

Long Island Botanical Society

Vol. 31 No. 4

The Quarterly Newsletter

Fall 2021

A New Rare Plant Survey for Fishers Island, New York

Steve Young, Chief Botanist, New York Natural Heritage Program

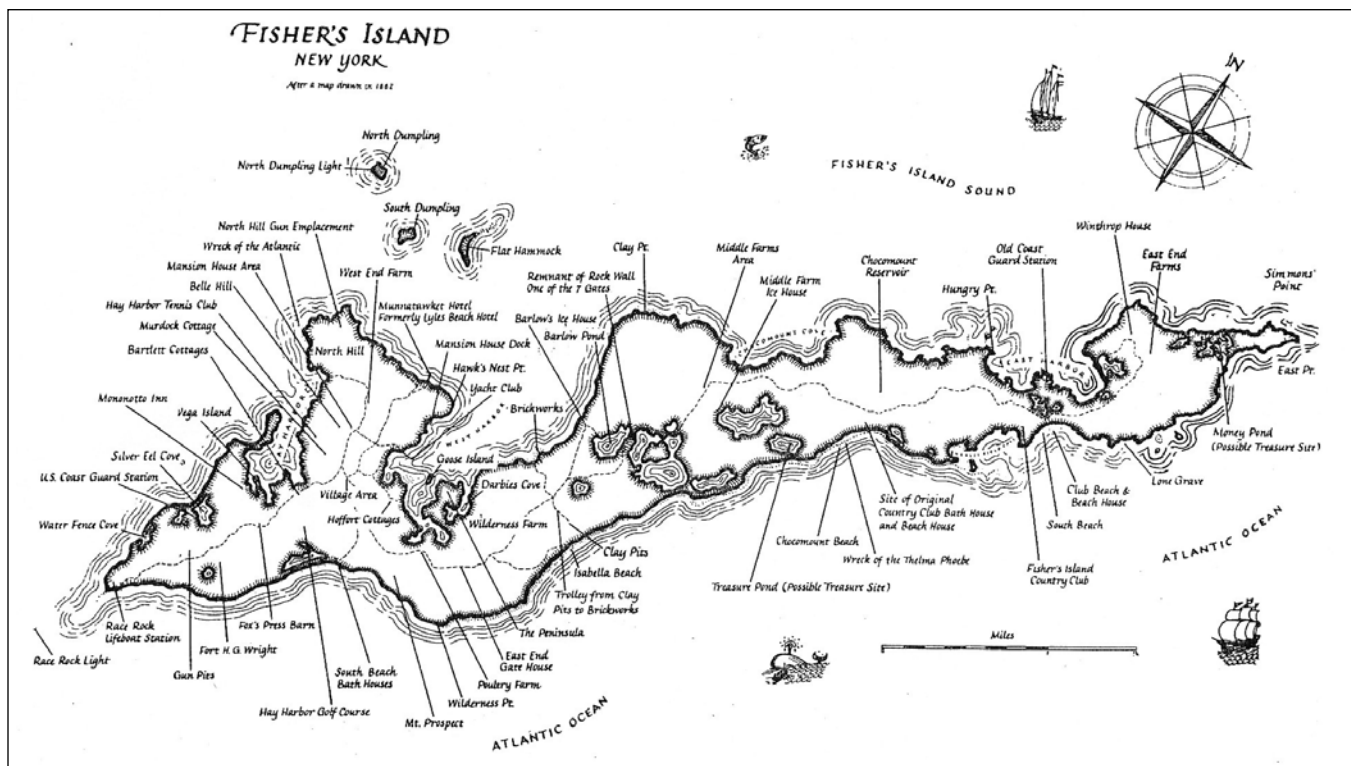


Figure 1. Map of Fishers Island, Suffolk County, New York. "After a map drawn in 1862." Image from FishersIsland.net.

If you happen to be in New London, Connecticut and look to the south you will see Fishers Island (Fig. 1), a mysterious and unknown place to many people and before last summer that included me. It is an extension of the Harbor Hill glacial moraine that continues to the northeast of the North Fork of Long Island and Little Gull, Great Gull and Plum islands lie along the moraine between Fishers Island and the North Fork. Its eastern tip is only 1.9 miles from mainland Connecticut but the western tip is 6 miles from New York's Little Gull Island so it is closer to Connecticut and can only be reached by auto ferry from New London and commuter ferries from Noank. The development on the island consists mainly of large estates, their recreation facilities and support infrastructure. The eastern two thirds of the island is closed

to the public. There is an old Army fort and small airfield at the western tip of the island where the ferry docks. In addition to the development there are large natural areas either associated with the estates or preserved as natural areas on the Town of Southold property or within the Henry L. Ferguson Museum's Land Trust.

When I started my position at the Natural Heritage Program in the early 90s, Gordon Tucker from the New York State Museum and Ed Horning from Fishers Island were in the middle of updating the flora of Fishers Island, the first time it had been done since Charles Hanmer had published a flora in 1940 (Hanmer 1940). In the 1999 summer issue

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Long Island Botanical Society

Founded: 1986 • Incorporated: 1989

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

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

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Society News

Al Lindberg steps down as LIBS Field Trip Committee Chair after many years and several terms of office. Al has the distinction of being the first official LIBS Field Trip Committee Chair in 1992. From 1995 to 1997 he co-chaired the committee with Glenn Richard and from 1998-1999 he co-chaired with Tom Meoli. More recently, Al chaired the committee from 2014-2021. In 1990 Al led his first LIBS field trip (to Stillwood Preserve in Nassau County) and went on to lead or co-lead 21 more field trips as of 2021. Only two LIBS members have led more: Andy Greller (35) and Eric Lamont (29). Al has served LIBS in so many ways including being an author for the LIBS Newsletter, contributing to the Flora Committee, overseeing botanical projects like the removal of hardy kiwi (*Actinidia arguta*) from Coffin Woods Preserve in Locust Valley, arranging use of Muttontown Preserve for LIBS monthly meetings, and having the grills ready for the Annual BBQ. Thank you so much Al, for your years of service to LIBS!

Bob Chapman, the new LIBS Field Trip Committee Chair. Bob is a Life Member of LIBS and for the past 7 years has been a regular at monthly meetings and field trips. He ranks as the first LIBS member to use snow shoes on a winter field trip (North Fork Preserve) and is not deterred by tropical storms and torrential downpours, as on the September 2021 field trip to Montauk. Welcome aboard, Bob.

New LIBS Life Members. One way members support the society is by becoming a Life Member. Such support keeps the society vibrant and able to achieve its goals. LIBS is pleased to welcome the following new Life Members in 2021: **Steven Borghardt, Bob Chapman, Louise Harrison, Patricia Klein, Al & Irene Messina, and Taylor Sturm & Ally Beattie.** Thank you for your support!

Correction. The incorrect scientific name for Virginia meadow beauty was given in the last issue of the LIBS Newsletter (2021, Vol. 31, No. 3, page 22). The correct name is *Rhexia virginica*.



PLANT SIGHTINGS

Locally rare lycophyte found at Green-Wood Cemetery, Brooklyn, NY

Molly Nash Rouzie

While scanning roadsides at Green-Wood Cemetery for bryophytes in October of 2019, I observed a colony of the moss-sized lycophyte *Selaginella apoda* growing above a shallow ditch at the bottom of a NNE-facing hillside. For the ensuing 26 months I searched for but failed to find any specimens beyond that first colony. As of 20 November 2021 the colony measured approximately 60cm by 300cm. Though online searches of local herbaria in December 2021 revealed no Kings County vouchers, New York Flora Atlas's distribution data included two 19th century (1866 and 1890) vouchers from the Brooklyn Botanic Garden herbarium (BKL). Neither of these records showed up in separate online searches of BKL and NYBG's Steere herbarium (NY). NYBG records did reveal three vouchers from the east end of Suffolk County in 1927

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(Fishers Island, continued from cover page)

of the LIBS newsletter Ed Horning describes their work and 15 rare plants that they had documented, a number Ed considered remarkable (Horning 1999).

In 2020 Pierce Rafferty and Jack Schneider of the Henry L. Ferguson Museum contacted us about planning a rare plant, rare animal, and natural community survey of the 77 parcels of natural area that the museum owns or holds easements on. I was very excited to get a chance to start the survey since I had never been to the island and had never seen some of the rare species that grow there. In 2021 we began a two-year survey of the parcels that span the entire length of the island and have a total area of about 346 acres. With the generous help of the museum staff, I started the plant surveys, chief zoologist Matt Schlesinger headed up the animal surveys, and chief ecologist Greg Edinger performed the natural community surveys.

During my research into the rare plant species that have been found on the island, I looked at the rare plants that had been listed in Hanmer's flora and the plant specimens that had been collected by Tucker and Horning for their flora. Since the early 90s, more plants have been added to the Heritage rare lists and a few have been removed but the number of rare plants on the island has grown to an incredible 67 species that were once documented or currently exist on the island. The list includes 52 species ranked S1-S2S3 (endangered or threatened) that are on the active list and 15 species ranked S3

(rare) that are on the watch list. See table 1. They include 32 species that were originally documented by Hanmer, 47 that were documented by Tucker and Horning, and 12 that have been documented so far by Heritage surveys. This number of active list species is the same as the number of active list species that have been documented in Long Island's coastal plain ponds, but the total number of rare species is more because the coastal plain ponds only have three watch list species. Therefore, Fishers Island, at 6.8 miles long and 4.2 mi.² in area, has the most documented rare plant species of any comparable area in the state. Looking at the number of times some species were documented and the length of time that they were last seen, I think that 14 of those species are probably extirpated from the island.

Many changes have taken place to the island vegetation over the decades with changes in land use, fragmentation (although large estates have reduced the amount of possible fragmentation), storm events, and the introduction of many new invasive species. Some invasive species like old world phragmites (*Phragmites australis*), Asian bittersweet (*Celastrus orbiculatus*), Japanese honeysuckle (*Lonicera japonica*), Japanese knotweed (*Reynoutria japonica*), rugosa rose (*Rosa rugosa*), and porcelain berry (*Ampelopsis glandulosa*) now dominate many areas of formally native vegetation. The floras of Hanmer, Tucker and Horning, and our work have documented a total of 45 invasive plant species on the island.



The 77 museum parcels encompass a wide variety of natural communities from sandy to cobbly to large boulder beaches, maritime and freshwater wetlands and ponds, maritime grasslands, and uplands dominated by deciduous forest, shrubs, or vines. It's obvious that this wide variety of coastal plain

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Figure 2. Large calyx goosefoot (*Chenopodium berlandieri* var. *macrocalycium*) along the top of a beach on Fishers Island, New York. This species is an annual herb adapted to living in harsh conditions in coastal sands along the Atlantic coast from Nova Scotia to North Carolina. Photo by Steve Young, 2021.

(Fishers Island, continued from page 31)

habitats would support many rare species. Our surveys were focused on the museum parcels, so we were not updating all the rare plant occurrences that have been documented at the approximately 50 locations around the island.

Here are some of the rare species that I saw during the two weeks that I was on the island. Unlike the beaches of the South Shore of Long Island, the beaches of Fishers Island are composed of larger cobbles and boulders and are fairly difficult to walk on, so you rarely see people on them. In the past they had supported the most occurrences of the very rare *Angelica lucida* (seacoast angelica), but this plant was not seen at all during our surveys in 2021. One rare plant that was common on the beaches was *Chenopodium berlandieri* var. *macrocalycium* (large calyx goosefoot, Fig. 2) and Fishers Island has the most plants of any location



Figure 3. Coastal plain Joe Pye weed (*Eutrochium dubium*) in a maritime grassland on Fishers island, New York. Joe Pye was an American Indian known for his special skill as a medicine man who made the rounds of rural New England in the late 1700s. He apparently was specially skilled at reducing fevers. One of the few records of him show that he bought "1 qt rum, 1 s[hilling] 6 p[ence]" at a tavern in Stockbridge, Mass., in 1775, so perhaps he made an elixir as well as an herb infusion. Photo by Steve Young, 2021.

in the state. *Honckenya peploides* (seabeach sandwort) was also very common on some of the beaches with its very recognizable stiff, four-ranked leaves. In small salt marshes adjacent to the beach *Potentilla anserina* ssp. *pacifica* (coastal silverweed) and *Plantago maritima* var. *juncoides* (seaside plantain) grow in small populations. Another beautiful plant that we saw at four different locations on the island was *Spiranthes vernalis* (grass-leaved ladies' tresses). One location was only a few yards from the edge of the beach, a habitat where I had never seen it before. Jack Schneider showed me a population of the stunning *Iris prismatica* (slender blue flag) at the edge of a grassland where large numbers of *Eutrochium dubium* (coastal plain Joe Pye weed, Fig. 3) are growing - quite a sight. In the freshwater wetlands we saw a nice population of *Hottonia inflata* (featherfoil), large numbers of *Glyceria obtusa* (coastal manna grass) and the floating leaves of *Hydrocotyle umbellata* (many-flowered marsh pennywort). The pennywort also occurred in a wet spot along a grassland trail where *Juncus dichotomus* (forked rush) was its companion.

During the field season of 2022 our plant surveys will look at parcels that were not surveyed in 2021 and additional rare species that we couldn't find or needed additional location information for more targeted surveys. Fishers Island is a special place and a hotspot for rare plant species, and we are eager to continue our surveys this field season. We look forward to reporting back to you about our finds in a future issue.

Literature Cited.

Hanmer, Charles C. 1940. Plants of Fishers Island. *Torreya* 40: 65-81.

Horning, Edwin H. 1999. Sleuthing for Rare Plants on Fishers Island, Suffolk County, New York. *Long Island Botanical Society Newsletter* 9: 13-15.

[Editor's Note: Charles Chapman Hanmer (1869-1960), author of *Plants of Fishers Island* (1940) and *A list of fleshy fungi of Fishers Island, N.Y.* (1945), was an agricultural inspector for the state of Connecticut and maintained a summer home on Fishers Island from 1905 to about 1955. A careful observer, he listed approximately 500 species from the island in his 1940 flora. A fairly complete set of vouchers from his two publications on Fishers Island was deposited at the Brooklyn Botanic Garden herbarium (BKL), now on long-term loan to The New York Botanical Garden herbarium (NY). Hanmer also had an extensive personal herbarium including collections from his travels to Nova Scotia, Minnesota, Florida, the West Indies, and Central America, as well as specimens collected in Connecticut.]

Table 1. Rare plants of Fishers Island, New York. (Asterisk = species probably extirpated)

Scientific Name	Common Name	Rare Rank	Studies Recorded
<i>Amelanchier nantucketensis</i>	Nantucket Juneberry	S1	Tucker and Horning
<i>Angelica lucida</i>	Seacoast Angelica	S2	Tucker and Horning
<i>Arethusa bulbosa</i> *	Dragon's Mouth Orchid	S2	Hanmer
<i>Asclepias purpurascens</i>	Purple Milkweed	S2S3	Hanmer, Tucker and Horning
<i>Asclepias verticillata</i>	Whorled Milkweed	S2	Hanmer, Tucker and Horning
<i>Atriplex glabriuscula</i>	Seaside Orach	S1	Tucker and Horning
<i>Bartonia paniculata</i> ssp. <i>paniculata</i>	Screw-stem	S1	Tucker and Horning
<i>Carex emmonsii</i>	Emmons' Sedge	S3	Tucker and Horning
<i>Carex hormathodes</i>	Marsh Straw Sedge	S2S3	Tucker and Horning, Heritage
<i>Carex mitchelliana</i>	Mitchell's Sedge	S1S2	Tucker and Horning
<i>Carex straminea</i>	Straw Sedge	S1	Tucker and Horning
<i>Chenopodium berlandieri</i> var. <i>macrocalyrium</i>	Large Calyx Goosefoot	S1S2	Tucker and Horning, Heritage
<i>Crocanthemum dumosum</i>	Bushy Rockrose	S2	Tucker and Horning
<i>Cuscuta pentagona</i>	Five-angled Dodder	S3	Tucker and Horning
<i>Cyperus erythrorhizos</i>	Red-rooted Flat Sedge	S3	Tucker and Horning
<i>Cyperus lupulinus</i> ssp. <i>lupulinus</i>	Great Plains Flat Sedge	S1S2	Tucker and Horning
<i>Cyperus odoratus</i>	Fragrant Flat Sedge	S3	Tucker and Horning
<i>Cyperus polystachyos</i>	Coast Flat Sedge	S2	Tucker and Horning
<i>Elatine americana</i> *	American Waterwort	S1	Graves specimen 1921
<i>Eleocharis engelmannii</i>	Engelmann's Spike Rush	S1	Hanmer specimen, Tucker and Horning
<i>Eleocharis uniglumis</i>	Salt-marsh Spike Rush	S2	Tucker and Horning
<i>Erechtites hieraciifolius</i> var. <i>megalocarpus</i>	Coastal Fireweed	S1	Tucker and Horning, Heritage
<i>Eupatorium pubescens</i> *	Hairy Thoroughwort	S1	Hanmer
<i>Eutrochium dubium</i>	Coastal Plain Joe Pye Weed	S3	Tucker and Horning, Heritage
<i>Fuirena pumila</i>	Dwarf Umbrella Grass	S2	Hanmer, Tucker and Horning
<i>Gaylussacia bigeloviana</i> *	Bog Huckleberry	S1S2	Graves specimen 1891

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(Fishers Island, continued from page 33)

<i>Glyceria obtusa</i>	Coastal Manna Grass	S2?	Hanmer, Tucker and Horning, Heritage
<i>Gratiola virginiana</i> *	Virginia Hedge Hyssop	S1	Hanmer
<i>Honckenya peploides</i> ssp. <i>robusta</i>	Seabeach Sandwort	S3	Tucker and Horning, Heritage
<i>Hottonia inflata</i>	Featherfoil	S2	Tucker and Horning, Heritage
<i>Hydrocotyle umbellata</i>	Many-flowered Marsh Pennywort	S2	Tucker and Horning, Heritage
<i>Iris prismatica</i>	Slender Blue Flag	S2	Hanmer, Tucker and Horning, Heritage
<i>Juncus dichotomous</i>	Forked Rush	S2	Hanmer, Tucker and Horning, Heritage
<i>Lechea minor</i>	Thyme-leaved Pinweed	S3	Hanmer
<i>Lespedeza frutescens</i> *	Bushy Bush Clover	S3	Hanmer
<i>Liatrix scariosa</i> ssp. <i>novae-angliae</i>	Northern Blazing Star	S2	Hanmer, Tucker and Horning
<i>Ligusticum scoticum</i> ssp. <i>scoticum</i>	Scotch Lovage	S1	Hanmer, Tucker and Horning
<i>Limosella australis</i>	Atlantic mudwort	S2	Hanmer, Tucker and Horning
<i>Lycopodiella alopecuroides</i> *	Foxtail Bog Clubmoss	S2?	Hanmer specimen BKL
<i>Lysimachia hybrida</i> *	Lowland Loosestrife	S1	Hanmer
<i>Myriophyllum pinnatum</i>	Green Parrot's Feather	S1	Tucker and Horning
<i>Oxybasis rubra</i> var. <i>rubra</i>	Red Pigweed	S2	Hanmer, Tucker and Horning
<i>Paspalum setaceum</i> var. <i>psammophilum</i> *	Sand Bead Grass	S1	Tucker and Horning
<i>Paspalum setaceum</i> var. <i>setaceum</i>	Thin Bead Grass	S2	Graves Specimen 1889
<i>Pityopsis falcata</i> *	Sickle-leaved Golden Aster	S3	Hanmer
<i>Plantago maritima</i> var. <i>juncooides</i>	Seaside Plantain	S2S3	Hanmer, Tucker and Horning, Heritage
<i>Polygala cruciata</i> *	Cross-leaved Milkwort	S3	Hanmer
<i>Polygonum buxiforme</i>	American Knotweed	S1S2	Hanmer, Tucker and Horning
<i>Potamogeton pulcher</i>	Spotted Pondweed	S2	Tucker and Horning
<i>Potentilla anserina</i> ssp. <i>pacifica</i>	Coastal Silverweed	S2	Tucker and Horning, Heritage
<i>Ptilimnium capillaceum</i>	Mock Bishops Weed	S3	Hanmer
<i>Pycnanthemum muticum</i> *	Blunt Mountain Mint	S2S3	Hanmer

Ranunculus cymbalaria*	Seaside Buttercup	SH	Hanmer
Ranunculus micranthus*	Small-flowered Buttercup	S3	Latham specimen
Rumex fueginus	Golden Dock	S1	Tucker and Horning
Salicornia bigelovii	Bigelow's Glasswort	S2S3	Hanmer, Tucker and Horning
Solidago latissimifolia	Coastal Goldenrod	S1	Tucker and Horning
Spiranthes tuberosa	Little Ladies' Tresses	S2	Hanmer [could be lacera]
Spiranthes vernalis	Grass-leaved Ladies' Tresses	S1S2	Hanmer, Tucker and Horning, Heritage
Suaeda linearis	Narrow-leaf Sea Blight	S1S2	Hanmer
Symphyotrichum subulatum var. subulatum	Annual Saltmarsh Aster	S2S3	Hanmer, Tucker and Horning
Symphyotrichum tenuifolium var. tenuifolium	Perennial Saltmarsh Aster	S2	Hanmer, Tucker and Horning
Thelypteris simulata	Massachusetts Fern	S3	Tucker and Horning
Tripsacum dactyloides var. dactyloides	Eastern Gamma Grass	S2	Tucker and Horning
Veronica peregrina ssp. xalapensis	Glandular Speedwell	S3	Tucker and Horning
Viola pedata var. pedata*	Bird's Foot Violet	S2	Hanmer
Zostera marina	Eel Grass	S3	Tucker and Horning

PLANT SIGHTINGS *continued from page 30*

and 1928. By late 2021 the observed plants had been growing for at least two years beneath a canopy of low-mown grasses with immediate neighbors including the moss *Atrichum undulatum* and common Green-Wood angiosperm genera such as *Viola*, *Oxalis*, and *Trifolium*. *Hypericum mutilum* and the fern *Onoclea sensibilis* had been observed on the same hillside—less than 6m to the SSW—during the Summer of 2021. The *Selaginella* colony had been growing well outside the drip line of any woody plants, though a *Prunus sargentii* grew less than 6m uphill, and several large hardwoods including *Robinia pseudoacacia*, *Liriodendron tulipifera*, and a *Quercus* were even farther uphill. The taller woody plants and the hillside itself had limited, but not excluded, the colony's exposure to bright sunlight. On 12 December 2021 Andrew Greller, Regina Alvarez, and Chris Kreussling joined me at Green-Wood to ponder the plants. Andy suggested we work together to scan the hillside from top to bottom, but even this group effort revealed no plants outside the original observation area. The cemetery's horticulture department was notified that a colony of *S. apoda* had been growing under existing maintenance protocols for over two years at this otherwise obscured location. *S. apoda* is a facultative wetland species with an "unranked" New York State conservation status according to New York Flora Atlas

as accessed on 14 December 2021. Aside from its inherent value as a component of our flora, *S. apoda* is also of interest to science as a model species from the lycophyte clade, which is sister to all other lineages of vascular plants (Schulz et al. 2010). As the species is available for purchase online, it is not entirely impossible that this colony's origin is human-mediated, however the persistence of a narrowly described growing area raises questions about the possible existence of a remnant natural spring supporting a native population here. Much of Green-Wood is built amongst the landforms of the Harbor Hill moraine, with the elevations, and even some of the kettle ponds, of the post-glacial landscape still at least loosely evident today.

Literature Cited.

Schulz, C., D.P. Little, D.W. Stevenson, D. Bauer, C. Moloney, and T. Stützel. 2010. An overview of the morphology, anatomy, and life cycle of a new model species: The lycophyte *Selaginella apoda* (L.) Spring. *International Journal of Plant Sciences* 171: 693-712.

Weldy, T., D. Werier, and A. Nelson. 2021. New York Flora Atlas. Retrieved Dec. 14, 2021. New York Flora Association, NY. <<http://newyork.plantatlas.usf.edu/>>.

FIELD TRIPS

February 5, 2022 (Saturday) 10 AM

Winter Botany and Birds

Hallock State Park Preserve, Northville, Suffolk Co., NY

Joint field trip with North Shore Land Alliance

Trip Leader: MaryLaura Lamont

contact info: woodpink59@gmail.com

(in case of bad weather); 631-315-5475

Winter botany is challenging and fun to learn the differences between trees, shrubs, and other plants. By using buds, seed, and bark we will observe a variety of plants at Hallock State Park Preserve. Learn differences between the hickories, oaks, tupelos, and more. We

will also observe and identify all the birds we can find at this time of year. Hawks, sparrows, and seabirds will be found. You will also hear about the cultural history of this 225 acre preserved piece of land. Be prepared to walk about two miles past fields and woods through trails that lead to Long Island Sound. Restrooms at the visitor center will be open, there is no parking fee in the winter and this program will meet in the upper parking lot near Long Island Sound.

Meeting place is the upper parking lot at Hallock State Park Preserve, 6062 Sound Avenue, Riverhead, NY 11901. Please contact the Trip Leader for information and to preregister.

UPCOMING PROGRAMS

Due to Covid-19 restrictions, monthly meetings at Muttontown Preserve are postponed until further notice.

LIBS Membership Renewals for 2022 are due. Mail your dues (\$25 individual, \$30 family) to:

**Kathleen Gaffney, LIBS Treasurer
590 Concord Avenue, Williston Park, NY 11596**

Thank you for your support!