Long Island Botanical Society Muttontown Preserve Muttontown Lane East Norwich, New York 11732

Programs

October 9, 2001* Tuesday, 7:30 PM

John E. Potente: John will give a photographic slide presentation on native plants with examples of a few local habitat restorations in: "Restoring the Long Island Genotypes". Location: Earth Science Center,

SUNY at Stony Brook

November 13, 2001* Tuesday, 7:30 PM

George Davis: George will present us with a down and dirty look at our world of saprophytes in his talk on: "**Mushrooms**" Note: Executive Board Meeting @ 6:30PM All members are welcome to attend. Location: Bill Paterson Nature Center,

Muttontown Preserve, East Norwich

December 11, 2001* Tuesday, 7:30 PM Joanne Knapp: Joanne will present a look at rare and unusual east coast native wildflowers in her slide show "Neat Places-Neat Plants" Location: Bill Paterson Nature Center, Muttontown Preserve, East Norwich

*Refreshments and informal talk begin at 7:30. Formal meeting starts at 8:00 PM. Directions: 516-571-8500

 Vol. 11, No.4
 The Quarterly Newsletter

Lopped Trees of Long Island Philip Marshall, Yale University

One of the curious features of the landscape of Long Island is what is termed "lopped trees", old oaks (Quercus spp., usually Q. alba) strangely deformed with right-angle bends in their boles near the base, found along property boundaries (often on roadsides) and the borders of farmland, and sometimes in the middle of the woods. Despite their strange and striking form, lopped trees are seldom found alone, and can usually be found in linear arrangements with other similarly contorted trees. The best known examples are a row of trees on the north side of the Northern State Parkway just east of Route 110 in Melville, but most are farther east in Brookhaven and on the South Fork. Often familiar landmarks, lopped trees are not natural but are rather the products of human manipulation, a part of the cultural landscape. This much is accepted, but what was their purpose?

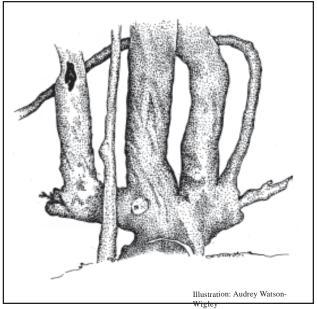
Lopped trees bear a striking and uncanny resemblance to "trail marker trees" found across the Midwest, oaks bent over when young by Native Americans to indicate the routes of footpaths (Jannsen, 1940), but no one has ever seriously suggested that lopped trees are part of Long Island's native heritage, even though some people call them "Indian trees". Although past attempts at coring lopped trees to determine their precise age have been unsuccessful, owing to heart rot (Richard Stavdal, pers. comm.), it has always been assumed that the trees are relics of the early years of European settlement on Long Island. There are records of British l a n d o w n e r s p i n n i n g d o w n

LONG ISLAND BOTANICAL SOCIETY

Oct.-Dec.

young oak trees to produce the curved "compass timber" needed for wooden shipbuilding (Albion 1965), but this was not likely produced on Long Island, despite the historical prominence of that industry here. The salient feature of lopped trees would appear to be their linear association with the edges of old farm fields and the borders of property and where there is one there are usually others to be found in a straight line on either side of it.

It is frequently asserted that lopped trees, under the name of "bound trees" or "line trees", were intended as markers of property boundaries, bent over horizontally at sapling size by farmers asserting their ownership of land (e.g. Murphy, [1964] 1991). However, lopped trees and bound trees are not the same. Bound trees, also known by surveyors as "witness trees", are indeed mentioned in many land deeds from the colonial era as markers of boundaries, b u t these were single (continued on page 40)



A lopped Tupelo tree (Nyssa sylvatica) in Wading River

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.

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Article & News Submissions

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Society News

Orient Beach Ordeal: Orient Beach State Park contains a recreational area for activity and an area that is protected as a preserve. The protected area is a pristine area that is environmentally sensitive. For that reason the New York State Department of Parks has designated it a protected area and restrictions have been placed upon it to preserve the integrity of the habitat. Limited access for viewing is provided, however, by foot. Rare plants and breeding shorebirds, which have been disturbed and eliminated from other beachfront areas are now limited to this unique refuge. Rare maritime plants do not necessarily grow in one spot. They often require and grow in migrating areas along the beach. Shore birds need a place with adequate areas to nest, feed and protect their young. They rely upon large areas of open sand along the beach to evade predators such as crows, foxes and raccoons. Recently, a small group argued that they would like to utilize this area of Orient State Park, as well, to pull up and anchor their boats. The idea of having the luxury to pull a boat up on this beach may seem harmless, but it will degrade and burden the environment there. This will result in cornering the rare plants and birds into even smaller areas within the protected areas and will further jeapordize their welfare. Most individuals and boaters understand this and respectfully abide by the rules. Deregulating the park habitat guide rules will add to the disruption of the rare plant habitat and the interference of the breeding for the shorebirds. The small group is pulling local publicity stunts by bringing their boats to shore deliberately, illegally and actively pressuring the parks department to forfeit the scope of the habitat protection. You may let the parks department know that you support their ongoing vigilance to enforce the restrictions maintaining the status quo by writing to:

Margaret Reilly, Director

New York State Office of Parks, Recreation & Historic Preservation Long Island Region

Belmont Lake State Park

Babylon, New York 11702-0247

Felling Stony Brook Forest: While members of the Coalition to Save Stony Brook Forest were helping relieve the NYC tragedy, a court decision allowed the leveling of the remaining portion of the Stony Brook Forest. Ward Melville Heritage Organization promptly initiated a bulldozing operation to knock down the trees of this vestige of America the Beautiful. For further information you may contact:

Coalition to Save Stony Brook Forest: (631) 751-7549.

Editor's Note: The final portion of "Classification for Mature Forests and Related Woody Vegetaion on Long Island, New York" by Andrew Greller has been postponed and will appear in the next issue of the LIBS newsletter.

An additional note on the White-fringed Orchid on Long Island, New York

Eric Lamont

For more than 100 years, orchidologists have recognized that northern populations of the Whitefringed Orchid are distinctly different from southern populations. Southern plants stand twice to four times as tall as northern ones, but more significant are the technical differences in the flower. The spur of southern plants, for example, is about twice as long as that on northern plants, probably to accommodate the larger southern butterflies that pollinate it.

The robust White-fringed Orchid with its enormous brilliant-white flowers is truly conspicuous in the wet meadows of the South and in 1896 George Nash decided to name the plant just that when he described it as a new species, Habenaria conspicua. In 1908, Oakes Ames concluded that H. conspicua was indeed different from its northern relative, H. blephariglottis, but was not sufficiently distinct to be recognized as a separate species. Ames recognized H. conspicua as a variety of H. blephariglottis. Today, orchidologists still recognize a northern and southern variety of the White-fringed Orchid: var. blephariglottis (northern) and var. conspicua (southern), usually included in the genus Platanthera.

According to Carlyle Luer, author of The Native Orchids of the United States and Canada (published in 1975 by The New York Botanical Garden) the southern variety *conspicua* occurs "locally along the Gulf Coast and ranges along the southern Atlantic Seaboard as far north as the pine barrens of New Jersey."

In 1993, Paul Martin Brown published A Field and Study Guide to the Orchids of New England and *New York.* To my knowledge, this is the only publication that describes the range of variety conspicua as extending north to Long Island, New York; variety *blephariglottis* is described as occurring "inland" throughout New York and New England.



During the past 20 years, I have observed the Whitefringed Orchid in the field on Long Island and have studied herbarium collections at the New York Botanical Garden, Brooklyn Botanic Garden, New York State Museum, Planting Fields Arboretum, Harvard University Herbaria and Cornell University. AllLong Island specimens of the White-fringed Orchid that I have examined have been assigned to the northern variety blephariglottis.

Notes on the White-fringed Orchid on Long Island, New York

Eric Lamont

The White-fringed Orchid was described as a new species in 1805 by the German botanist Carl Ludwig von Willdenow (1765-1812), based upon a collection from Pennsylvania. Willdenow included the new orchid in the genus Orchis and gave it the species name *blephariglottis*. In 1824, the English botanist William Hooker (1785-1865) transferred the species to the genus *Habenaria* and in 1835 John Lindley (1799-1865) transferred the species to the genus *Platanthera*. Today, most botanists know the White-fringed Orchid as *Platanthera blephariglottis*, but some botanists still refer to it as *Habenaria blephariglottis*.

The oldest herbarium collection of the White-fringed Orchid from Long Island dates back to 1869 (just a few years after the American Civil War), when Elihu Miller collected a specimen from a swamp at the "Forge" near Riverhead. That specimen was deposited at the Brooklyn Botanic Garden where it remains to this day. Historically, at least 33 different populations of the White-fringed Orchid have been known to occur on Long Island (Figure 1). Today, this number has been reduced to approximately 16 extant populations and several of these remaining populations are in serious danger of being destroyed by humans. The large populations of the Whitefringed Orchid that used to adorn the wetlands of Brooklyn and Queens have been totally destroyed. Only two small populations of this orchid remain in Nassau County and only one population is currently known from western Suffolk County.

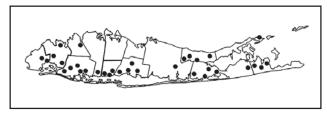


Figure 1. Past and present locations of White-fringed Orchid (*Platanthera blephariglottis*) on LI. [From: *Atlas of the Orchids of Long Island, New York*, by Eric Lamont (1996), published by Torrey Botanical Society.]

The east end of Long Island is the final refuge for this showy orchid, but in recent years even the East End populations have been threatened with destruction. For example, in the Township of East Hampton a roadside population of the White-fringed Orchid consisted of between 150 to 200 flowering individuals in the mid to late 1980's (with at least twice that many sterile plants). However, due to uncontrolled roadside mowing by the Town's Department of Highways only one individual plant flowered in 2001! A similar decline was being noted from a population at Quogue Wildlife Refuge (QWR) in the Township of Southampton. But the loss of individuals was due to the process of ecological succession, not by the deliberate action of humans. The QWR population of the White-fringed Orchid was declining due to the loss of suitable habitat; shrubs were encroaching upon the open wetland, thus crowding out the sun-loving orchids and other bog plants. During the 1980's, dozens of flowering orchids occurred at the Quogue site, but by the mid-1990's, only six individuals remained. It was feared that if the habitat was not managed and restored, the orchids would completely die out.



White-fringed Orchid (*Platanthera blephariglottis*) *Blephariglottis*, from the Greek *blepharon* ("eyelid") and *glotta* ("tongue"), referring to the lower lip (or tongue) of the flower with its finely fringed edges.

Highlights of Recent Field Trips

Barbara Conolly

Wicks/Froelich Farm August 18, 2001 LIBS conducted a summer inventory of the plants here during its walk. As expected, there were a lot of Goldenrods in the overgrown farm area (species rugosa, speciosa, canadensis var. scobra, nemoralis and odora) along with tangles of Mutliflora Rose and great stands of Mugwort and Giant Ragweed. But there was also a small group of Velvetleaf (Abutilon theophrasti) and large stands of Maryland Tick-trefoil (*Desmodium marilandicum*) with Wild Sensitive Plants (Chamaecrista nictitans). There were a few Deptford Pinks (Dianthus armeria) still in bloom, some handsome clumps of Hyssop-leaved Thoroughwort (Eupatorium hyssopifolium) and a couple of Bush-clovers (Lespedeza capitata and Lespedeza virginica). Asters were not in full bloom yet, but there were a few samples of White Woodland Aster (Aster divaricatus) and Heath Aster (Aster ericoides). There was a big discussion over a tall purple thistle, but Donald House resolved the problem with his trusty Cronquist: it was *Cirsium vulgare*, the Bull thistle.

But the highlight of the trip, quite unexpected, were Slender Lady's-tresses (*Spiranthes lacera* var. *gracilis*). About 40 of them were blooming in the more open stands of Goldenrod and were identified by the bright green spot on their throats. Nice to end a field trip on a bright note!

Editorial Comment: After weighing the choices of selectively removing the invasive plants versus mowing and then turning over the soil for a grassland restoration, Huntington Audubon Society (stewards of Wicks Farm) has elected to till the soil and plant nonlocal genotype grasses. (See LIBS Vol.11, no.3 page 32). This technique is a potential hazard for existing native plants on the site. Hopefully, the significant plants such as the Lady's-tresses will be marked and protected.

The Hauppauge Springs September 15, 2001

Eighteen of us met on a gorgeous sunny day at a bank parking lot along the Veterans Memorial highway in Smithtown. First, John Potente described the Springs area and showed us the layout with some excellent aerial photos he had taken in the past year.

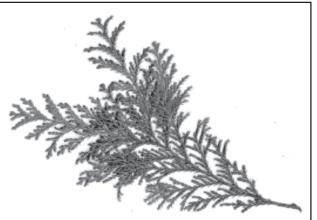
We then walked along the busy highway for a bit, only to be stopped in our tracks by a loud call from Ray Welch: "I've found the springs!" And indeed he had - cast off by the road edge from an old rusty truck.

The woods containing Red Maple, White Ash, Tulip Tree, Tupelo and an occasional Oak also contained a fine specimen of Atlantic White Cedar (*Chamaecyparis thyoides*) and a couple of Umbrella Trees (*Magnolia tripetala*).

A swampy area contained a thick margin of Water -willow (*Decodon verticillatus*) behind which rose a tall growth of Swamp Beggar-ticks (*Bidens connata*) which Peterson notes can grow to seven feet.

But the thrill of the day was to stand by the clear rushing water of the spring where Dave Thompson of Trout Unlimited had taken the picture of a goodsized Brook Trout to grace the cover of a recent issue of the Hauppauge Spring Newsletter. Dave was with us and stated that he had previously caught an eleven inch Brook Trout on the north side of the highway where the culvert empties on its way to the sea.

Who says we don't have clear cold trout streams on Long Island?



Atlantic White Cedar (*Chamaecyparis thyoides*) present in the Hauppauge Springs hoto: John E. Potente

Lopped Trees (continued from page 37) large old-growth trees (probably marked on their boles with a knife or timber scribe) from which property lines could be followed along certain compass bearings; they were the benchmarks of the old "metesand-bounds" system of land surveying. Bound trees were used to establish municipal boundaries as well as those of private holdings; for example, until permanent stone markers were set in the nineteenth century, the Brookhaven-Riverhead town line was legally defined by a certain Pepperidge tree (Nyssa sylvatica) in Wading River, the Brookhaven-Smithtown town line was defined by a tree of unknown species on the shore of Lake Ronkonkoma, and the Brookhaven-Southampton town line was defined by "the Bound Tree at Seatuck" on the Seatuck River in Eastport (Bayles, 1882). The "metes-and-bounds" method of surveying was later replaced by more systematic techniques, as in the General Land Survey of Public Lands in the West, initiated in 1785 (McIntosh, 1962), which required several "bearing trees" to be recorded by species at each section corner with two trees recorded at quarter corners. "Line trees", properly defined, were the occasional trees growing directly on the lines between corners, and were recorded as found. Quantitative studies of records of "bearing tree" and "line tree" species from the General Land Survey and other surveys have enabled ecologists to reconstruct the forest vegetation of many of these areas at the time of European settlement.

There are several independent and very specific early accounts of the prominence of hedges in the landscape of eastern Long Island, a feature that added to the quaintness of the region in the eyes of many travellers. Gabriel (1921) went so far as to speak of "the hedges of old England". Rather than serving as boundary markers per se, I would suggest (following Overton, 1943; Baily, 1956; and Bayles, 1962) that rows of lopped trees on Long Island are relics of hedges used to fence farmland. Hedges made by the English settlers of the East End in adaptation the British tradition of farm hedges of native plant materials. Instead of planted hawthorn (Crataegus), blackthorn (Prunus spinosa), or privet or "Prim" (Ligustrum), which were found to be susceptible to insect infestation ("In the town of East Hampton, in Suffolk County,

by the best computation, at least two hundred miles of good prim-hedge died in the course of two or three years, which was a greater loss to the inhabitants than if every house in the township had been burnt down at the time" [L'Hommedieu, 1794]), native oaks were substituted and treated in just the same manner ("Young oaks...have answered well for a hedge by loping the same on a ditch...a good fence against cattle and sheep," [L"Hommedieu, 1794]). Still, these hedges probably served only as a supplement to wooden post-and -rail fences. The expense of timber was probably the motivation for hedging, as Long Island was largely cleared of forest cover by the middle of the eighteenth century (Murphy, [1964] 1991). In the place of trees were many thousands of cattle (Murphy, [1964] 1991; Bidwell & Falconer, 1941). It is known that hedges and earthen ditches (a feature also associated with lopped trees on Long Island) were used instead of wooden fences or stone walls by some colonial farmers of treeless Cape Cod and Martha's Vineyard in Massachusetts (Thoreau [1865] 1988; Banks, 1911; Russell, 1976; Allport 1990), and certainly the great expense of replacement with wooden fencing was the reason given by Nathaniel Prime in 1845 for the persistence of the "fences of living material" (Prime, 1845) he saw in Southampton at that time. There are accounts of New-England-style stone walls in such places as Strong's Neck in Setauket (Thompson, 1839) and Gardiner's Island (Todd [1907] 1968), but stone was not an option for most Island farmers. When George Washington visited Long Island in 1790 he wrote with disapproval in his diary that, "Their fences, where there is no Stone, are very indifferent: frequently of plashed trees of any & every kind which have gown by chance," (Washington, [1790] 1978). Plashing or pleaching is a traditional method of forming a hedge, or thickening the base of a thinly-grown existing hedge, by cutting partway through upright stems, bending them over horizontally and then weaving them together (Latin plectere, "to weave") to form a continuous barrier while forcing thick new sprout growth from latent and epicormic buds. Also called "hedgelaying" in Britain (Blisset, n.d.; Dowdeswell, 1987), this is precisely the method used to "lop" trees on Long Island, except that the pole-size oaks required a small boy to climb

summoned several of his Riverhead High School Environmental Studies students. I lured several Southampton College students doing cooperative education work at the Refuge and even snagged my sister. Bundled to the cold and delicately stepping, our little group pruned the encroaching woody vegetation such as Inkberry (Ilex glabra), High Bush Blueberry (Vaccinium corymbosum), Pitch Pine (Pinus rigida) and Red Cedar (Juniperus virginiana) down to soil level in several bog areas along the Main Trail of the refuge. It was tedious but interesting work and, with the management goal in mind, even exciting. We worked diligently in several different bog areas; in one we were setting back succession not for White-fringed Orchids, but for Rose Pogonias (Pogonia ophioglossoides), another freshwater wetland orchid native to Long Island.

That management work occurred three and a half years ago. This summer of 2001, Eric Lamont, John Potente and I counted eighty-eight White-fringed Orchids in bloom in August. Wow, what a sight and what a satisfaction!

Beyond preserving the diversity of the Quogue Wildlife Refuge and its habitats, the importance of setting back succession in these bogs is specifically geared to preserve this site of White-fringed Orchids. Several of the remaining sites of this orchid on Long Island are threatened for various reasons, as this site had been. I would also add that maintaining these bog areas at Quogue will help not only other unusual plants like the large Cranberry (Vaccinium *macrocarpon*) but populations of animals such as the Spotted Turtle (Clemmys guttata). The Refuge harbors a small population of this species of special concern, a ranking just under threatened. Spotteds prefer bogs, headwaters of ponds and sometimes swamps, rather that the open pond. Thus, we can expect our management work to have multiple successes.

The blossoming White-fringed Orchids of 2001 brought the only reward necessary for the management work of several years ago. Their spectacular beauty also brought an enthusiasm to help maintain these wetlands in the future. For, to quote from Lance Biechele's article, "Secret Relationships Among Our Native Orchids", in the April-June 2001 edition of the LIBS newsletter, "When planning for orchid preservation, one must bear in mind the need for adequate bordering wetland areas to allow for pioneer orchid plants to establish themselves."

I personally hope that in late July/early August, you take a trip to the Quogue Wildlife Refuge to see, up close, the striking beauty of the White-fringes. They have a long lower lip with eyelash-like projections. They are, as the common name states, white, and a very pure white indeed. To see so many stark white beauties during the heat of the summer in one small site is to be mightily impressed. It reminds me of a part of on old Robert Frost poem:

> A saturated meadow, Sun-shaped and jewel-small, A circle scarcely wider Than the trees around were tall; Where winds were quite excluded, And the air was stifling sweet With the breath of many flowers--A temple of the heat.



Where ense can you ce at an a stongarto rate plants like the sun-loving White-fringed Orchid, the Pitcher Plant and Round-leaved Sundew, even to lay down on the boardwalk and gently touch the cool wetness of the sphagnum moss?

Go there next summer, and enjoy them--for their rarity, beauty and uniqueness. But remember, look, but do not disturb.

Orchids --at arms length, but not for picking--

Gigi Spates

For years in a bog¹ along a boardwalk at the Quogue Wildlife Refuge (QWR), a small population of White-fringed Orchids (*Platanthera blephariglottis*) had held their own. Coming into the 1990's, the population dwindled to become a scattering of six. As these slender, graceful plants were being crowded by a succession of wetland shrubs and young trees.

Now to be accurate about it, White-fringed Orchids, no matter how many in the grouping there are, do grow scattered in a bog amongst other bog plants. The first and foremost plant, indeed the base plant of the bog habitat, is sphagnum (*Sphagnum* spp.). What is basic about this yellow-green moss, tinged with red? It has evolved to retain many more times its own weight in water. Carpeting the bog, the sphagnum even in severe drought conditions holds water at ground level which allows other bog plants to take hold and flourish.

In the particular bog where the Quogue Wildlife Refuge's White-fringed Orchids grow, there are also populations of two insect-digesting plants. The most noticeable one is the Pitcher Plant (*Sarracenia purpurea*), here in small but showy stands with their o d d pitcher-shaped green and



Helping to revert the site to bog habitat at Quogue

1. Author's Note: In the following article, I refer to certain wetland areas as bogs, that being the old designation for what we now know here on Long Island to be more accurately called Coastal Plain Poor Fens.

dark red leaves and flowers. The other, and a very diminutive one, is the Round-leaved Sundew, (*Drosera rotundifolia*). Poking through the sphagnum, their stemmed leaves are adorned with glue-tipped hairs. What a curious and exciting discovery is this bog!

Coming back now to the dangerous decrease in the number of White-Fringed Orchids, in the summer of 1996, as director of the QWR, I approached Eric Lamont for advice on management of this and several other pocket bogs around Old Ice Pond. We were concerned about these rare plants as well as the wellbeing of their habitat. Eric and I knew that to keep the bog plants thriving, we needed to manage for more space and sunlight and to do that we needed to set back the natural succession of shrubby plants. Removing woody plants would also keep the bog from drying out, for as those plants matured, they would require a great deal of water and their roots would raise dry islands within the wet bog. Thus, in 1996, we set out to plan for a gathering of willing and able laborers, for appropriate tools of the trade and, of course, the necessary DEC wetlands permit. (Even the DEC-managed facility must apply and receive permission to work within the boundaries of a wetland.)

What was the result of this warm weather preparation? A band of armed pruners in the middle of that very next winter! To avoid disturbance as much as possible Eric recommended selective pruning in the depth of the dormant season. He



Eric and Gigi by the restored bog site in the summer of 2001 with eighty-eight White-fringed orchids (*Platanthera blephariglottis*) in bloom.

them to bring them down with his weight (Overton, 1943; Bayles, 1962)! As Washington said, trees of every kind were used, and there are accounts of flowering dogwood (Cornus florida), American chestnut (*Castanea dentata*), and hickories (*Carya*) in "the old hedges of Long Island," and with a liberal admixture of *Rubus* and *Smilax* they became "the abode of singing birds and of the more timid marauders of the field" (Flint, 1896: 29), perhaps a determining factor in the ecology of some animal species of the Island in a former age of open fields. A 1903 photograph by Howard Conklin (now in the collection of the Queens Borough Public Library) of a row of Lopped Black Cherries (Prunus serotina) in Bellport is evidence that this tree species was used as well, but with few exceptions only the long-lived oaks appear to remain now. With the past century or more to reassert their arborescent habit, and with stems and limbs lost to self-thinning and self-pruning, their former place in farm hedges has become obscure.

The author wishes to thank the support of the Douglas Dockery Thomas Fellowship from the Garden Club of America and the Carpenter-Sperry-Mellon Fellowship from Yale University.



The author with a lopped tree in Robert Cushman Murphy County Park in Manorville, Long Island.

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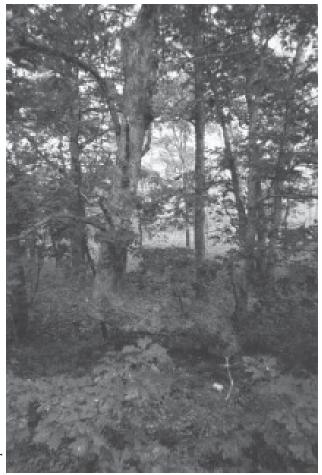
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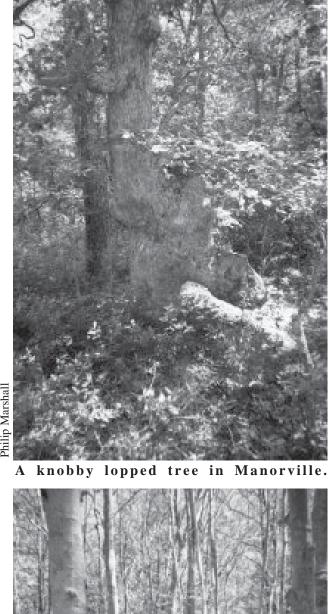
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Lopped tree on Accabonac Road in East Hampton.

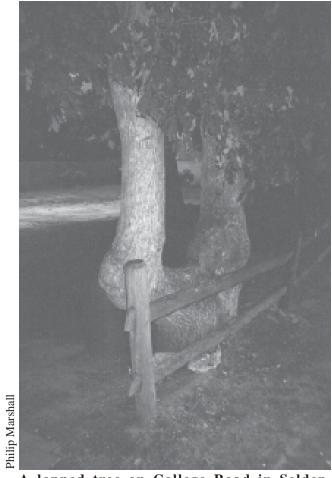






Boundary ditch on Edge of Woods Road in Water Μ i 1 1

Page 42



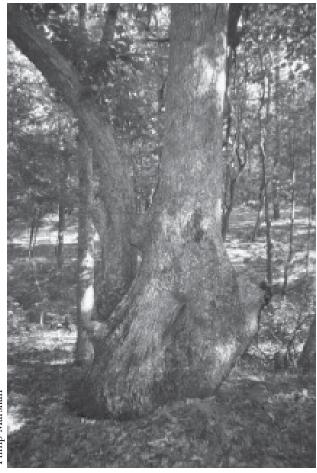
A lopped tree on College Road in Selden.



A lopped tree on Old Sag Harbor Road in Noyak.



A lopped tree on Accabonac Road in East Hampton.



A lopped tree at the Maple Swamp in Flanders.