

LONG ISLAND BOTANICAL SOCIETY NEWSLETTER

November • December 1992 Vol. 2, No. 6

Seabeach Amaranth: it survives!

Long Island's barrier beaches have taken a beating lately. Last year it was hurricane Bob and the Halloween storm. This year it was tropical storm Danielle. The pounding waves and high tides have resulted in severe beach erosion and much rearrangement of sand. These beaches are also home to one of New York's rarest plants, **seabeach** amaranth (*Amaranthus pumilus* Raf.). Occurring only sporadically on Atlantic barrier beaches from South Carolina north to New York, it has recently been proposed for Federal threatened status by the U. S. Fish and Wildlife Service. Rediscovered on Long Island in 1990 after a 35 year absence, **seabeach** amaranth was inventoried by New York Natural Heritage and Nature Conservancy staff and contractors in 1990, 1991 and again this year. After the recent storms we were not sure how the plant would fare. Some of the beaches were covered by 6 inches or more of new sand or washed away **completely!** This year's surveys **have** just been completed and we are happy to report that overall, **seabeach** amaranth has survived another year despite the storms.

Some smaller populations did not survive however. For example, the few plants **growing** at Tiana beach were nowhere to be seen; **Danielle** had eroded the beach back to the foredune. Some of the larger populations

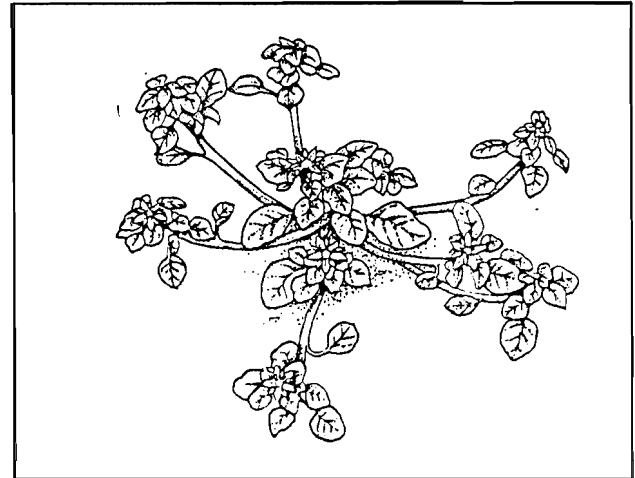


Illustration by Shirley Baty, Jan. 1989

have not changed much and have even produced larger robust plants than in the past. Some plants have reappeared in almost the same exact spots they were documented in previous years.

These findings bring up some interesting questions. Is **seabeach** amaranth strictly an annual or do some plants survive year to year as perennials? How far do seeds spread during the winter? How long do seeds survive in the sand? How close to the surface do they need to be and how much moisture do they need to germinate? Why isn't this plant much more common?

Besides natural fluxes in beach conditions that this plant has evolved to **survive**, we may add a host of human disturbances that act as **deterrents** to the establishment of more extensive populations: beach raking, driving on the beach, deposition of dredge spoil, excavation of pipelines, and the wall-to-wall sunbathing in densely populated towns are some of the most important

It will be interesting to see how **seabeach** amaranth survives Long Island's constantly changing beach conditions. Are there enough plants growing here now to keep a foothold? Maybe Long Island is actually too far north from its normal range and it naturally dies out over time only to be reintroduced from seed brought north with the next coastal hurricane.

What **do** YOU think? --Steve Young, Botanist, New York Natural Heritage Program

PROGRAMS

10 Nov. 1992 - 7:30 pm, Dr. Kerry Barringer, "Plants and vegetation of Costa Rica"; Uplands Farm Nature Center, Cold Spring Harbor.

Dec. 8, 1992 - 7:30, Dick Amper and/or John Turner, "Current status of the L.I. Pine Barrens"; Uplands Farm Nature Center, Cold Spring Harbor.

*Refreshments start at 7:30 p.m., the program starts about 8:00 p.m.

Rare and Interesting Plants of Connetquot River State Park Preserve

One of the most significant sites for rare plants on Long Island is the 3,500 acre Connetquot River State Park preserve in Oakdale. Its diverse habitats support a variety of woody and herbaceous plants. The rarest and more interesting of plants however, can be found in the wet pine barren areas.

One of the earliest plants to bloom at the preserve is Pyxie Moss (*Pyxidantha barbulate* Michx.), It can be easily overlooked because it appears more moss-like than a wildflower. It was discovered by William Kolinek, a long time seasonal employee of the South Side Sportsmens Club (previous owners of the preserve). He consulted biologist Eugene C. Ogden, from the New York State Museum who responded with the following letter dated 25 May 1959:

"You will be happy to learn that your flowering moss is a new record for New York State. Perhaps Mr. Stanley Smith, Curator of Botany at the N.Y. State Museum has already written to you. He Plans to write you and hopes to be able to explore further in your area. The plant is *Pyxidantha barbulate* our first record north of the New Jersey pine barrens. He is quite excited about it and feels there may be a possibility of finding other rare plants that get north to the NJ. sand."

Connetquot has the largest of the two New York, populations. It grows in association with sheep laurel (*Kalmia angustifolia* L.), huckleberry (*Gaylussacia baccata* (Wang.) Koch) and the Pitch Pine (*Pinus rigida* Mill.).

As early as the third week of May our earliest orchid, Southern Twayblade (*Listera australis* Lindl.) can be found in a wetland area at the preserve. It thrives in the deep shade of Red Maple (*Acer rubrum* L.) where sphagnum is abundant. This population averages several hundred plants and during some years may be as many as 2,000 plants. I found this orchid in 1978 while leading a school field trip. It is one of three populations reported on Long Island.

I don't recall when I first saw Yellow Milkwort (*Polygala lutea* L.), but I never thought of it as a rare plant since it grows so abundantly south of our area. There are three extant populations of this plant in New York all of them on Long Island and two of the populations at Connetquot; both are in good shape.

During the last 5 years populations numbered less than 50; I have counted over a hundred plants in earlier years. One of the populations was threatened by soil erosion from a nearby hill. The state successfully stabilized the erosion to protect this rare plant.

In early August the Crested fringed orchid (*Platanthera cristata* (Michx.) Lindl.), can be observed in bloom. It has been found at four locations within the preserve. The largest population is comprised of fifteen plants. During 1987 a smaller population with three plants was observed near the river. The three plants were unhealthy looking specimens because of the lack of rainfall that summer. Each day I made a special trip to bucket water from the nearby stream to help these wilted plants. After the second day, they appeared healthier, and eventually flowered and produced seeds.

Each year when I relocate Nuttall's lobelia (*Lobelia nuttallii* R. & S.), its color reminds me of the eastern bluebird. Its delicate flowers are sky blue. There are two major populations of this lobelia in the preserve consisting of hundreds of plants and can also be found scattered along the preserve's firelanes. Although it is secured globally it is a threatened New York State plant.

One of the most curious looking orchids, Spotted Coralroot (*Corallorhiza maculata* (Raf.) Raf.), made its rare appearance at the preserve in September 1981. One single flowering plant grew in the pine litter in the shade of a white pine (*Pinus strobus* L.). I've searched for this curiosity every year since but it has not returned.

Downy rattlesnake plantain (*Goodyera pubescens* (Willd.) R. Br.) is another plant which was once observed in the preserve but has not been seen recently. There were several plants near the hatchery in the mid 1970's. The grass pink (*Calopogon tuberosus* (L.) BSP.) was observed near the Pyxie site during the same time. The vegetation there had grown, shading the woodland floor so it may be lying dormant waiting for the right opportunity to reappear;

One of the more common orchids in the preserve is White fringed orchid (*Platanthera blephariglottis* (Willd.) Lindl.)--in mid-summer it can be found in many wet pine barren areas. The largest single population in the preserve is comprised of up to 15 plants. There are many other smaller populations consisting of 1-6 plants. Its flowers are frequently browsed by deer.

Each September I look forward to finding Nodding ladies'-tresses (*Spiranthes cernua* (L.) Rich.) in our wet meadows. Where you find one, you'll find six, eight or more because it frequently grows in colonies. At about the same time and in the same area, Slender ladies'-tresses (*S. lacera* (Raf.) Raf.) can also be observed although at Connetquot, they're not as abundant. In late July of 1991, I found several *Spiranthes* which had gone to seed. They appeared to be *S. lacera* but were smaller

Connetquot cont'd.

and obviously had bloomed earlier than other Ladies'-tresses. Could these have been the rare Spring ladies'-tresses, *S. vernalis* Engelm. & Gray? I returned in July 1992, but could not find a trace of these orchids. I'll keep you posted!

Many species of violets occur at the preserve and can be found in various habitats. Marsh blue violet (*V. cucullata* Ait.) is abundant along the waterways. Birdfoot (*V. pedata* L.) finds its niche in the sunlit sandy fire lanes in the preserve. On shaded fire roads Primrose-leaved violet (*V. primulifolia* L.), Lance-leaved violet (*V. lanceolata* L.) and the Northern downey violet (*V. fimbriatula* Sm.) are abundant. One of the rarest of the violets is the Coastal violet (*V. brittoniana* Pollard); Connetquot has the only New York State occurrence. I've monitored this over the years and have seen as many as 15 plants in 1991.

There are many other interesting and notable plants in the preserve including: Spatulate-leaved Sundew (*Drosera intermedia* Hayne) - a carnivorous plant which grows in the wet pine barrens; Colicroot (*Aletris farinosa* L.) - although there are many historical records of this plant, many of these sites are no longer in existence, and need to be re-evaluated; trailing arbutus (*Epigaea repens* L.) - found on many fire lanes in the park; Indian pipe (*Monotropa uniflora* L.) and Pinesap (*M. hypopithys* L.) - two saprophytes. Indian Pipe is more common at Connetquot than Pinesap.

As habitats are changed by storms or human impact, there's bound to be more appearances of unusual and rare plants at Connetquot River State Park Preserve. Many of our rare plant sites within the preserve came about because of the creation of fire roads through the park. The preserve now protects known rare plants sites and with assistance of the Nature Conservancy monitors the populations of our rare plants. Park preserve legislation mandates the preservation of the park's natural resources so these and other plants can be observed by future generations.-- Gary J. Laxton

The Long Island Pine Barrens

It is impossible to consider the fate and future of the 110,000 acre Long Island Pine Barrens without taking into account the lawsuit filed by the Long Island Pine Barrens Society (LIPBS).

On November 21, 1988 LIPBS filed one of the most important and perhaps largest environmental lawsuits ever filed in New York State in state Supreme Court in Riverhead. The purpose of the suit was to require the compliance of the Towns of Brookhaven, Riverhead, and Southampton and Suffolk County with the State Environmental Quality Review Act's (SEQR) requirement to undertake a cumulative impact analysis impact of some 238 separate development projects proposed in the Pine Barrens.

The Society contended that SEQR and previous case law relating to the Albany Pine Bush requires such an interactive analysis and that the current project-by-project reviews undertaken by the Towns and County not only violated SEQR, they failed to identify and therefore ameliorate cumulative impacts on the ecological and ground- and surface water features of the Pine Barrens.

The Supreme Court decision went against the Pine Barrens Society, In his decision Judge Paul Baisley ruled that such a cumulative assessment is only mandated when a plan of study is in place to protect the area, the type of circular reasoning that led an attorney to comment: "its like a bank approving you for a loan only if you can prove that you don't need it". Moreover, it seemed the judge misunderstood the concept of cumulative impacts: he considered the different types of impacts from the same project, e.g. garbage generation, loss of open space, groundwater quality etc. to be cumulative instead of similar impacts from similar projects in a definable, coherent area as intended by SEQR.

The Society appealed the decision to the Appellate Division of the Supreme Court and by a 3 - 2 majority the judges overturned the lower court decision, affirming the precept of the LIPBS's legal action.

The Towns and developers have appealed the decision to the New York state's highest court, the Court of Appeals, and the case is scheduled to be argued on October 22.

Enough about legal action. Key acquisitions over the past several years have substantially advanced the protection of the Pine Barrens. Most of the funds have come from the Drinking Water Protection Program (also referred to as the 1/4 penny sales tax program). To date the County has purchased more than 7,700 acres of key

NEW ADDRESS

Lois Lindberg-Membership chair
45 Sandy Hill Rd.
Oyster Bay, NY 11771-3111

Pine Barrens cont'd.

watershed lands including the 1,840 Hampton Hills property, several hundred acres in the dwarf pine plains, more than 800 acres in the headwaters of the Peconic River and a few hundred acres in each of the **Manorville** and **Riverhead** Hills regions.

Several thousand more acres of important pine barrens properties have been purchased pursuant to the County's 1988 Open Space Program, including 450 acres adjacent to Swan Pond in Manorville, 700 acres at Maple Swamp and 600 acres west of Sears-Bellows County Park.

With these acquisitions complete and the protection of several thousand additional acres through the dedication of **tax** default properties to **the** County's Nature Preserve system, the foundation of a national park quality Greenbelt of publicly-owned lands, stretching from Rocky Point to Hampton Bays, is in place

There is much more, however, that needs to be accomplished if we are to be successful in protecting the Pine Barrens: the Pine Barrens society has identified another 21,000 acres that need to be acquired; an ecologically-based fire management program supported by local fire **departments** needs to be developed; and a comprehensive research program relating to management concerns of the Pine Barren ecosystem needs to be conceptualized and developed.

If these actions occur, the long-term future of this critically important landscape will indeed look **bright**--
John Turner

L.I.B.S. Programs

10 Nov. 1992 - 7:30 pm, Dr. **Kerry Barringer**, "Plants and vegetation of Costa Rica"; Uplands **Farm**. Nature Center, Cold Spring Harbor.

Dr. **Kerry Barringer**, Curator, Brooklyn Botanic Garden, will give a slide presentation on the plants and vegetation of Costa Rica. Dr. **Barringer** spent one year in Costa Rica in the early 1980's.

8 Dec. 1992 - 7:30 pm, Richard **Amper**, and/or John Turner, "The current status of the L.I. Pine Barrens", Uplands Farm Nature Center, Cold Spring Harbor.

Richard **Amper**, Executive director of the L.I. Pine Barrens Society and/or John Turner will discuss the political, cultural, and ecological issues involved in protection of the L.I. Pine Barrens. Recent court cases and decisions will be discussed as well as future plans for management.

East Hampton Orchids: Will They Survive?

Historically, the greatest concentration and diversity of native orchid species on Long Island (and probably in all of New York State) occurred at the east end of the south Fork in the Township of East Hampton. **Twenty-three** different species of orchids have been documented at East Hampton Township during the past 100 years. In comparison, 54 orchid species have been reported for all of New York State and 35 species have been reported for **all** of Long Island.

Of the 23 orchid species reported from East Hampton, several have not been recently observed. White bog-orchid (*Platanthera dilatata* (Pursh) Lindl. ex Beck) was last observed at "a swamp near the ocean" by Roy **Latham** in 1929; Tubercled orchid (*Platanthera flava* var. *herbiola* (R. Br.) Luer) was last observed at Montauk by Roy **Latham** in 1927; Crane-fly orchid (*Tipularia discolor* (Pursh) Nutt.) was last observed "in low, wet woods with laurel and holly, Montauk" by Roy **Latham** in 1928; and Spotted coralroot (*Corallorhiza maculata* (Raf.) Raf.) was last observed at Montauk by Roy **Latham** in 1927. It is possible that overlooked populations of these four species are still extant at Montauk since appropriate habitats remain available: however, extensive searches conducted by botanists during the past 15 years have failed to relocate any of the historical sites.

Of the surviving orchid species at East Hampton, most have experienced a severe decrease in population size. The case of Dragon's-mouth (*Arethusa bulbosa* L.) best illustrates this. In 1923, Norman Taylor wrote of boggy areas at Montauk: "about the end of May the part of the peninsula is aflame with *Arethusa bulbosa*. In fact it is more common here than elsewhere within the observation of the writer." Earlier, in 1877, Elihu Miller wrote: "I find *Arethusa bulbosa* growing in great abundance in the swamp adjoining Hook Pond in the village of East Hampton. I gathered several hundred specimens in a very small part of the swamp. No one need have any fear of destroying that locality by collecting specimens." Today, *Arethusa* is extirpated from Hook Pond and only a dozen or so individuals have been observed throughout the entire Township. Changing patterns of land use seems to be the direct cause of decline in numbers of *Arethusa* sites.

Several orchid populations at East Hampton are currently being imperiled by the Town itself. This was observed first-hand during the L.I. Botanical Society's 1992 "Orchid Foray". Our first stop in East Hampton was a roadside near Sag Harbor where, in previous years, a vigorous population of crested fringed orchid

East Hampton Orchids cont'd

(*Platanthera cristata* (Michx.) Lindl.) had occurred. Only five populations of this rare orchid currently occur in all of New York state. In 1992, the once vigorous population near Sag Harbor had been reduced to a single individual. A rare hybrid orchid (*Platanthera x canbyi* (Ames) Luer) also previously known from this same site was not observed at all.

A large population of white fringed orchid (*Platanthera blephariglottis* (Willd.) Lindl.) growing near the Crested fringed orchid site near Sag Harbor, is also being systematically destroyed by the Town. Dozens of flowering individuals adorned the roadside during years past: in 1992 not one flowering plant was to be seen. All that was found were "stumps" of individuals struggling to survive.

After our group witnessed the devastation of the fringed orchids a few of us scrambled through the underbrush to search out another orchid population. For as long as any of us could remember a colony of downy rattlesnake-plantain (*Goodyera pubescens* (Willd.) R. Br.) had been growing in a small section of the woods just off the roadside. Alas not a plant was to be found.

After regrouping we traveled east to another orchid hotspot near Amagansan. We were delighted to see dozens of orange fringed orchids (*Platanthera ciliaris* (L.) Lindl.) in full flower. However, two weeks later I revisited the site and witnessed the few remaining survivors: over half of the population had been decimated.

What is the happening? The East Hampton highway department is systematically mowing the roadside where the rare orchids occur. Mowing the roadsides is not necessarily detrimental to the orchids: but the time of mowing is very important. Mowing at the proper season will eliminate invasive shrubs and will maintain the roadsides as a grassy herbaceous habitat ideal for rare native orchids. But for the past few years, and especially during 1992 roadsides supporting orchid populations have been mowed by the highway department at the most critical time in the plant's life-cycle. All living organisms invest vast amounts of energy in reproduction, which is necessary for the continuation of a species. The orchids at East Hampton are being mowed exactly at the time when they are reproducing.

One would think that the solution to the problem is simple: establish and implement a mowing schedule that does not coincide with the time of reproduction. Well, such a plan has meticulously been established by several environmental groups working closely with the Town, but the highway department has not implemented the plan. And now the situation is getting worse. In years past roadsides supporting orchid populations were usually mowed only once a year: in 1992, some of the

roadsides were mowed three or four times. Many orchids did not even get the chance to produce flowers.

A battle has been raging for a few years now. Environmental groups and even other departments within the Township are fighting to save the orchids; but it appears to be a losing battle. Conferences have been held to educate individuals, and the local media has given full coverage to the war: but the mowing continues.

As a result, we may be witnessing the final days of some of New York's rarest plant species.--Eric Lamont

New Members

The Long Island Botanical Society is pleased to welcome the following new members:

Henry Bookout-Riverhead; June Christensen-Northport; Catherine Conolly-Seattle, WA; Mashomack Preserve, Shelter Island; Jenny Aileen Contreras-Locust Valley; Ted Griffen-Sagoonack; James C. Grimes-Land; Designs Inc.; John Lawrenson-Kew Gardens; Leslie J. Mehrhoff-CT. Geological & Natural History Survey; Margo Myles-East Northport; Bill Olson-Freehold, NJ.; Ronald Rozsa-Willington, CT; Donna Sauers-Riverhead; Barbara Scherger-Hampton Bays; Stephen M. Young-Guilderland, NY

Back Issues Available.

The Long Island Botanical Society has significantly increased its membership during 1992. If you are a new member, who joined LIBS sometime during mid-year, and would like copies of earlier Newsletter issues please contact Eric Lamont (516-722-5542).

L.I.B.S. Logo

Throughout the year we have been publishing proposed logos for the society. We have one additional logo which we will publish next issue. If there are any other proposed logos they need to be sent in before Dec. 15 and they will be included in the next issue. At that time we will ask the membership to vote on one logo for the Society.

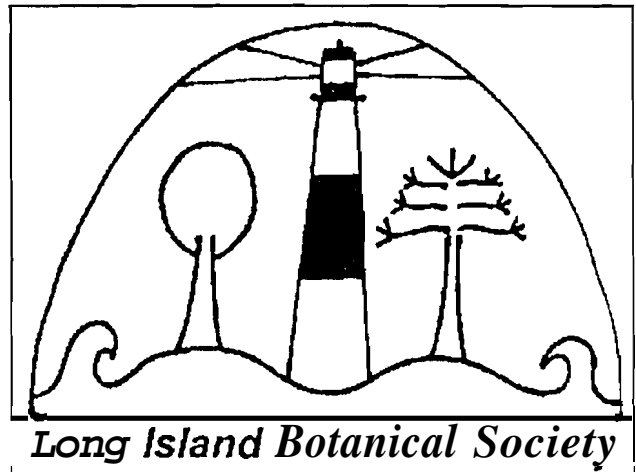
LONG ISLAND BOTANICAL SOCIETY
Founded: 1986; Incorporated: 1989.

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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Membership

Membership is open to all, and we welcome any new members. Annual dues are \$10. For membership, make your check payable to LONG ISLAND BOTANICAL SOCIETY and mail to: Lois Lindberg, Membership Chairperson, 45 Sandy Hill Rd., Oyster Bay, NY 11771-3111



LIBS LOGO? #4

Steve Young has sent the above logo suggestion. He writes: "The most prominent feature on the logo is the Lighthouse which is the most characteristic feature of Long Island and gives the regionality everyone can understand. It also represents the Society as a beacon in the study and conservation of Long Island plants. The two hills at the bottom represent the two moraines on the island and the waves represent the Atlantic Ocean and the Long Island Sound. The two trees, a deciduous tree on the left and a pitch pine on the right, represent the flora of the island."

LONG ISLAND BOTANICAL SOCIETY
P.O. BOX 905
LEVITTOWN, NY 11756

