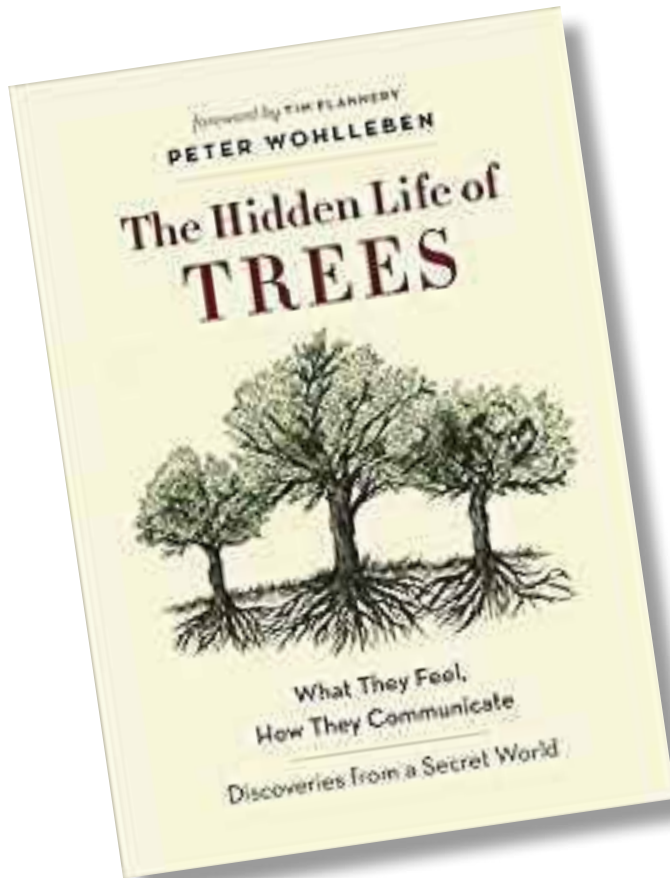
***Zizania aquatica* var. *aquatica*, southern wild rice.** (Poaceae, the Grass Family). Rare on Long Island. This conspicuous native grass was found along the brackish shore of Carmens River at Wertheim National Wildlife Refuge, Suffolk Co., by Eric Lamont on 3 Oct 2018. The colony is located on the west side of the river, just south of the railroad tracks. Historically, this species was more common on western Long Island but those populations have been destroyed by human activities; only four populations have been reported from Nassau and Suffolk counties. The seed from this grass was part of the diet of Native Americans of eastern North America.

BOOK REVIEW

The Hidden Life of Trees: What They Feel, How They Communicate – Discoveries from a Secret World.

By Peter Wohlleben. 2016. 288 pp. Greystone Books, Vancouver/Berkeley.

Reviewed by Marie George, St. John's University.



You won't look at trees the same way after reading Wohlleben's account of how they grow and interact with other each other and with other organisms. You will learn the wide variety of perils a tree must negotiate in order to live a full lifespan, as well as how the lives of communal trees, solitary trees, and city trees differ. You will learn a lot about ecology as well, e.g., how information about drought and insect attacks is communicated from one tree to another via a fungal network.

What is less satisfactory in the book are inadequately supported claims of tree sentience. Though it infuriates me when people whack at trees, it is not because I think that the tree feels pain but rather because I know that damage to the bark makes the tree susceptible to insect attacks. The fact that "leaf tissue sends out electrical signals, just as human tissue does when it is hurt," (p. 8) hardly shows that the tree feels pain. Evidence needs to be provided that a tree has something functionally equivalent to a nociceptor. Wohlleben thinks that the fact that trees react

differently to the saliva of different insect species shows that trees have a sense of taste. He never considers the possibility the trees are simply reacting to the different chemicals present in the saliva and not to any flavor they might have.

In the last chapter Wohlleben talks about the attitudes we ought to have towards forests. He maintains that forests are more than just a commodity, as they are a habitat for many species and are a source of wonder for us. He also tells us though that it is time to treat plants differently than we have in the past given their "emotional lives and needs" (p. 244)--something he has not adequately established.

In sum, *The Hidden Life of Trees* is a mixture of fascinating science (a single quaking aspen can cover hundreds of square yards) and flights of imagination (cracking roots may be cries of thirst). Engagingly written, it is a good read for anyone interested in plants.

FIELD TRIP

March 2, 2019 (Saturday) 10 AM

*North Fork Preserve, Northville, Suffolk County, NY
Old Growth Forest*

Joint trip with the North Shore Land Alliance

Trip leader: Eric Lamont

Trip limited to 12 people; registration required.

Nestled among the gentle hills of the Harbor Hill Moraine on Long Island's North Fork is an old growth forest that has not changed much in hundreds of years. The forest is full of swamps and steep slopes making the land unsuitable for farming. The original forest was cut down in the 1700s but the soil was never turned over and farmed. A second growth forest sprung up and today many of the old trees are 150–250 years old.

Participants will be introduced to the natural history of North Fork Preserve's old growth forest, freshwater wetlands, and other ecological communities.

To sign-up, email Eric Lamont and more information will be provided including the meeting place.

Email: elamont@optonline.net

UPCOMING PROGRAMS

January, February, and March 2019: No Meeting!

April 9, 2019*

Tuesday, 7:30 PM

Marie George: “Are Plants Sentient?” Recently, a number of biologists have claimed that plants are sentient (able to perceive or feel things). For example, Daniel Chamovitz claims that the dodder sniffs out its host and Peter Wohlleben maintains that certain plants taste the saliva of insects chewing on them. A number of scientific papers appear to show that plants are capable of habituation and classical conditioning, which seems to indicate that they are sentient. Nevertheless, many biologists and philosophers remain skeptical. Marie is Professor of Philosophy at St. John’s University

and holds an MA in biology from Queens College, NY. Originally from California, and an avid hiker from an early age, Marie got interested in botany while in grad school upon finally noticing the fine details that differentiate plants. After getting tenure in the St. John’s philosophy department, she pursued her interest in plants while studying biology at Queens College. Marie is an organic gardener and sometimes teaches environmental ethics.

Location: Bill Paterson Nature Center
Muttontown Preserve, East Norwich

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