

LONG ISLAND BOTANICAL SOCIETY NEWSLETTER

Vol. 7, No. 3

May - June 1997

Management of *Phragmites* at Tiffany Creek Preserve, Oyster Bay Cove, New York

From the last Long Island Botanical Society Newsletter we have learned of the earliest occurrences of *Phragmites australis* on Long Island, its distribution in the local and world community, and of its importance to a limited number of insect populations. It is obvious to us all that unless a major predator arises, *Phragmites* is here to stay.

In its spread across Long Island, *Phragmites* will reach and compete in all susceptible habitats. The only answer to protecting and restoring our wetlands is to learn to live with it by managing it effectively.

The Flag Meadow at Tiffany Creek Preserve is a high quality wet meadow community, acquired as a significant habitat in 1993 by Nassau County, with the assistance of the L.I. Chapter of The Nature Conservancy. At the time of its acquisition, the wet meadow, an increasingly rare habitat in Nassau County, was rapidly being lost to ecological succession. A secondary threat was an approximately one-acre stand of *Phragmites australis*. In 1994, the Flag Meadow Restoration Project was initiated in

an attempt to forestall the meadow's transition into a red maple swamp, and to control the spread of and possibly eradicate the *Phragmites*.

There are various methods of control available to the natural area managers; all are labor-intensive and have to be tailored to the conditions of the individual site. For our work at Flag, I have chosen a regime of mowing and cutting, a variation on several studies done in The Nature Conservancy preserves in Ohio (Nature Conservancy, 1993). Since *Phragmites* is a grass, cutting several times during a season at the wrong times may increase stand density (Osterbrock, 1984). For this method to be effective, the mowing and cutting must be done in late July. At that time, the food reserves are in the aerial portion of the plant, preventing the translocation of the nutrients to the rhizomes, thus reducing the plant's vigor (Osterbrock, 1984).

The strategy for our field work is rather straightforward. The areas of the pure stand are mowed, starting from the perimeter of the stand working up to mixed stands of vegetation. We have learned over the course of our management work that mulch

Highlights

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Rose Mallow (*Hibiscus moscheutos*) can co-exist with *Phragmites* for awhile before it becomes eliminated.

(Illustration by Audrey Watson, Mattituck)

mowing decreases the labor intensity of the process by quickly reducing the size of the stand, and by reducing the amount of cuttings to be removed. *Phragmites* left on site as cuttings sprout and form stolons (Osterbrock, 1984). In our experience, the product of mulch mowing does not sprout. In sections of the plot that contain mixed stands of desirable plant species to be saved, we cut and removed the *Phragmites* using power and hand tools.

We have several weapons in our command for the July war against *Phragmites* at Flagg Meadow. Our power arsenal consists of a DR Field and Brush Mower (a small self-propelled brushhog mower), and Echo 3000 series brush clearing saws. More precise cutting is done with hand hedge shears and pruners.

There are a number of other notable management strategies, depending on size of population and on-site conditions. At Wertheim National Wildlife Refuge in Shirley (Suffolk Co., NY), Dr. Robert Parris has used water level manipulation and burning to eliminate *Phragmites* in a 20-30 acre freshwater impoundment. West of Wertheim at Seatuck and Fireplace Neck, Dr. Parris dammed up old mosquito control ditches to restore tidal flow to the marshes. This manipulation of the water table is controlling significant stands of *Phragmites* (Parris, 1997). Dr. Parris has offered to lead a September field trip to these sites and discuss his techniques. At Constitution Marsh in Cornwall-on-Hudson, NY, Keene used a combination of cutting, covering with plastic (black and clear) and dripping of herbicide into cut stems with a syringe (Nature Conservancy, 1993). The herbicide Rodeo has been used successfully in many states; it is however non-selective. Herbicide use would require a permit in our area. Information on other control techniques may be found in The Nature Conservancy's "Element Stewardship Abstract for *Phragmites australis* (*Phragmites communis*) - Phragmites or common reed" (The Nature Conservancy, 1815 North Lynn Street, Arlington, VA 22209).

So I guess the question is, "Have we won the war at Flagg Meadow?" The answer is we are winning but the *Phragmites* is still there. After three years of management, the population has decreased from 390

to 75 stems per square meter in the most dense portion of the stand. Stem height has been reduced from 3 to 2 meters. The overall stand looks weak and sparse. We will have to continue our efforts for several more years to see if we can truly eradicate the *Phragmites*. As you can see, the very labor-intensive management of *Phragmites australis* is really only feasible to control small populations in our most critical wetland habitats, but it can be done.

Oh, by the way - we have plenty of spare reeds. Is anyone planning to re-enact Thor Heyerdahl's *Tigris Expedition*?

Literature Cited

- Nature Conservancy. 1993. Element Stewardship Abstract for *Phragmites australis* (*Phragmites communis*) - Phragmites or common reed.
Osterbrock, A. J. 1984. *Phragmites australis*. The problem and potential solutions. Nature Conservancy Ohio Field Office, Stewardship. 8p.
Parris, R. W. 1997. Personal communication.

Al Lindberg, Nassau County Museum
Natural History Bureau

Freight Trains in the Trees

I hear the ebb and flow of the rushing wind.
Canada is in that wind.
Masses of air the size of Montana
Push through the tall oaks outside my bedroom.
At night the sound of the northwesterly arctic air
From Manitoba and Wisconsin
Passes through here
Like a subway train
Slipping by the clean nakedness of these trees.

Thomas Allen Stock, Smithtown

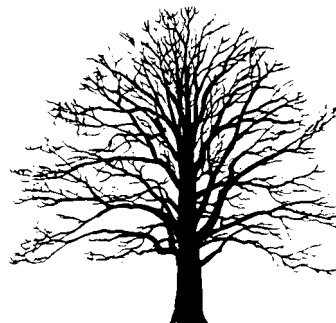


Illustration from Peterson Field Guide #11 ---->

Additional Notes on Ancient Wood Fragments from the Montauk Peninsula

In a recent issue of this newsletter [Vol. 7, No. 1] Ray Welch and I reported on a wood fragment that we collected at the Ditch Plains area on the Montauk Peninsula. The specimen was identified as spruce (*Picea*) and dated at 12,210 YBP [years before present].

Since then additional samples have been collected and, in some cases, identified from the original study area which we now term Site 2. We have also collected and identified wood fragments from two additional locations, Sites 1 and 3, both of which are on the Atlantic coast of the Montauk Peninsula.

One wood sample was collected from Site 1 which is approximately 2 km to the west in an area of low relief that Sirkin (1991) terms a meltwater channel. In addition, a wood and a peat sample was collected from Site 3 which is approximately 0.5 km east of Site 2.

The wood found at Site 1 was collected from a peat-like deposit below a severely eroded dune. This specimen was dated at 2,120 \pm 80 YBP and, though not positively identified appears to be either wild black cherry (*Prunus serotina*) or eastern red cedar (*Juniperus virginiana*), both of which are consistent with the vegetation that might have been found in a near-coastal environment at that time as well as today (Davis, 1969).

Site 2 is an actively eroding bluff in which lacustrine [of lakes] sediments are exposed. In addition to the spruce noted above, three additional wood samples have been collected from Site 2. The uppermost specimen collected approximately 0.9 m below the bluff surface was dated at 1,635 \pm 85 YBP and appears to be wild black cherry. The other two specimens were both collected from approximately 2 m below the surface; one was dated at 11,490 \pm 220 YBP and has been identified as spruce. The other is also thought to be spruce since its age is 11,760 \pm 220 YBP and it was collected from the same stratum.

Site 3, further to the east, is an area of low relief

where peat is exposed on the upper beach face. The peat is immediately seaward of an actively eroding dune to the north of which is a marsh fed by groundwater and, probably, by intermittent surface flow. Two samples, one peat and one wood, were collected from the peat exposure. The wood, collected approximately 0.3 m below the surface of the exposed peat was dated at 5,455 \pm 115 YBP and, again, is most probably red cedar or black cherry. The peat was taken approximately 1 m below the surface and has been dated at 10,290 \pm 200 YBP. Both the presence and date of the peat indicates that it was deposited in a low energy, fresh water environment since the sea had not yet reached its present day level at that time.

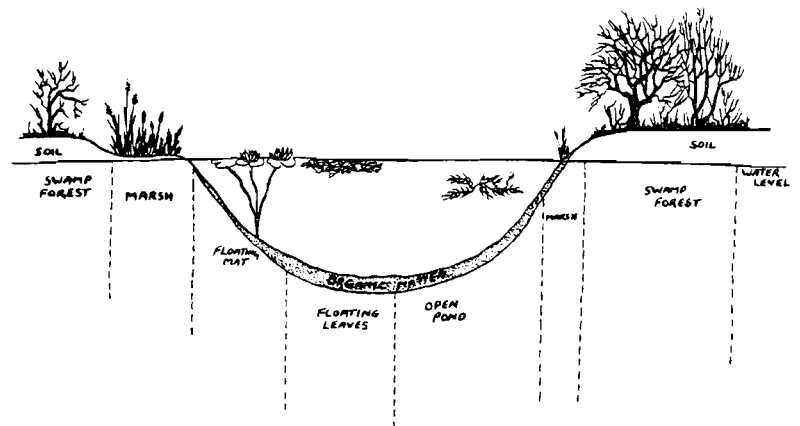
Literature Cited

- Davis, M. B. 1969. Climatic changes in southern Connecticut recorded by pollen deposition at Rogers Lake. *Ecology* 50: 407-422.
- Sirkin, L. 1991. Stratigraphy of the Long Island Platform. *Journal of Coastal Research Special Issue 11*: 217-227.
- Welch, R., & J. A. Black. 1997. Ex Ligno, Mundus: From Wood, a World. *Long Island Botanical Society Newsletter* 7: 1-3.

John Black, Geosciences, Inc.
Patchogue

Ray Welch, Department of Biology
Suffolk Co. Community College

(The New York State Summer Institute for Science and Math, Suffolk Community College, provided funding for the dating of the specimens.)

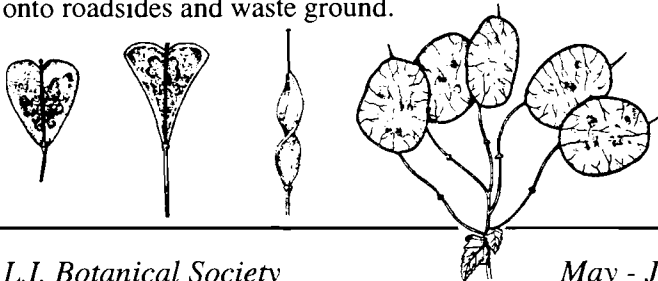


Plant Sightings

Barbara Conolly brought fruits and a restored leaf of Wild Bur Cucumber (*Sicyos angulatus*) to the January meeting; she had collected it from Horse Shoe Road in Mill Neck. In late December while conducting the Christmas Bird Count in the hills just west of Cold Spring Harbor, **Eric & Mary Laura Lamont** saw masses of a vine tangling over shrubs onto the lower limbs of trees. From a distance the plant appeared to be Kudzu-vine (*Pueraria lobata*), but upon closer inspection it turned out to be Bur Cucumber. **Dave Kunstler** remarked that *Sicyos* had proliferated this year in Oyster Bay, and **Steve Clemants** reported it from south Brooklyn.

Barbara Conolly also brought to the January meeting a specimen of Winter Honeysuckle (*Lonicera fragrantissima*) in bloom, having collected it on January 4th. Tom Meoli brought the fruit of Strawberry Shrub (*Calycanthus floridus*) from a large, naturalized colony in Huntington, near Route 25.

By mid-April at least six weedy species in the Mustard Family were in full flower. The earliest is the European Whitlow Grass (*Draba verna*) with tiny white flowers; its relative *Draba reptans* is a native species, rare in New York, and has not been recently observed on Long Island. Hairy Bittercress (*Cardamine hirsuta*) and Mouse-ear Cress (*Arabidopsis thaliana*) also have small white flowers and commonly occur in disturbed sands throughout the island; *Arabidopsis* has giant chromosomes (relatively speaking) and is commonly used in genetics studies. The unique fruits of Shepherd's Purse (*Capsella bursa-pastoris*) appear along the lower inflorescence while the tip is still in full flower. The brilliant yellow flowers of Early Wintercress (*Barbarea verna*) identify this roadside mustard even when travelling the speed limit on the LIE; its more robust cousin *Barbarea vulgaris* flowers a few weeks later. Money-bags or Honesty is in the genus *Lunaria* (from *luna*, the moon), and sometimes escapes from cultivation and wanders onto roadsides and waste ground.



Sea Poppy (Glaucium corniculatum), New to the Flora of Long Island, N.Y.

Dr. Robert Kiger, Director and Principal Research Scientist at the Hunt Institute for Botanical Documentation, is a contributing author of *Flora of North America*. While preparing the taxonomic treatment for the genus *Glaucium* of the Poppy Family (Papaveraceae), Dr. Kiger studied a voucher specimen collected by Elihu S. Miller on 7 August 1878, from the bay shore near Montauk Point. Miller had originally identified the specimen as *Glaucium flavum*, a species relatively common on gravelly shores at Montauk, Orient, Shelter Island and Gardiners Island. Dr. Kiger immediately recognized the collection as *Glaucium corniculatum*; he writes, "*Glaucium corniculatum* has been widely introduced outside its native Eurasian range as a crop weed and ballast waif. It can persist in a fairly broad range of climates and probably is established in North America more widely than existing herbarium records indicate." It will be interesting to see if this species still persists on Long Island.

Society News

Orient Point Trail Guide

During the past year the LIBS Education Committee has been working with New York State Office of Parks, Recreation & Historic Preservation in the preparation of the **Roy Latham Maritime Forest Trail** and accompanying interpretative trail guide for Orient Beach State Park. The trail was completed last year with assistance from a local Boy Scout Troop. **Gary Lawton, Mary Laura Lamont, Paul Stoutenburgh, and Thomas Allen Stock** are now applying the final touches to the trail guide. The State is financing publication of the guide. A dedication ceremony is being planned for this spring, but a definite date has not yet been set. For more information please call OBSP at 516/323-2440.

Executive Board Meeting

A meeting of the Executive Board will be held on 13 May 1997 at 6:15 pm (before the monthly meeting and program) at the Bill Patterson Nature Center, Muttontown Preserve. All members are welcome.

Pine Barrens Workshop

Dr. Margaret Conover has organized a two day workshop (May 17 & 18) entitled, "Learning to Live in the Long Island Pine Barrens." Although the workshop is geared specifically for teachers, LIBS members have been invited to attend the meetings and field trips. For more information call Margaret at 516/821-8155.

A Note From The Membership Chairperson

As the yearly renewal announcements have gone out and are beginning their return journey, you may have noticed a change. The LIBS Board has determined that by sending dues directly to Treasurer **Carol Johnston**, funds will be processed more efficiently. Envelopes sent out with the renewal notices are now pre-addressed to Carol.

To the question, "Am I due for renewal yet?" - check the mailing label on this issue of the newsletter. The date in the upper right corner indicates the most current year for which you've paid (unless you've just sent in your check). Renewal notices are sent to all members in February each year, and late notices are mailed in May.

I will still maintain the database of members' records, so please continue to direct new members, changes of address, cancellations, or questions about your membership to me. And now, you technophiles out there can even e-mail me: LALindberg@compuserve.com or if you prefer numbers, 103260.523@compuserve.com

Lois Lindberg
Membership Chairperson

Field Trips

3 May (Saturday). Tungsten Mine Park, Trumbull; Saugatuck Falls Natural Area, Redding CT. Leader: **Chris Mangels**. Focus of the trip will be spring flora, birds, and insects. All participants will meet at the Bridgeport CT Ferry Terminal at 9:00 am. Ferry from Long Island leaves Port Jefferson at 7:30 am.

24-25 May (Saturday-Sunday). Rochester, NY. (Joint trip with New York Flora Association.) Two days of botany, including Bergen Swamp, Zurich Bog, Rush Oak Openings, and limestone

woodlands on the Onondaga Escarpment. This is a great opportunity to see some of the state's rarest plants and communities. The trip is limited to 24 participants, so call **Bob Zaremba** to reserve your spot at: 518/463-6133 ext. 226 (or 518/274-7419).

1 June (Sunday). Kettle hole vegetation in the vicinity of Bald Hill near Selden, Suffolk County (north of the LIE, exit 63). Meet at 10am for a 2 mile walk in the Ronkonkoma Moraine. Leader: **Ray Welch**. Call Ray before 8:30 pm for directions to meeting location (tel: 516/981-5852 (home); 516/451-4642 (work).)

14 June (Saturday). Shawangunk Mountains: Ice Caves, Dwarf Pine Ridges, scenic views, Cragmore, Ulster County, NY. (Joint trip with the Torrey Botanical Society.) Meet at 10am in the parking area for the Ice Caves. Take I-87 to Exit 16 for US Route 17 north/west, passing the towns of Goshen and Middletown, and get off at Exit 113 for Route 209. Turn right (north), driving through the Port Jervis trough, west of the Shawangunks. Travel into downtown Ellenville and turn right (east) on Route 52. Turn right at the stop sign at the base of the Shawangunks. Approx. 5 mi from the junction with Route 52 there will be a sign for the Ice Caves on the left. Turn left here (Cragmoor Road) and follow the signs to Ice Caves (turning right on Sam's Point Road). There is a \$6 entrance fee. Bring lunch, ample beverage, insect repellent, and be prepared for wet walking. Leader: **Patrick Cooney** (914/478-1803).

28 June (Saturday). Cordwood Landing County Nature Preserve. Join members of the LIBS Flora Committee as they assist The Nature Conservancy by conducting a floristic inventory of the site. Leaders: **Al Lindberg, Randy Tate, & Ann Carter**. Meet at 10 am at Ann Carters' house, adjacent to the preserve: 123 North Country Road, Miller Place (tel.: 516/331-4699). Directions from LIE: Take Exit 63. Go north on County Road 83 to the end, about 9 miles. Turn right onto 25A. Turn left at the first light onto Echo Avenue. Turn left onto North Country Road. Ann's house is the second house on the right after you make the turn. (Carter Christmas Tree Farm, the yellow house next to the little red gift shop.)

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.

President	Eric Lamont
Vice President	Skip Blanchard
Treasurer	Carol Johnston
Rec'd Sec'y	Barbara Conolly
Cor'sp Sec'y	Jane Blanchard
Local Flora	Steven Clemants
Field Trip	Glenn Richard Allan Lindberg
Membership	Lois Lindberg
Conservation	John Turner Louise Harrison
Education	Mary Laura Lamont Thomas Allen Stock
Hospitality	Betty Lotowycz
Program	Skip Blanchard Steven Clemants
Editor	Eric Lamont

Membership

Membership is open to all, and we welcome 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 Road, Oyster Bay, NY 11771-3111

PROGRAMS

13 May 1997 - 7:30 pm*, Dr. Andrew Greller
(Biology Dept., Queens College of CUNY)

"Vegetation & Flora of the Florida Keys"

A talk with slides on the plant communities and interesting plants of the Florida Keys.

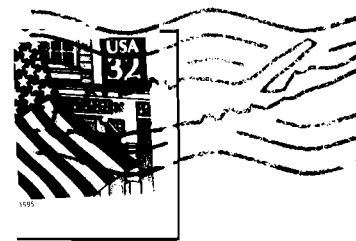
Location: Bill Patterson Nature Center,
Muttontown Preserve, East Norwich.

10 June 1997 - Annual LIBS Barbecue
Glenn Richard will once again host this year's evening of activities at the Swan Pond Biological Station of SUNY at Calverton.

**Please see the enclosed flier
for specific information.**

*Refreshments & informal talk begins at 7:30pm
the meeting starts at 8pm. For directions to
Muttontown Preserve call 516-571-8500.

LONG ISLAND
c/o Muttontown
Muttontown
East Norwich



MEA