LONG ISLAND BOTANICAL SOCIETY NEWSLETTER

Vol. 6, No. 4 Jul. - Aug. 1996

Origin of the Long Island Pine Barrens: An Alternative View

The pine barrens of Long Island, while purported to be an ancient fire dependent landscape may be, and very probably are, the result of years of abuse and misuse on the part of the original European settlers and their descendents. Thus, the true role of fire in the pine barrens must be considered.

Long Island, formed some 20,000 YBP (years before prsent) by sediments deposited by the Wisconsinian Glacier, had a substrate immediately available for colonization by lichens, grasses, sedges, etc. At that time the climate was considerably colder and moister than at present. As a result the vegetational communities were at first akin to arctic tundra and, as the climate moderated, forests similar to the spruce-fir communities of present day Newfoundland predominated. Later, again in response to moderating climate, a northern hardwood transitional forest dominated.

Then, approximately 8,000 YBP, during the Hypsithermal Period. the climate became warmer and drier than today, enabling more southerly trees to establish themselves and leading to the decline of the northern forest. It is probable that the pitch pine (*Pinus rigida*) became established during this period. The climate then moderated, and for the past 4,000 years the temperature, rainfall, etc. have been fairly constant.

During this last time period the glacially derived sediments were being re-worked, and a complex soil structure was developing. Thus, it is reasonable to expect that oak, hickory and chestnut began to replace the pines and dominate the forest since the end of the Hypsithermal. In the absence of natural disturbance, which would open the canopy and favor the shade-intolerant pines, this hardwood forest would have persisted. Obviously, the pines would not have been completely eliminated but would have been confined to areas experiencing frequent disturbance. The presence of a hardwood forest appears to be confirmed by pollen analysis. These studies show that various species of pine were dominant on Long Island from approximately 10,000 to 4,000 YBP. More recent sediments show the oak pollen to be at a significantly higher percentage than the pine

Chestnut (*Castanea dentata*), along with species of oak (*Quercus*) and hickory (*Carya*), may have once dominated the forests of central Long Island

Highlights

Pine Barrens: Alternative View, con't from p. 23

(Sirkin 1987). Such pine/oak pollen percentages persist until very recent times when the ratio of pine pollen increases. This increase, however, might be attnbuted to recent anthropogenic factors.

Thus, the only way that the pine forest on Long Island could have persisted until today is by fire, and the only non-human cause of fire on Long Island is by lightning strikes. However, lightning on Long Island is usually preceded by heavy rainfall. It is generally agreed that fires set by lightning in a wet woodland are rare.

If one then falls back on Native Americans as the cause of fire to explain the antiquity of Long Island's "fire dependent" pine barrens, the cause becomes an anthropogenic rather than a natural event. The island's earliest human inhabitants were hunter-gatherers who moved about in widely dispersed populations. Most anthropologists agree that these Paleoindians did not bum large areas of Long Island.

At the time of European contact in the late 16th century, the Native Americans on Long Island had developed an agricultural lifestyle and were known to bum in order to clear land for agriculture. It is estimated, however, that their total population was less ihan 4,000 (Ceci 1977). This is a population density of less than three individuals per square mile and indicates a minimum of human disturbance.

Thus, it is reasonable to assume that the early settlers saw hardwood forests of oak, hickory and chesmut when they viewed Long Island for the first time. It is known that they considered this forest as a vast and exploitable resource. They cleared the land for farms, cut wood for home construction and for cordwood, which was their only source of home heating fuel. Somewhat later, wood was cut to supply Long Island's shipbuilding industry.

Pitch pine is generally not preferred for home or ship building. Pitch pine is also a dangerous heating fuel since its resins coat chimneys and cause house fires. Yet the forests of Long Island were the major source of wood for New York City's heating needs, and the wood being used was most probably not pitch pine. By 1812 Brookhaven Town, now occupied by thousands of acres of pine barrens, was sending 100,000 cords of wood per year to the city (Prime 1845). Indeed, wood cutting on this scale would have devastated the hardwood forests and allowed for a re-establishment of the pines.

The presence of an earlier hardwood forest is confirmed by the post records of Camp Upton, now the site of Brookhaven National Laboratory. Although the surrounding forest is currently dominated by pine, it was necessary when clearing the area in 1917, to remove closely spaced hardwood stumps that were commonly six feet in diameter (Coyne 1919).

By 1840 coal had replaced wood as a heating fuel and the cordwood era on Long Island came to an end. The forests had little chance to recover, however, since the New York to Boston link of the Long Island Rail Road, which traversed today's central pine barrens, was completed in 1844. Sparks from the coal burning locomotives caused widespread, well documented fires. One fire burned a swarth 10 miles long and four miles wide through the forest. Historians note that portions of the forest were set afire almost daily by the railroad (Treadwell 1912). Fires of this magnitude were certainly sufficient to allow for the perpetuation of a fire dependent woodland. Thus, while the present Long Island pine barrens may be a fire dependent forest they most probably are an anthropogenically induced ecosystem.

Moreover, the actual effect of fire in the pine barrens is unclear. Conard (1935) noted that scrub oak "... is usually the result of fire, which destroys the pine. Subsequent fires destroy the surviving

Illustration by Larry Decker

Pine Barrens: Alternative View, con't from p. 24

pines." After the fire the oaks resprout "... completely shading the soil and preventing any other trees or shrubs from getting a start." More recently Boerner et al. (1987) in a study of the New Jersey pine barrens observed that "... sporadic prescribed burning may accelerate, not retard, succession toward oak dominance."

Thus, though the pine barrens are most probably an anthropogenically induced woodland brought about by the clearcutting of the pre-Colonial hardwood forests the exact role of fire is in question. Are the pine barrens a fire dependent ecosystem or does fire hasten the succession to oaks?

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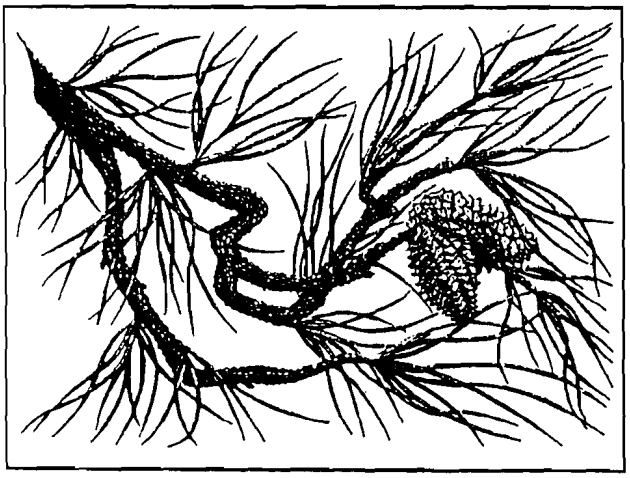
John A. Black, Patchogue



Gnarled tree growth of Pitch Pine is undesirable as a source of lumber. (Illustration: Larry Decker)

"Ancient Flame" Fire, History, and the Long Island Pine Barrens

"How can anyone not see that all observation must be for or against some view if it is to be of any service?" - - Charles Darwin

Of Long Island's plant associations its pine barrens are widespread and distinctive. Their proper management is currently an active concern of public and private agencies. When money and politics are prominent, a welter of other agendas, both patent and hidden, often submerges strictly ecological considerations. Although the orthodox opinion is that the pine barrens are a long-standing plant association resulting from a combination of poor, sandy soils and frequent fire, some propose that the barrens are neither old *nor* natural. Instead they posit that the association is a recent artifact of post-European manufacture, a result of the settlers' unbridled selective tree-cutting and accompanying accidental conflagrations (Black and Pavacic 1996).

The "genuinely natural" community in the location of the pine barrens appears to be viewed as some sort of "oak-chestnut/oak" forest (Turano 1983). Some subscribers to this concept of the pre-Contact forest then say that pine barrens are clearly "unnatural" and that proper management requires the elimination of fire and the restoration of the legitimate forest, through the processes of succession, and the elimination of the usurping pines. Behind this smoke screen lie discredited ideas on anthropogenic influences on landscapes; on succession; and on the nature of "natural" (Budansky 1995).

Indians and Fire

In addition to ecological naivete, there is also a peculiar form of ethnocentrism and reverse racism that implies Europeans corrupted an Edenic Long Island with a hellish regime of sylvic rapine and fire run rampant. In this view the long-standing presence of humanity on the Island before Contact had no significant effects. Here we have cartoonish Native Americans — nature's nobles, wise keepers who cherished and protected the natural world, and all was a Peaceable Kingdom full of birdsong, amity,

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and untrammeled pristine woodlands. Pocahontas has had her revenge.

Aside from being a Romantic and condescending view of Native Americans, such gratuitous nonsense also serves to blacken the deeds and motives of the Europeans and turns the pine barrens into a token of cultural imperialism. And so it is only a small step, to holders of such views, to assert that any proposals about ways to maintain the pine barrens via fire are wrongheadedly perverse.

The anthropological evidence contradicts fantasies about the "noble savage" and Native Americans' absence of impact on the landscape in the pre-Contact millennia (Russell 1980). William Cronon (1983) summarized the historical as well as scientific data on the overwhelming, ancient effects of Native Americans on the landscapes of the Northeast. Patterson and Sassaman (1988) provide a useful review on this matter, with an emphasis on Indians and fire, in more compact form.

They state that "it is clear that for North America as a whole Indians were, when first encountered by Europeans, an important source of wildland fire," and that questions of Indian burning deserve study, but that such studies are often vexed by analysts who fall into subjective analysis of the original fragmentary and selective historical records as well as those who hold outmoded ideas on the nature and frequency of "natural" disturbances and the results of successional processes.

In their view, the data say that a conservative interpretation for southern New England (which includes, in their study, Long Island) is "that Indian burning resulted in a mosaic of forests and fields in various stages of succession." For this region they conclude that the pre-Contact population was "relatively dense" and that populations over several millennia encountered demographic conditions that "promoted the need to manipulate resources with fire," and they "believe that, at least in coast and riverine areas, Indians intentionally used fire to enhance resource availability."

They review the studies of others and from these say that "fire adaptations in oak, chestnut, hickory, and pitch pine suggest that these species, which were common in southern New England when Europeans arrived, favored plant communities that were subject to at least occasional burning." Thus there is no credibility in the idea that the pine barrens could not have existed pre-Contact, because only after Contact was fire an ecological factor on Long Island. The Native Americans burned, burned with calculation and surely also by accident, and a pine barrens formation on the sterile soils of central Long Island was the likely consequence.

The Historical Record

What evidence do the "no fire and no pines" advocates adduce against this view? Little and insubstantial. Early mentions of Long Island's vegetation relate to coastal sites or the west end of the Island and are both skimpy in extent and imprecise in detail (Russell 1983). That pine barrens are not mentioned in them is taken as implying that pine barrens did not exist. I might remark, "absence of evidence is not evidence of absence." The observation that pine barrens do not show up in the literature until the 19th Century (Dwight 1822, Prime 1845) is also put forward as evidence of absence previous to that time, where a more reasoned view would be that travelers were now more frequently penetrating the Island's interior where the pine barrens existed. Notes on increased fire 19th Century burning frequency (Prime 1845, Sleight 1929) are conjoined with mentions of pine barrens to produce an equation "19th Century Disturbance = Pine Barrens." I will additionally remark that "correlation is not causation."

But this is mostly so far just a matter of opinion concerning a lamentably fragmentary and imprecise historical record. Speculation. while not useless, must take account of all data, not just the historical. Are there any other data that can unambiguously support either a "long standing fire/long standing barrens" or a "recent fires/recent barrens" interpretation for Long Island? Yes.

The Pollen Record

Palynological (pollen) analysis is the accepted, most useful means for reconstructions of Holocene climatic and community structure. Identifying, counting, and dating the pollen in lake and bog sediments open a clear window to the past. While these efforts are not without their problems, alternative reconstructions that defy very plausible pollen

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data interpretations or minimize and discard them in favor of more subjective data can hardly merit strong support. Regional and Long Island research has provided enough pollen data to uphold the interpretation of the antiquity of the pine barrens and, additionally, to support the long established presence of fire and refute alternative views. Figures 1-3, drawn from (and edited from) Davis (1969), Sirkin (1971), and Clark and Patterson (1985) summarize the data.

In Figure 1, the data clearly show the trajectory of climate change to modem conditions since the end of the Ice Age. Spruce and fir give way to a "pine pulse" that rapidly subsides 8000 radiocarbon years before present. Elsewhere in Davis' paper she shows that the "pine pulse" represents white pine pollen, but the faint pine background since 6000 C-14 years b.p. represents pitch pine, red pine and jack pine pollen types. The pine signal is trivial against the oak signal, whose massive presence for over 5000 years tells us that the Rogers lake vicinity (in Connecticut, a few miles from Long Island Sound) is and has been "oak forest."

Compare this pollen diagram with the Cattail Marsh one (NCT) in Figure 2, from a North Shore site near Huntington, clearly an oak community today. Although Sirkin has only one C-14 date, and only at Sunken Lake (SL), the spruce pulse which comes at 10,000 C-14 years b.p. is also prominent in the NCT data, so both diagrams are apparently complete from the end of the Pleistocene to the present. Comparing the NCT data to the Rogers Lake data is informative: they are generally the same profile, with a spruce pulse, a pine pulse that quickly falls to a negligible level, and a rise of an oak community that dominates to the present'day at both sites. These two, however, differ from the Sunken Lake site.

At both the NCT site (outside the present day pine barrens) and the SL site (well within it, in the pitch pine-oak association) there is a pine pulse as the spruce pulse wanes. The Rogers Lake analysis compels the conclusion that this pine period was a white pine period, not pitch pine. At NCT the pine dwindles and oak increases; at SL the history diverges four or five meters of the most recent sediments have considerable pine pollen. That this core segment represents the presence of pine-oak forest at the SL site over several millennia is hard to deny — and the site is pitch pine-oak today. (I should note that there is no "Sunken Lake" at the coordinates provided by Sirkin but the coordinates are congruent with Scuttle Hole, a bog.) There is no reason to believe that the pine signature in the sediments at SL is anything other than predominantly pitch pine, but the Clark and Patterson data in Figure 3, from Fresh Pond Marsh (at Wading River) and from Deep Pond (at Camp Wauwepex, less than a mile from "SL"), confirm this.

The Fresh Pond Marsh site is in the oak-dominated North Shore forest, and while there is pine pollen, it has significant levels of white pine, pollen lacking at Deep Pond; Deep Pond is in the pine-oak category of the more general pine barrens ecotype. The sediment cores are much more fine-grained in their analysis than the previous ones, and in each case are only a little over a meter in length. Analysis has provided four datable horizons in these cores: 1920, 1880, 1800 and 1680. Extrapolation from these horizons shows that the Fresh Pond Marsh data represent about a millennium; the Deep Pond data, nearly double that. At both sites the pine signal has been persistent, and at the Deep Pond site it has been steady, significant, and nearly all pitch pine — and has clearly been so for hundreds of years **"pre-settlement."** The pollen echoes from weedy species that indicate the agricultural history of the two sites (heavy at Wading River; slight at Deep Pond) show that each site represents floristic conditions at that site and are not more general regional "pollen averages".

The Charcoal Record

In addition to the pollen analysis, researchers (Patterson and Sassaman 1988) analyzed cores from throughout New England (including the core from Deep Pond, L.I.) for their charcoal contents in order to determine the degree of burning in the pre-Contact period. Charcoal inputs represent, of course, local fires. Since sediments were datable, the researchers could determine relative bum frequencies for both post and pre-Contact time. Although inland sites showed significantly increased post-Contact bum frequencies, "along the coast, especially in southern New England, differences [in bum frequencies] are not so great," and that "pre-Colonial fires must have been common."

At Deep Pond, with two millennia of sediment sequence, the adjusted pre-Contact charcoal value is the highest of any of the ten Northeast study sites,

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and absence of corn pollen in the pollen signature indicates that the burns in the Deep Pond area were apparently the consequence of general regional burning, rather than near-site, specific fire-clearing for the fields and gardens of Native Americans.

Conclusion. These various pollen diagrams and their comparisons lead to a robust conclusion: the pine-oak community, a significant element of the pine barrens association, is a stable, long established one, and there is clear evidence associating it with fire. Accepting this, we must also conclude that "pine barrens" in the broad sense is also of considerable antiquity, and that anthropogenic fire has played a major role in its maintenance for millennia, and that human influence is not "unnatural". To belittle this conclusion is to blunt Occam's Razor; to deny it is to turn the razor into a throwaway.

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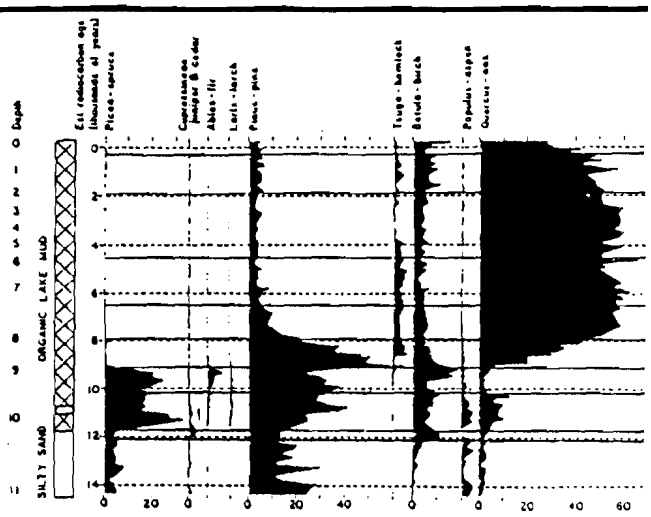


Figure One: Rogers Lake **Data**
Figure Edited from Davis (1969)

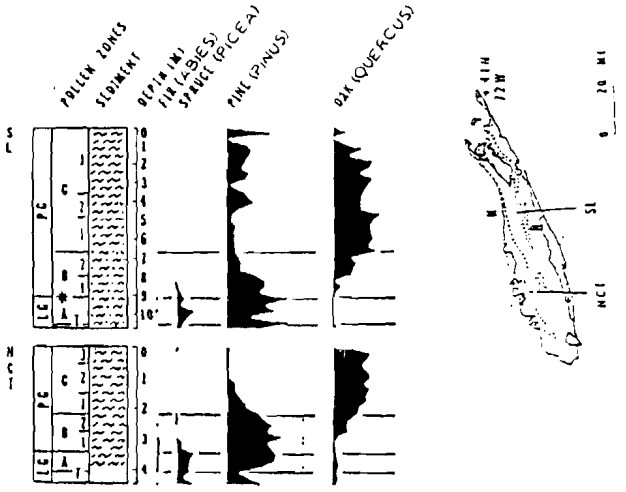


Figure **Two:** Cattail Marsh and Sunken **Lake Data**
Figure Edited from Sirkin (1971)

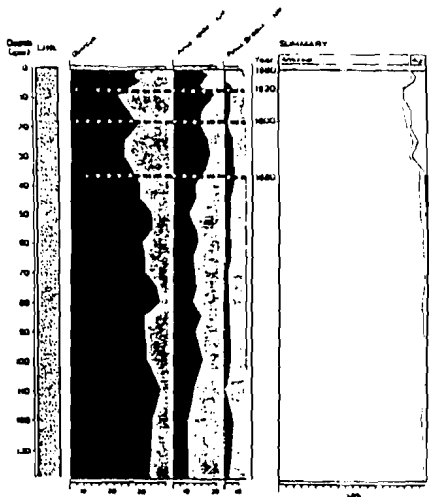


Figure Three: Deep **Pond Data**
Figure Edited from **Clark** and **Patterson** (1985)

A Rebirth on Long Island:

A Naturalist's Hike Into The Burned Pine Barrens

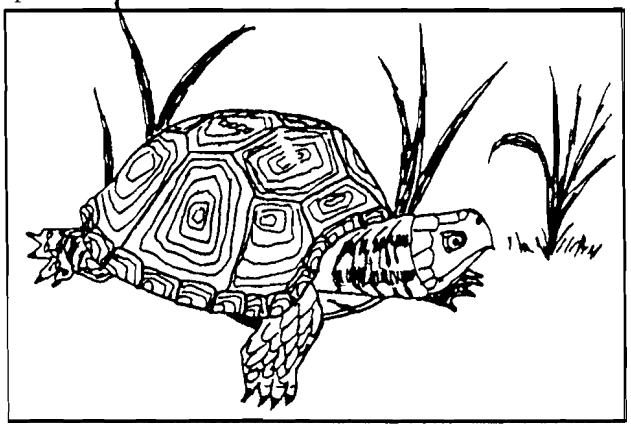
September 1995. The rebirth of the burned pine barrens of Long Island has already started. The barrens have long awaited these fires and already the amount of regeneration is astonishing but normal, and that is what surprises many people. Since the August fires I've often heard it said that "nothing will come back, the fire burned too deep, it was too hot." I had hoped this was not the case, and recent trips into several blaze spots yielded many interesting observations.

Sprouting out in several areas of the most intense Westhampton fire sites was Bearberry *(Arctostaphylus uva-ursi),* Scrub Oak *(Quercus ilicifolia),* Lowbush Blueberry *(Vaccinium pallidum),* Scarlet Oak *(Quercus coccinea),* and Pitch Pine *(Pinus rigida).* In less intense bum sites Bracken Fern *(Pteridium aquilinum),* Goat's Rue *(Tephrosia virginiana)* and Sweet Fern *(Compronia perigrina)* were noted, and more rigorous oak regeneration. Up near the moraine behind Suffolk Community College, where the blaze is believed to have started, the forest was not as intensely burned as in Westhampton; hence more vigorous regeneration of all the vegetation. Here the fire appeared to bum in swaths; one section of forest was almost untouched while other sections burned in linear paths. Trails of stump jumper trucks and bulldozers were more evident. Some bulldozer paths were quite wide and it will be interesting to observe regeneration and colonization of plants in these areas. The scarring left on the bulldozed landscape will probably last for many years.

In parts of the Rocky Point bum site, which occurred a few days before the Westhampton or "Sunrise" fire, all of the above named species were regenerating along with the addition of Black Cherry *(Prunus serotina),* which were sprouting from the base of burned trees. No Black Cherry regeneration was noted in the Westhampton bum site. Two fungi were observed growing out from the ashes. In many areas of the Westhampton bum site the rare little Pink Bum Cup *(Tarzetta rosea)* carpeted the ground. This tiny cupped orangeish-pink fungus is only found in burned over areas. It gave the charred black ground an orange glow and showed that there is "life among the ashes." Thanks go to Lance Biechele for identifying it. Another taller, more typical looking mushroom was seen but remains unidentified.

At intensely burned spots strange holes in the ground were found. At first you might think they were protective holes dug by animals to escape the fire; but upon careful examination they were found to be where trees once stood. The trunks of these trees were bumed right into the ground, some holes were 8 inches deep. The outer part of the holes were still completely lined with bark while the entire middle, or inside of the tree, was incinerated! One would never know a tree grew there until you put your hand into the hole and found it lined with bark - Pitch Pine bark. Other than the holes, no evidence of the original trees remained. A few other holes were found, maybe box turtles made these to escape the fire. Let's hope some escaped, but in several areas many dead box turtles were found. I think this fire took a toll on their already low numbers. Several turtle shells and many bones were found, including beaks and noses. The upper and lower shells (carapace and plastron) remained relatively intact with the exception of a few boney side scutes missing. Possibly as the trapped animal cooked inside its shell it eventually exploded outward. Their bones were found scattered outside of their shells.

Deer tracks were evident in the burn sites, but it appeared they were just on the move, as we were. Rabbits had recently nibbled the regenerated Scrub Oak; only the tips had been eaten, not the entire sprout.



The fire took its toll on Box Turtles
(Illustration by Mary Laura Lamont)

Rebirth on L.I., continued from page 29

Birds were observed flying over the bum sites; some settled down to feed along lightly scorched roadsides where vegetation survived the full blaze. Dark-eyed Juncos, American Goldfinch, Black-capped Chickadees, and Red-breasted Nuthatch, were among the species noted. They are all basically seed eaters and it was observed that the Red-breasted Nuthatch ventured into the bum sites a bit more than the others. The nuthatch found unburned Pitch Pine seeds in some of the cones of taller trees. These trees and their cones were charred black, but the little birds worked the burned cones over and extracted seeds only from the upper part of the cone; perhaps the lower part of the cone had lost or dispersed their seeds. We examined the winged pine seeds that were falling to the charred ground. Each seed had been neatly extracted from the wing leaving a circular little hole. The wind was also blowing seeds down from cones that were not completely burned; maybe this spring they will sprout into new seedlings.

Two species of ants were observed emerging from the charred ground. Only one or two individuals from each colony appeared to be working, and even they seemed to be very slow moving. It was easy to locate the emerging ants because their freshly excavated hills of tan sand were such a contrast to the blackened ground. A small unidentified moth was also observed flitting from clumps of sprouting Scrub Oak.

It has been a long time since Long Islander's saw a blaze of this magnitude, and we sometimes forget nature's terms and conditions. Many people described the blaze as "awful." But when they see all the green foliage of new growth sprouting from the blackened landscape they use words as "amazing, astonishing, and unbelievable!" Educating people about fire dependent communities is one way to hear those new words. Dr. Margaret Conover of the Science Museum at Shoreham-Wading River has used the recent fires as an opportunity to educate school children. The children who attend the program will grow up with the understanding that our pine barrens is a unique fire adapted community that is not destroyed by fire but regenerated by it, and proves there is life among the ashes.

Mary Laura Lamont, Riverhead

Plant Sightings

A rare, non-native mint was located in an abandoned field near Riverhead this spring by Skip Blanchard. *Lamium* hybridum, one of the Dead Nettles, is listed in A Checklist of New Yotk State Plants (Mitchell 1986) but apparently no specimens have been deposited in the herbarium at the State Museum. The New York Metropolitan Flora Preliminary Checklist (Clemants 1990) does not list this species from L.I. nor from southeast N.Y., but the mint has been reported from Fairfield Co., CT.

Bob Laskowski and Chris Mangels reported a population of Iceland Moss (Cetraria *islandica*) from near Sayville. This lichen (not a moss) is common in the arctic tundra, L.I. being the southern limit of its range. During the 1940's Roy Latham became intrigued with this species and published a series of five papers on its L.I. distribution.

Rare Swamp Cottonwood Forest Rediscovered Near Greenport

.It must have been in the late 1970's when Joe Beitel first showed me the crane-fly orchid (Tipularia discolor) in Moores Woods just west of Greenport. On that outing conversation had drifted to Roy Latham who had recently passed away. Joe mentioned that Roy had reported Swamp Cottonwood (Populus heterophyla) from the vicinity of Greenport, and for the next hour or so we searched the woods in vain for the rare cottonwood. Throughout the ensuing years I always kept an eye out for the cottonwood during my frequent visits to Moores Woods.

When recently asked by The Nature Conservancy (on behalf of the Township of Southold) to survey an extensive tract of land near Moores Woods, my interest in the long lost population of Swamp Cottonwood was once again aroused. Unfortunately, I knew that Phragmites Reed occurred along the fringes of the land and figured that I would once again survey another disturbed tract on Long Island's North Fork.

The aggressive Multiflower Rose ripped at my legs and arms as I bushwacked through the roadside shrubland into the interior. A narrow tunnel through the rose and catbrier caught my eye and bending low, I crawled through the passageway. To my

Swamp Cottonwood, continued from page 30

astonishment I had been transported into an undisturbed, mature forest. The first trees observed were Swamp White Oak (Quercus bicolor); tall trees, and lots of them. The soil got wet. Soon I was in standing water several inches deep. Then I saw it. No doubt about it. A poplar! Quickly examining the Leaf petiole and blade revealed it to be Roy Latham's lost population of Swamp Cottonwood. Turning my head revealed another tree, then another. Big trees. Saplings. Fruits eloquently drooping from overhanging branches. I stopped counting after 100 individuals.

Onward through the forest. Vernal ponds, groves of American Beech, Red Maple/Tupelo swamps, ferns everywhere. Over 20 species of *Carex*, certainly a rarity must be among them. A Red-tailed Hawk angrily left its nest and screeched overhead.

Ahead, an extensive opening in the forest canopy. Crashing through another barrier of native shrubs I beheld the most extensive cattail marsh I'd ever seen on Long Island. Acre upon acre of cattail; here and there a small batch of Phragmites, but dwarfed by the immensity of the cattail marsh.

Certainly a systematic survey needs to be conducted. It's gratifying to realize that Long Island still harbors such hidden, natural gems.

Eric **Lamont,** Riverhead

Society News

May Meeting: **Celia Hastings** announced a new "Wildflower Hotline," based upon the famous Rare Bird Alert; the telephone number is 1-800-354-4595, from 9am to 4pm, and is financed by four Federal agencies. **Steve Clemants** announced that a New York Native Plant Society has been formed and is being coordinated by **Carol Southbee** from Rochesier and **Andrea Post** from Long Island; more information will be forthcoming.

June Meeting: The annual barbeque was once again hosted by **Glenn Richard** at SUNY's Swan Pond Biological Station in Calverton. An hour walk through the abandoned cranberry bogs revealed two orchid species with flowers in tight bud: Rose Pogonia (Pogonia ophioglossoides) and Grass Pink (*Calopogon* tuberosus); usually these orchids are in full bloom by the second week of June, flowering dates of many species continue to be delayed this year. Attendance was 16.

Techno-arrogance

Many LIBS members have expressed concern over the planting of thousands of Pitch Pine seedlings in the pine barren burn sites near Westhampton and Rocky Point. The N.Y.S. Dept. of Environmental Conservation (DEC) spearheaded this reforestation project with the support of a local car dealership. Apparently the seedings were obtained from a tree farm from upstate New York. Such human intervention is unnecessary and can be harmful by introducing foreign genes into our native populations of Pitch Pine. As **Margaret Conover** stated: "The notion that natural ecosystems like the pine barrens may need occassional human intervention is known to conservation biologists as 'techno-arrogance.'" Such efforts should be directed at restoration and improvement of the suburban, man-made environment, cleaning up vacant lots, and planting native trees in parks.

LIBS Exhibit

On June 9th **Tom Stock** displayed the education exhibit at the Sweetbrier Nature Center; he also presented a moss puppet show for children but oddly enough, he reported, the adults showed more interest and response. Also on behalf of LIBS, Tom has written a preliminary nature trail guide for the Science Museum at Shorham-Wading River Central School District. On June 2nd, **Mary Laura Lamont** represented LIBS by leading a walk for N.Y.S. Dept. of Parks through the Roy Latham Nature Trail at Orient Beach State Park.

LIBS T-Shirts

Back by popular demand: quality Fruit-of-the-Loom forest green sweat-shirts ($18) and T-shirts ($10) with tan lettering of the Society's name and logo. To place an order please call Mary Laura Lamont at 516/722-5542.

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

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

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Membership

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

Field Trips

27 July **1996** (Saturday), 10:30am, JORELMON PARK, ALBANY CO., N.Y. Leaders: Al Breisch & Mark Fitzsimmons. Site contains limestone ledges, wetlands, caves, upland mesic forest. Rich fern flora with Green Violet, Golden Seal, Ginseng. Bring lunch. DIRECTIONS: From exit 22 of 1-87 (Selkirk Exit-mile post 135) turn S on Rte. 144 for 0.5mi. Turn right on Rte. 396, go 6mi. Turn right on Rte. 102, drive S 4.5mi. and park on right at Jorelman Park tennis courts. For those interested, afterwards we could take a short trip through the nearby Albany Pine Bush. For rhore info call Al Breisch (518/439-7635). For info on car pooling, cal Al Lindberg (W - 516/571-8500; H - 5161922-0903).

10 Aug. **1996** (Saturday), 9:30am, WARD POUND RIDGE RESERVATION. Leader Skip Blanchard. Visit this fine NE Westchester preserve full of extensive fields, rolling hills, streams and marshes for a general natural history foray. DIRECTIONS: From L.I. find your way to Hutchinson Pkwy, go N, get onto I-684 and continue N. Exit onto Rte. 35 near Katonah (my map seems to show this as exit 6). Take 35 E to Rte. 121 S in Cross River (3.8mi.). Park entrance is first left on 121. Museum is 1.5mi in from entrance (0.7mi after toll booth). Meet at Museum parking lot at 9:30am. Bring lunch. We will finish mid to late afternoon. Per vehicle entrance fee is $7, so you may want to carpool. For carpooling ideas/info, call Skip at 516/421-5619 evenings.

LONG ISLAND BOTANICAL SOCIETY
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