

Long Island Botanical Society

Vol. 30 No. 2

The Quarterly Newsletter

Spring 2020

Distribution of Atlantic White Cedar (*Chamaecyparis thyoides*) on Long Island, New York

Eric E. Lamont¹ and John L. Turner²

¹President, Long Island Botanical Society

²Senior Conservation Policy Advocate, Seatuck Environmental Association

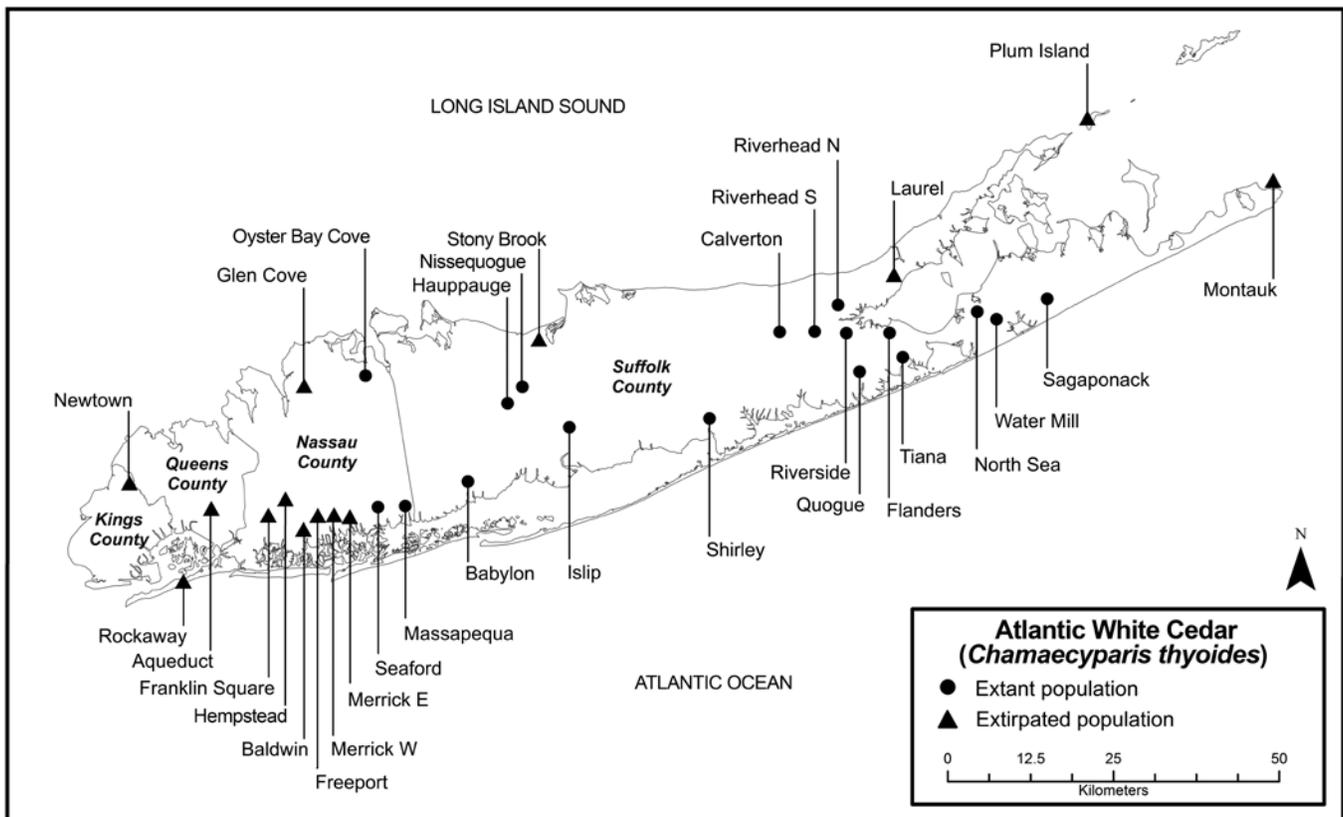


Figure 1. Map of Long Island showing extant and extirpated populations of Atlantic white cedar. Map © Eric Lamont and John Turner.

Chamaecyparis thyoides, commonly known as Atlantic white cedar, occurs primarily along the Atlantic and Gulf coastal plain from southern Maine to northern Florida and west to southern Mississippi. The species is most abundant in southern Virginia, North Carolina, and northern South Carolina, has a patchy distribution throughout most of its range and is rare in New York and New England.

In New York, *C. thyoides* is almost entirely restricted to Long Island; a few inland populations occur with Sterling Forest,

Orange County the most inland population in the state approximately 50 miles west of the Atlantic coast. On Long Island, *C. thyoides* occurs in both glaciated and unglaciated regions (Fig. 1) and grows along stream and river edges; along shallow pond edges; in shallow, shrub-dominated depressions; in deep, poorly drained peat-filled depressions and in wetlands with limited organic material. In each, *C. thyoides* ranges from being 100% dominant (Fig. 2) to being codominant with *Acer rubrum*, *Nyssa sylvatica* and/or *Pinus rigida*. In stands where
(Continued on page 15)

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

Executive Board

President

Eric Lamont 631-722-5542

elamont@optonline.net

Vice President

Andrew Greller agreller2@optonline.net

Treasurer

Carol Johnston

johnfjohnston2@optonline.net

Recording Secretary

Sue Avery suea483@gmail.com

Corresponding Secretary

vacant

Committee Chairpersons

Flora

Eric Lamont elamont@optonline.net

Andrew Greller agreller2@optonline.net

Field Trips

Allan Lindberg ajlindberg@optonline.net

Programs

vacant

Membership

Lois Lindberg lalindberg3@optonline.net

Conservation

Bill Titus dottie11560@hotmail.com

John Turner redknot2@verizon.net

Education

MaryLaura Lamont

woodpink59@gmail.com

Hospitality

Kathleen Gaffney kg73@cornell.edu

Dorothy Titus dottie11560@hotmail.com

Webmaster

Donald House libsweb@yahoo.com

Rich Kelly Day, Coordinator

Sue Feustel suefeustel@optonline.net

Newsletter Editor

Eric Lamont

elamont@optonline.net

Society News

LIBS gratefully acknowledges donors. The society would not exist without the support of its members and LIBS takes this opportunity to express sincere appreciation to the following members for their generous year-end donations:

George Andrek

Jim Ash

Sue Avery

Lucille Blum

Eleanor Burns

Robert Chapman

Regina Conlan

Barbara H. Conolly

Aline Euler

Sandra Ferguson

Sue and Ken Feustel

Douglas Futuyma

Marie George

Andrew Greller

Joseph Grupp

Louise Harrison

John Heidecker

Jean Held

David Hinchliffe

Marian Hubbard

Jane Jackson

Ann Johnson

Marilyn Jordan

Eric and MaryLaura Lamont

Maureen Levine

Larry Liddle

Lois and Allan Lindberg

Mary Maran

Baruch May

Albert Messina

Bill Miller

Leonard Miller

Margo Myles

Mary Normandia

David Papayanopoulos

Timothy Purtell

Richard and Carole Ryder

Andrew Sabin Family Foundation

Joanne Schlegel

John Seirup

Gigi Spates

Richard Stalter

Dava Stravinski

Lisa Synoradzki

Jenny Ulsheimer

Kristine Wallstrom

Ray Welch

Steve Young

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. Please show your support of LIBS by becoming a Life Member.

Current Life Members of LIBS:

Lillian Ball

Kim Berlin

Karen Blumer & Mike Madigan

Victoria Bustamante

Leslie Clarke

Barbara H. Conolly

Leon Dalva

Robert DeCandido

Wei Fang

Sue & Ken Feustel

Tom Fiore

Judith M. Fitzgerald

Kathleen Gaffney

April Gonzales

Andrew Greller

David Kunstler

Eric & MaryLaura Lamont

James C. Lendemer

Lois & Allan Lindberg

Carrie Ann Lindstadt-Iurka

Mary Maran

Grace Markman

Bill Miller

Gerry Moore

Enrico Nardone

Larry Penny

Elizabeth Pessala

Planting Fields Foundation

John Potente

Andrew Sabin Family Foundation

Seatuck Environmental Association

Vincent Simeone

Dava Stravinsky

Lenore Swenson

Robert Zaremba

(Atlantic White Cedar, continued from cover page)



Figure 2: Looking skyward in northern grove of Atlantic white cedar at Sagaponack. Photo by John Turner, Dec. 28, 2019.

C. thyoides dominates, light penetration through the canopy is limited and the understory is often dominated by bryophytes, including various species of *Sphagnum*. Generally, *C. thyoides* requires acidic muck or peaty soils underlain by sand in open or semi-open environments. Long Island populations are associated with watersheds flowing either: 1) south into bays and the Atlantic Ocean, or 2) north into Long Island Sound, or 3) into Peconic Bay on the East End.

The decline of *C. thyoides* throughout its range during the past 200 years has been largely associated with logging and drainage. On Long Island, *C. thyoides* has a long history of commercial uses. Torrey (1843) reported: "The wood of this tree is light, fine-grained, and exceedingly durable. It is used like the Cypress, for shingles, cedar-ware, fence-rails, etc. It is also sawed into boards." Smith (1960) reported: "In the last thirty years of the 19th century my grandfather built boats and launched them into Meadow Brook at Merrick [Nassau Co.]. He used cedar planking in his boats . . . While the supply of white cedar held out it was the miracle wood. It came



Figure 3. Section of New York City water pipe made of Atlantic white cedar, 1800-1840. This section of pipe was installed by the Manhattan Water Company, founded in 1799. The company was originally envisioned by public officials as a provider of pure waters from north of the city. The company's goals were never realized – its only source was a modest existing well near the Collect pond, the mostly wooden mains reached only a portion of the city's residents, and the water quality was often poor. Image © New-York Historical Society. [Overall: 24 × 15 × 15 in.; Gift of Mr. J. W. Rutherford, 1907].

into use wherever and whenever endurance was sought without the protection of paint. Our forefathers built their houses of it. The womenfolks loved white cedar floor planking because it scoured white. When put down for pier piling, it lasted indefinitely. The staves of molasses barrels, cider barrels, and storage vats were white cedar. It made telephone and telegraph poles that never needed replacement. Because of a certain resonant quality it came into demand for wooded pipes in pipe organs." Smith (1960) also mentioned the use of *C. thyoides* in the construction of water supply pipes in New York City from 1774 to 1804, before the advent of cast iron piping (Fig. 3).

The distribution and abundance of *C. thyoides* on Long Island has been incompletely reported during the past 100 years. Taylor (1915) reported it as "scattered on western L. I." and in 1916 added, "All of the stations for it on Long Island are on the coastal plain except those near Riverhead, where it is found between the Harbor Hill and Ronkonkoma Moraines. These stations near Riverhead are mostly scattered trees, there being no grove of any considerable area." Today, the populations near Riverhead are among the largest on Long Island. Harper (1917) considered *C. thyoides* "not native to northern Queens" and Svenson (1936) noted, "The white or swamp cedar [is] now almost extinct on
(continued on next page)

(*Atlantic White Cedar, continued from page 15*)

Long Island.” Peters (1973) reported no North Shore populations west of Hauppauge and listed fewer than half the total number of populations reported by us.

The objectives of our study include (a) determination of the past and present distribution of *C. thyoides* on Long Island, and (b) comment on the current status of each population.

Methods. The past and present distribution of *C. thyoides* on Long Island is based on the authors’ extensive field work and personal observations from the 1970s to present, herbarium collections, published literature, and field work and personal communication with local botanists and naturalists including Victoria Bustamante, the late Rich Kelly, MaryLaura Lamont, Allan Lindberg, Bob McGrath, Michael Sperling, Ray Welch, Steve Young; Carol Stern and Janice Angliss, Research Librarians at Glen Cove Library; New-York Historical Society; Phil Blocklyn, Executive Director of the Oyster Bay Historical Society and Jane Jackson of the North Shore Land Alliance for their help with the research.

Results and Discussion. Historically, 32 populations of *C. thyoides* have been known to occur on Long Island and today 18 are extant. Eighteen of the 32 populations are/were associated with watersheds flowing south across Long Island’s outwash plain into bays before emptying into the Atlantic Ocean, seven flow/flowed north into Long Island Sound and seven flow/flowed into the Peconic Bay watershed on the East End.

In the following discussion, past and present occurrences of *C. thyoides* on Long Island are presented alphabetically by county followed by the town closest to each population. Some localities have common place names (e.g., Silver Lake County Park) listed after the town. For each occurrence from Kings, Queens and Nassau counties we include current status (extant or extirpated), locality (latitude and longitude), published reports by earlier investigators, annotations from herbarium collections, summary of land use history when known, and our personal field observations from the past 30+ years. The entries for Suffolk County have been shortened because of space restrictions. An expanded version of this article is being prepared by us for publication in a peer-reviewed journal.

KINGS COUNTY

Newtown. Cedar Swamp. (extirpated)

40.714303 Lat., -73.931228 Long.

This historical occurrence of *C. thyoides* represents the westernmost population on Long Island and was likely extirpated by the mid-1800s when the natural landscape of the Newtown Creek watershed had been significantly altered by human activity. This population also represents the only known occurrence of *C. thyoides* in Kings County.

An early account of the “Cedar Swamp” near Newtown has been provided by Thompson (1839), including a description of the locality: “near the road from Williamsburgh [sic] to Jamaica.” Today, the road is known as Metropolitan Avenue and for the past 200 years it has crossed the headwaters of Newtown Creek just east of Williamsburg. Svenson (1936) also mentioned the “Cedar Swamp” near Newtown and Clemants (1999) reported the locality as the headwaters of Newtown Creek in Kings County. Today, the region surrounding Newtown Creek consists of commercial and residential urban development.

NASSAU COUNTY

Baldwin. Silver Lake County Park. (extirpated)

40.647906 Lat., -73.61607 Long.

The Baldwin locality mentioned by Smith (1960) and Peters (1973) is approximately 2.7 km south of the town of Baldwin; a small, isolated, and disturbed remnant of the original habitat has been preserved at Silver Lake County Park. This locality includes the headwaters of Parsonage Creek and the stream that flows south into Parsonage Cove. Smith (1960) reported “one tree (which with a four foot, six inch diameter) was the largest white cedar on Long Island at the time.” Peters (1973) reported, “In 1957 isolated trees still remained” but “In 1972, all were gone.” The Parsonage Creek watershed was surveyed by Turner in 2013 and no *C. thyoides* was found; the region has been negatively impacted by human activities.

Franklin Square. (extirpated)

40.687277 Lat., -73.675733 Long.

We have found only two reports (and no herbarium collections) of *C. thyoides* from the vicinity of Franklin Square: Smith (1960) noted “a small group of three or four stands in Franklin Square” and Peters (1973) noted “isolated trees still remained at Franklin Square.”

The locality of this historical population is not currently known. It might have been located in the headwaters and along the northern borders of Hook Creek, the only stream running through the Franklin Square community. We and others have searched for *C. thyoides* throughout the region with no success. Today, the headwaters of Hook Creek have been destroyed and filled in for various industrial and commercial uses and much of the creek has been channelized.

Freeport. Brookside Preserve. (extirpated)

40.658959 Lat., -73.602777 Long.

The locality of the Freeport population was recorded by William Ferguson on annotation labels of his herbarium collections of *C. thyoides* [14 Oct 1922, *Ferguson s.n.*, NY; 2 sheets]: “N of RR, between reservoir and swamp” and “1/5 mi NE of Reservoir, N of RR.” Millburn Creek flows south through this watershed and empties into Baldwin Bay. The watershed property north of the railroad tracks was owned by the City of Brooklyn as part of the Brooklyn Water Works from 1852 until 1988

(Turner 2003), when Brookside Preserve was created through the efforts of South Shore Audubon Society and Nassau County government.

Visits in the late 1980s to the Milburn Creek watershed region by the authors and others revealed two live trees of *C. thyoides* along the creek in Brookside Preserve just north of the railroad tracks. At the time,

these individuals represented the westernmost occurrence of *C. thyoides* on Long Island. The area was surveyed by Turner in 2011 and no live *C. thyoides* was found. Michael Sperling (pers. comm.) of South Shore Audubon Society reported, "The last two trees of *Chamaecyparis* had died in the mid-1990's, one from destruction by vandals who cut it down and the other from being wind-tossed in a storm." The remains of the wind-tossed tree were still visible in 2011.

Glen Cove. Cedar Swamp. (extirpated)
40.843197 Lat., -73.616617 Long.

We have been unable to find much information on the occurrence of *C. thyoides* in the vicinity of Glen Cove. Our primary source is Harper (1907) supplemented with three historical maps of Long Island from the mid-1800s. We speculate that this *C. thyoides* swamp occurred along the main stream flowing north through Cedar Swamp Valley into Glen Cove Creek and into Long Island Sound.

Harper (1907) noted, "Some maps of Long Island (such as can be seen in almost any railroad station on the island) show a settlement named "Cedar Swamp" about three and one half miles northeast of Roslyn, in the glaciated region; but on a recent visit to the spot indicated I could find no perceptible aggregation of houses, no *Chamaecyparis*, nor even any swamp. Inquiry at a house near by elicited the information that the road I was on was called the Cedar Swamp Road, but my informants did not know why, and after walking along it for several miles I knew no more about it than before."

Three maps of Long Island from 1842 to 1859 show "Cedar Swamp" just southeast of Glen Cove at the intersection of what is now Cedar Swamp Road and Chicken Valley Road. The maps include *Geological Map of Long Island with the Environs*



Figure 4. Foliage spray of Atlantic white cedar at Cranberry Bog Nature Preserve, Riverhead. Photo by John Turner, Dec. 22, 2019.

of New York by W. W. Mather (1842), *Map of Long Island* by J. H. Colton (1852) and *Map of Queens County* (1859).

Today the stream flowing north, adjacent to Cedar Swamp Road, has been negatively impacted by human activities, with much of the water now piped underground to accommodate a variety of residential, commercial,

industrial, and recreational uses. The area was surveyed by Turner in 2013 and no *C. thyoides* was found.

Hempstead. Hempstead Lake State Park (extirpated)
40.666479 Lat., -73.652902 Long.

One of the largest Atlantic white cedar swamps on Long Island occurred in the headwaters of Hempstead Lake and extended south along Mill Creek, past Rockville Centre. Torrey (1843) noted *C. thyoides* "occurs in considerable quantities . . . near Hempstead" and included the locality in a list of four large white cedar swamps on Long Island. Bicknel (1908) reported, "Of the localities mentioned by Torrey (1843) that at Hempstead is probably now reduced to the two companion trees at Rockville Center [sic] on the stream flowing south from Hempstead, which was dammed and excavated over thirty years ago, I am told, to form the Hempstead reservoir and associated ponds." The region's natural hydrological features have been significantly altered by human activities and *C. thyoides* is considered extirpated from this locality.

Massapequa. Carman Creek. (extant)
40.670023 Lat., -73.433301 Long.

The Atlantic white cedar swamp at Carman Creek was mentioned as being near Amityville by Nicols (1907), Bicknell (1908), and Peters (1973) but we refer the locality to Massapequa because Amityville is in Suffolk County and the cedar swamp is in Nassau County. The site was surveyed by Turner in 1985 and 22 individuals of *C. thyoides* were observed. A 2012 site visit revealed the population had declined to five large, living trees growing in a section of Carman Creek immediately north of Merrick Road. All of the trees occurred on the eastern bank of the creek, with a group of three approximately 45 meters north of the road and

(continued on next page)

(Atlantic White Cedar, continued)

the other two about 120 meters north of the road. Evidence of reproduction was not observed; seedlings and saplings were not found.

The site is surrounded by high density residential development on the eastern side of Carman Creek and a commercial parking lot on the west. The site is highly degraded with no quality streamside wetland habitat remaining; the backyards of adjacent residential properties nearly about the trees, providing very little buffer. Considering the downward trend in the number of surviving trees, it is likely this population will become extirpated in the near future.

Merrick (east). Meroke Preserve. (extirpated)
40.664095 Lat., -73.54233 Long.

The Atlantic white cedar swamp in the Baldwin Creek watershed east of Merrick was once considered “the largest on Long Island” (Taylor 1916). Harper (1907) noted, “The *Chamaecyparis* occurs for some distance . . . there are some thousands of the trees” and Nichols (1907) reported “a good colony of the tree.” Bicknell (1908) reported: “this cedar swamp is the same one to which an excursion of the Torrey Club was conducted by Miss F. A. Mulford on May 30, 1906. Upon that occasion the swamp was explored at a point over half a mile north of the railroad. Dr. Harper traced the cedars several hundred yards south of the railroad. Hence it appears that the growth extends nearly a mile north and south along the stream. Probably no more extensive growth of this tree occurs within a much greater distance from New York [City].” Taylor (1916) contributed a detailed description and analysis of this “grove of several hundred acres” and noted, “About twenty-five miles from the City, at Merrick, on the south shore of Long Island, there is a cedar swamp more than a mile long and varying in width from a few yards to nearly half a mile.”

Although the cedar swamp was large, early botanists also reported a lack of reproduction of *C. thyoides* and a state of decline caused by negative human impacts. Harper (1907) noted, “The fact that no trees less than three inches in diameter were seen would

seem to indicate that no young ones have come up for several years, perhaps ever since the reservoir was made.” Taylor (1916) described negative impacts on the cedar swamp “caused by the damming of the stream about a hundred years ago.” . . . “All of the region now occupied by the pond was once covered by white cedar trees, submerged stumps of which may still be seen in the clear water.” . . . “To the southward the swamp has suffered much from fire and from pumping operations of the City, a reservoir having been made just north of the railroad, thereby clearing the trees from this area.” Smith (1960) provided a summary of various factors contributing to the decline of *C. thyoides* along Baldwin Creek. Peters (1973) reported the population extirpated by 1972.

A visit to Meroke Preserve by Turner in 2011 failed to reveal any living trees although a few decomposing logs in the northwestern section of the preserve appeared to be Atlantic white cedar.

Merrick (west). (extirpated)
40.659600 Lat., -73.567206 Long.

Smith (1960) reported three individuals of *C. thyoides* “in the northeast quadrant of the Meadow Brook Parkway–Babylon Turnpike clover leaf” west of Merrick. The clover-leaf is adjacent to East Meadow Pond in the Meadowbrook watershed. The area was surveyed by Turner in 2013 and *C. thyoides* was not found. The remnant colony reported by Smith (1960) may have been part of a larger population destroyed by road construction and other human caused disturbances.

Oyster Bay Cove. Tiffany Creek Preserve. (extant)
40.864418 Lat., -73.502535 Long.

The population of *C. thyoides* at present day Tiffany Creek Preserve occurs on the eastern edge of the preserve at the head of Shutter Lane Pond, one of two ponds that form the headwaters of Tiffany Creek. The creek flows north into Oyster Bay Harbor and ultimately into Long Island Sound. The property was part of the Henry Fleet Farm at the turn of the 20th century. Allan Lindberg has been monitoring Tiffany Creek Preserve since it was acquired by Nassau County in 1992.



Figure 5. Looking across Sweezy Pond (south of the Peconic River in Riverhead) at a shoreline dominated by Atlantic white cedar with pitch pine (*Pinus rigida*) further inland. The top of Atlantic white cedar trees is spike-shaped whereas pitch pine crowns are rounded or dome-shaped.

Grier (1925) reported *C. thyoides* from “Tiffany Estate, CSH.” This report refers to cultivated specimens once planted at Laurelton Hall, the L. C. Tiffany Estate in Cold Spring Harbor (A. Lindberg, pers. comm.). We have found no published reports or herbarium collections of *C. thyoides* from Oyster Bay Cove.

In 2011 and 2012 Turner surveyed the site and recorded the following observations: 16 trees, loosely grouped in a grove encompassing approximately 465 m². Individuals of *C. thyoides* grow on raised hummocks (dominated by several species of *Sphagnum*) ranging from approximately 10 to 30 cm above water level. Individuals vary in age and dbh; mature individuals range from 50 to 60 cm dbh and most other trees range from 25 to 30 cm. No seedlings were observed but cones were found on many individuals and fallen cones were found mixed with the leaf litter. No threats to the population were observed. Water levels appeared natural and no discharge of pollutants into the swamp was observed.

Seaford. Tackapausha Preserve. (extant)
40.668837 Lat., -73.481137 Long.

The westernmost extant population of *C. thyoides* on southern Long Island occurs in the southern portion of the Seaford Creek watershed at Tackapausha Preserve, owned by Nassau County. The preserve is situated in a heavily suburbanized region.

William Ferguson collected a voucher of *C. thyoides* from this population in 1926 [17 Jul 1926, Ferguson 5033 (NY)]. Smith (1960) reported “three or four [trees] in the Tackapausha Preserve at Seaford” and Peters (1973) reported: “In 1957 isolated trees still remained at Seaford” and “In 1972, a few trees” remained.

Observations of the cedar grove and vicinity by Turner from the early 1980s to present has revealed a decline in the population due to negative impacts by human activities, including soil compaction along a hiking trail, vandalism of cedar trees, dumping, and human caused fires. A 2011 restoration project of portions of Tackapausha Pond’s shoreline included planting ten young individuals of *C. thyoides* (from Long Island origin) on both sides of the path to the bridge.

In December 2017 Turner visited the cedar grove and counted 21 live trees of various ages, ranging in size from 32.7 cm to 127.3 cm dbh. No seedlings or young saplings were observed and several smaller trees had died since a visit in 2012. Two live, mature trees had been wind-tossed into the pond and a hummock during a recent storm. The cedar grove had been vandalized: five trees, including the third and fourth largest, had been cut with a hatchet and had bark stripped off their trunks. Some of the hummocks had been trampled and eroded by humans walking along a trail running through the cedar grove.

We recommend restricting access to the cedar grove by eliminating the hiking trail thereby reducing soil compaction and vandalism and restoring habitat favorable to the germination of *C. thyoides* seeds.

QUEENS COUNTY

Aqueduct. Baisley Pond Park. (extirpated)

40.674216 Lat., -73.787853 Long.

Bicknell (1908) described the decline of an “ancient” colony of *C. thyoides* east of Aqueduct in present day Baisley Pond Park: “The westernmost station [of *C. thyoides*], a mile and a quarter east of Aqueduct, is a swampy spot in the woods which, though it now becomes dry in summer, was once evidently a more permanent swamp and formed the source of a small brook. Here is an assemblage of white cedars not more than a few rods in extent, the remnant of an ancient colony as attested by the size of some of the trees. When last visited, May 9, 1906, many of the trees were dead or dying, the most vital appearing green in the upper parts only. The largest trunk measured 7 feet 6 inches in circumference close to the base and 6 feet 9 inches a foot above the ground.” This cedar swamp was also noted by House (1924).

Baisley Pond Park was surveyed by Lamont in 2012 and *C. thyoides* was not found. The swampy woods and small brook described by Bicknell (1908) were gone; instead, the site consisted of a landscaped New York City park with athletic fields, tennis courts, and paved walkways around a pond. The park is surrounded by residential and commercial buildings.

Rockaway. (extirpated)

40.579819 Lat., -73.837237 Long.

Torrey (1843) reported *C. thyoides* from “near Rockaway” and noted “it occurs in considerable quantity.” In 1896, Ericson collected *C. thyoides* from “Rockaway Park”. Bicknell (1908) reported, “Wherever Torrey’s Rockaway station may have been, there can be little doubt that it no longer exists.”

SUFFOLK COUNTY

Babylon. Belmont Lake State Park. (extant)

40.709205 Lat., -73.327103 Long.

A large population of *C. thyoides* was reported from the vicinity of Babylon by Torrey (1843). A 2012 survey by Turner of Belmont Lake State Park revealed one live individual of *C. thyoides* in a freshwater swamp immediately southeast of Southards Pond. A nearby dead cedar had been blown down during a winter storm in 2010. No seedlings or young trees were observed despite the presence of suitable habitat.

Calverton. (extant?)

40.900890 Lat., -72.761505 Long.

In 1923 Roy Latham collected two vouchers of *C. thyoides* from “Calverton” and “between Calverton & Riverhead villages”. Peters (1973) referred to a “report” of *C. thyoides* from Calverton but provided no specific information. Since the early 1980s we

(continued on next page)

(*Atlantic White Cedar, continued from page 19*)

have searched unsuccessfully for *C. thyoides* in the vast Peconic River watershed between Calverton and Riverhead. Because abundant suitable habitat still occurs we speculate a few scattered individuals persist and more field work is needed.

Flanders. Birch Creek-Owl Pond County Preserve, Hubbard County Park, Sears-Bellows County Park. (extant)

40.886121 Lat., -72.563448 Long.

Thousands of multi-aged individuals of *C. thyoides* dominate parts of the Birch Creek, Mill Creek, and Hubbard Creek watersheds in the morainal hills of Flanders and along the coastal streams flowing north into Flanders Bay (Fig. 6). This region supports the largest, most extensive and diverse mega-population of *C. thyoides* currently known on Long Island. A population of dwarf individuals of *C. thyoides* occurs on “moated islands” in several ponds including House and Division ponds in Sears-Bellows County Park. The trees are only 1-1.5 m tall and usually occur in dense stands. The small islands are surrounded by moats of open water; the water table lies close to the surface all year.

Hauppauge. Hauppauge Springs. (extant)

40.824134 Lat., -73.230231 Long.

The population of *C. thyoides* occurring in the headwaters of the Nissequogue River, south of present day Veterans Memorial Highway (Route 454), has been known to local botanists and naturalists for more than 100 years. Herbarium vouchers collected from 1909 to 1936 and Peters (1973) list the locality as “Hauppauge” and “Hauppauge Bog.” Potente (2005, 2017) called it “Hauppauge Springs.” A field survey of Hauppauge Springs by Turner in 2017 revealed approximately 48 individuals of *C. thyoides* on the south side of Route 454, east of Old Willets Path.

Islip. Connetquot River State Park Preserve, Bayard Cutting Arboretum. (extant)

40.748115 Lat., -73.156058 Long.

A large population of *C. thyoides* once occurred in the Connetquot River watershed in Islip (Torrey 1843). Today, only a few live individuals remain in the headwaters north of Route 454 in Connetquot River State Park Preserve and near the mouth of the river, north and south of Sunrise Highway (Route 27). In 2019 the dam failed at West Brook (a tributary of the Connetquot River) and the man-made pond drained revealing stumps of Atlantic white cedar that had been submerged for more than 100 years (Turner 2019).

Laurel. (extirpated)

40.977544 Lat., -72.557287 Long.

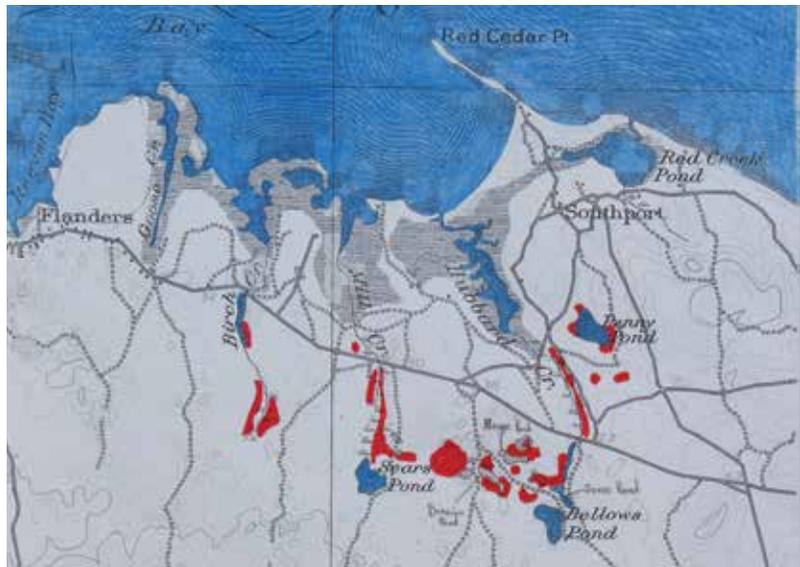


Figure 6. Map showing the mega-population (in red) of Atlantic white cedar in the Birch Creek, Mill Creek and Hubbard Creek watersheds in Flanders. Flanders Bay is to the north (top). Map based on the USGS Riverhead, N.Y. Quadrangle, 1904 edition, reprinted 1947.

The original report of *C. thyoides* from “a swamp at Laurel, Southold Township” by Burnham and Latham (1925) was based on a Latham collection from 1923. Searches of the swamps near Laurel Lake by Lamont from the 1980s to present have failed to relocate *C. thyoides*.

Montauk Point. (extirpated)

41.074269 Lat., -71.859462 Long.

Remnants of an ancient Atlantic white cedar swamp, currently mostly submerged in the Atlantic Ocean a few meters off the north shore of Montauk Point, have been reported by Englebright and Lamont (2011).

Nissequogue. Blydenburgh County Park. (extant)

40.828984 Lat., -73.226056 Long.

Chamaecyparis thyoides was collected several times from the Nissequogue River watershed in the 1920s and reported from the vicinity of Nissequogue by Peters (1973). The population is now restricted to the southwest corner of Stump Pond in Blydenburgh County Park. Visits to the site by Turner and Lamont since the 1970s have revealed a stable population of approximately 140 mature individuals; numerous seedlings were observed by Turner in 2015 suggesting a healthy population.

North Sea. (extant)

40.925978 Lat., -72.409774 Long.

Four dense groves of *C. thyoides* occur in North Sea, each in a topographical depression aligned north to south with Little Fresh Pond; three groves are north of the pond and one is to the south. The two northernmost groves epitomize cedar populations growing in deep, poorly drained peat-filled depressions; corings obtained from the northernmost grove by Alice Belling in the 1970s revealed a nearly twenty

foot layer of peat (Belling 1977). Roy Latham collected *C. thyoides* from North Sea in 1954 and the locality was also mentioned by Peters (1973).

Plum Island. (extirpated)

41.174965 Lat., -72.200498 Long.

Roy Latham (1969) documented an Atlantic white cedar swamp in the extensive freshwater wetland on Plum Island's southwestern corner. Norman Taylor of Brooklyn Botanic Garden collected bark from this species on Plum Island in 1915 (voucher at BKL) and wrote on the herbarium label: "a good sized grove of dead trees." Lamont & Stalter (2011) reported cedar stumps still persisting at the locality.

Quogue. Quogue Wildlife Refuge. (extant)

40.836875 Lat., -72.615653 Long.

Atlantic white cedar is scattered along Quantuck Creek in the southern half of Quogue Wildlife Refuge; four groupings occur - three groves on the east side of Quantuck Creek, the northernmost located in the forested wetlands just south of the berm at North Pond, and two others further south, the southernmost found at the juncture of the Main and Bridge Trails. Another group occurs on both sides of the creek and both north and south of the wooden bridge that crosses the creek, from which these grouping of trees can be easily seen. We estimate the entire refuge population at about 100 trees.

Riverhead (north of Peconic River). Kingswood Parkland Preserve and Sawmill Creek. (extant)

40.929138 Lat., -72.663333 Long.

A population of several hundred Atlantic white cedar trees occurs in a forested wetland bounded by Northville Turnpike, Ostrander Avenue and Kings Drive east of Merritt Pond in Riverhead. Another population of about a dozen trees occurs on the east side of Northville Turnpike just south of its intersection with Oliver Street, in the watershed of Sawmill Creek. This population includes individuals that are infected with the fungal disease caused by *Gymnosporangium* (Fig. 7). A little north of this population, also on the east side of Northville Turnpike, are two additional cedar stands containing approximately 40 trees. This population appears to be expanding with several younger trees along the water's edge.

Riverhead (south of Peconic River). Cranberry Bog County Nature Preserve, Peg Lane Pond, and David Sarnoff Preserve. (extant)

40.906657 Lat., -72.672571 Long.

The various and extensive groves of *C. thyoides* within Cranberry Bog County Nature Preserve and adjacent properties constitutes one of the two (along with the Flanders mega-population) largest, most intact and least disturbed Atlantic white cedar populations on Long Island. The Riverhead mega-population collectively includes thousands of trees. A few hundred cedars grow along the shoreline of

Swezey's Pond and the stream that feeds the pond. Hundreds of individuals also occur around Cheney and Cedar Ponds on the north side of County Route 51. In the David Sarnoff Preserve 34 trees grow adjacent to County Route 104 along the western edge of the unnamed pond situated in the extreme northern end of the state property.

Riverside. (extant)

40.909637 Lat., -72.642110 Long.

Based on a 2013 visit by Turner, 7 individuals of *C. thyoides* occur in a swamp bordering a pond and outlet stream flowing north into the Peconic River on the southwest corner of the intersection of State Route 24 and County Route 105.

Sagaponack. Adjacent to Sagg Swamp Nature Preserve. (extant)

40.938505 Lat., -72.285696 Long.

Three discrete groves of Atlantic white cedar occur in Sagaponack south of Route 27 and north of The Nature Conservancy's Sagg Swamp Preserve. The groves are found in a low-lying area in the headwater system that flows through Sagg Swamp

(continued on next page)



Figure 7. *Gymnosporangium* fungus swellings in woody stems of Atlantic white cedar growing on the east side of Northville Turnpike, Riverhead. Photo by John Turner, Dec. 28, 2019.

(Atlantic White Cedar, continued from page 21)



Figure 8. Largest known Atlantic white cedar on Long Island at Sagaponack. Photo by John Turner, Dec. 28, 2019.

and are aligned in a northwest-southeast orientation. The two outer groves each contain several dozen trees and the middle one contains about a dozen trees. What may be the largest Atlantic white cedar on Long Island, with a DBH of 28.82 in., was found by Turner in 2019 growing on the eastern edge of the middle grove (Fig. 8).

Shirley. (extant)
40.801846 Lat., -
72.883819 Long.

One Atlantic white cedar tree was observed by Turner in 2013 on the east side of the Carmans River south of Sunrise Highway.

Although we have found no previous reports or collections of *C. thyoides* from the Carmans River watershed we speculate there was a larger population at this locality in the past.

Stony Brook. (extirpated)
40.913668 Lat., -73.146620 Long.

The only reports we have found of *C. thyoides* from the vicinity of Stony Brook include Saxton's (1790) report of "a cedar hassock which was . . . on the east side of Smithtown bay" and Blydenburgh's (1832) report of "a certain cedar hassock in Stony Brook mill pond".

Tiana. Munn County Park. (extant)
40.871005 Lat., -72.545266 Long.

Dozens of Atlantic white cedar trees occur south of the Ronkonkoma Moraine along Tiana Creek and on the eastern shore of Munn's Pond and south of Montauk Highway on the east side of the creek north of the Long Island Railroad tracks.

Watermill. (extant)
40.912020 Lat., -72.375452 Long.

Four distinct colonies of Atlantic white cedar occur in relatively close proximity to each other on both sides of Seven Ponds Town Road in Watermill. The two colonies on the east side of the road and the northern colony on the west side consist of scattered individuals within a shrub swamp. A large and dense cedar grove occurs in the western portion of an extensive wetland on the west side of the road.



Literature Cited.

- BELLING, A.J. 1977. Postglacial migration of *Chamaecyparis thyoides* (L.) B.S.P. (Southern White Cedar) in the northeastern United States. Ph.D. Dissertation. New York University.
- BICKNELL, E.P. 1908. The white cedar swamp in western Long Island. *Torrey* 8: 27-28.
- BLYDENBURGH, R.F. 1832. *Cited in:* Ross, P. & W.S. Pelletreau. 1903. A history of Long Island. Chap. XI, p. 241. Lewis Publishing Co., NY.
- BURNHAM, S.H. & R. LATHAM. 1925. The flora of the town of Southold, Long Island and Gardiner's Island, New York. Fifth supplementary list. *Torrey* 25: 71-83.
- CLEMANTS, S. (ed.). 1999. New York Metropolitan Flora. Woody Plant Workbook. Brooklyn Botanic Garden, Brooklyn, NY.
- ENGLEBRIGHT, S. & E. LAMONT. 2011. Rediscovering ancient "Ghost Forests" on eastern Long Island, New York. *Long Island Botanical Society Newsletter* 21: 29, 31-32.
- GRIER, N.M. 1925. The native flora of the vicinity of Cold Spring Harbor, New York. *American Midland Naturalist* 10: 384-437.
- HARPER, R.M. 1907. A Long Island cedar swamp. *Torrey* 7: 198-201.
- HARPER, R.M. 1917. Two Long Island peat bogs. *Torrey* 17: 108.
- HOUSE, H.D. 1924. Annotated list of the ferns and flowering plants of New York State. *New York state Museum Bulletin No. 254:* 1-759.
- LAMONT, E. & R. STALTER. 2011. What happened to the Atlantic white cedar swamp on Plum Island, New York? *Long Island Botanical Society Newsletter* 21: 33.
- LATHAM, R. 1969. The status of the Osprey at Orient, Long Island. *Engelhardtia* 2: 3.
- NICHOLS, J.T. 1907. New stations for *Chamaecyparis* on Long Island, New York. *Rhodora* 9: 74.
- PETERS, G.H. 1973. The trees of Long Island. Long Island Horticultural Society, Publication no. 3. Oyster Bay, NY.
- POTENTE, J.E. 2005. The Hauppauge Spring. *Long Island Botanical Society Newsletter* 15: 29, 31-32.
- POTENTE, J.E. and J.L. TURNER. 2017. A brief history of the effort to preserve Hauppauge Springs. *Long Island Botanical Society Newsletter* 27: 30-31.
- SAXTON, D. 1790. *Cited in:* Ross, P. & W.S. Pelletreau. 1903. A history of Long Island. Chap. XI, p. 241. Lewis Publishing Co., NY.
- SMITH, J.D. 1960. Long Island cedars. *Long Island Forum* 23: 78, 82.
- SVENSON, H.K. 1936. The early vegetation of Long Island. *Brooklyn Botanic Garden Record* 25: 207-227.
- TAYLOR, N. 1915. Flora of the vicinity of New York. *Memoirs of The New York Botanical Garden* 5: 1-683.
- TAYLOR, N. 1916. A white-cedar swamp at Merrick, Long Island, and its significance. *Memoirs of The New York Botanical Garden* 6: 79-88.
- THOMPSON, B.F. 1839. *History of Long Island.* Published by E. French, New York.
- TORREY, J. 1843. A flora of the state of New-York. Vol. 2. Carroll and Cook, Albany.
- TURNER, J.L. 2003. The Ridgewood water supply system. *Long Island Forum* 66: 6-17.
- TURNER, J.L. 2019. Restoring the natural flow at West Brook, Oakdale, Suffolk County. *Long Island Botanical Society Newsletter* 29: 30-31.

FIELD TRIPS

APRIL 18, 2020 (SATURDAY) 10:00 AM

Muttontown Preserve North, Nassau County NY.

"The Seven Ponds Woods"

Trip Leader: Al Lindberg

email alindberg@optonline.net

At the center of Muttontown Preserve North, the Seven Ponds Woods are the last remnants of pro-glacial "Lake Muttontown" which was locked between the Harbor Hill Terminal Moraine and the retreating Harbor Hill ice sheet. Once part of the H.I. Hudson Estate, this area has been recognized as a significant wetlands since 1916. While exploring the woodlands, we will view one of Muttontown Preserve's two persimmon *Diospyros virginiana* populations, and look for Hophornbeam *Ostrya virginiana*, and whatever we find along the way. We will meet at The Bill Paterson Nature Center. Dress for the weather, waterproof footwear may be useful. Hand lens, camera and binoculars are recommended. Bring a liquid and snack or sandwich, as desired.

Directions: The Bill Paterson Nature Center is located at the end of Muttontown Lane south of Northern Blvd. (Rte 25A) in East Norwich. From the Long Island Expressway take Exit 41 North (Rte 106) to East Norwich, make a left on Northern Blvd (26A) for one block to Muttontown Lane. Turn left (south), the road ends at the Nature Center Parking Area.

MAY 2, 2020 (SATURDAY) 10:00 AM

Ashley Schiff Preserve, Stony Brook Univ., Suffolk County NY.

Trip Leaders: Sue Avery & Andy Greller

email suea483@gmail.com and agreller2@optonline.net

Sue & Andy will guide us through this 26-acre preserve on the Stony Brook University campus. Located on the Harbor Hill Terminal Moraine, the preserve features 75 plant species, including trailing arbutus, mountain laurel, winterberry and spotted wintergreen, all native to the deciduous forest.

Directions: We will meet at the Ashley Schiff Preserve kiosk, which is situated on Circle Road. There is a visitor parking lot, free on weekends, also on Circle Road next to the Life Sciences building. <https://goo.gl/maps/avWvzGJ1jpf0YDeYA>

Dress for the weather, hand lens, camera and binoculars are recommended. Bring a liquid and snack or sandwich, as desired.

SAVE THE DATES

Wednesday, September 16, 2020, 9am – 3pm.

Tobay Beach Kennedy Preserve, Nassau County NY.

Joint trip with NYFA, "Rare plants and Cyperus of Jones Beach"

Leader: Steve Young

Saturday September 26, 2020, 9am – 2pm.

Greentree Foundation Property, Manhasset,

Nassau County NY.

Leaders: Stephane Perreault and Jim Stevenson

RICH KELLY DAY AT CAUMSETT

June 17-24, 2020

(date to be determined; a warm, sunny day)

12 Noon

Caumsett State Historic Park,
Lloyd Neck, Suffolk County

We will gather in memory of Rich Kelly and count butterflies.

If you are interested in attending this special event please email Sue Feustel (suefeustel@optonline.net) and you will receive more details.

For background info, see

- 1) the web page: caumsettprojects.org (it includes information/photos on the Baltimore Checkerspot population at Caumsett) and
- 2) the last issue of the LIBS Newsletter: "Rich Kelly and the Baltimore Checkerspot Success Story" by Sue and Ken Feustel (2020, Vol. 30, p. 10).



Baltimore Checkerspot at Caumsett. Photo by Ken Feustel.

UPCOMING PROGRAMS

April 14, 2020* **Tuesday, 7:30 PM**

Andrew Greller: "Great Ferns I have Known."

Ferns occupy niches in almost every terrestrial ecosystem. Their forms vary from tall trees to paper-thin epiphytic "films." Ferns formed the first land forests in Earth's history. They are perhaps the most beautiful leaf forms among plants today. Long Island is fortunate to have many fern families represented in its flora. We will review the great taxonomic diversity of ferns, their life cycle, ecological niches, and their geological history. Andy is Vice President of LIBS and Professor Emeritus of Biology, Queens College, CUNY.

May 12, 2020* **Tuesday, 7:30 PM**

Douglas Futuyma: "World Birding: Travels of an Evolutionary Biologist." In this talk Doug

will share some of his birding experiences within a broader natural history context. Doug is a Distinguished Professor in the Department of Ecology and Evolution at Stony Brook University and a Research Associate on staff at the American Museum of Natural History. His research focuses on speciation and population biology and he is the author of a widely used undergraduate textbook on evolution.

June 9, 2020 **Tuesday, 5:30 PM**

(please note early start time for the barbecue)

Annual Barbecue: The annual barbecue, featuring Chef Eric's made-to-order hamburgers and hot dogs. Salads, deviled eggs, desserts, etc. gladly accepted. The traditional location – on the green behind the Muttontown Preserve nature center.

* All programs held at 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