

Long Island Botanical Society

Vol. 21 No. 2

The Quarterly Newsletter

Spring 2011

How LIBS became involved in the publication of *Tidal Marshes of Long Island, New York*

by Eric Lamont

Introduction

In September 2010 the Torrey Botanical Society published, in association with the Long Island Botanical Society (LIBS), volume 26 of *Memoirs of the Torrey Botanical Society* entitled *Tidal Marshes of Long Island, New York* (Figure 1). The publication contains 13 peer-reviewed articles by some of the region's leading scientists and environmental law experts and is the first volume to be published in association with another botanical society.

The publication includes, among other topics, analyses and discussions of controversial tidal marsh "restoration and management" strategies and programs, like Open Marsh Water Management (OMWM). Concern over negative impacts to Long Island's remaining tidal marshes, resulting from OMWM and other similar programs, initially influenced LIBS members to investigate these programs.

LIBS First Learns About OMWM

In 1997, LIBS field trip committee chair, Allan Lindberg, scheduled a trip to Wertheim National Wildlife Refuge (NWR) to view the early results of *Phragmites* control by flooding techniques

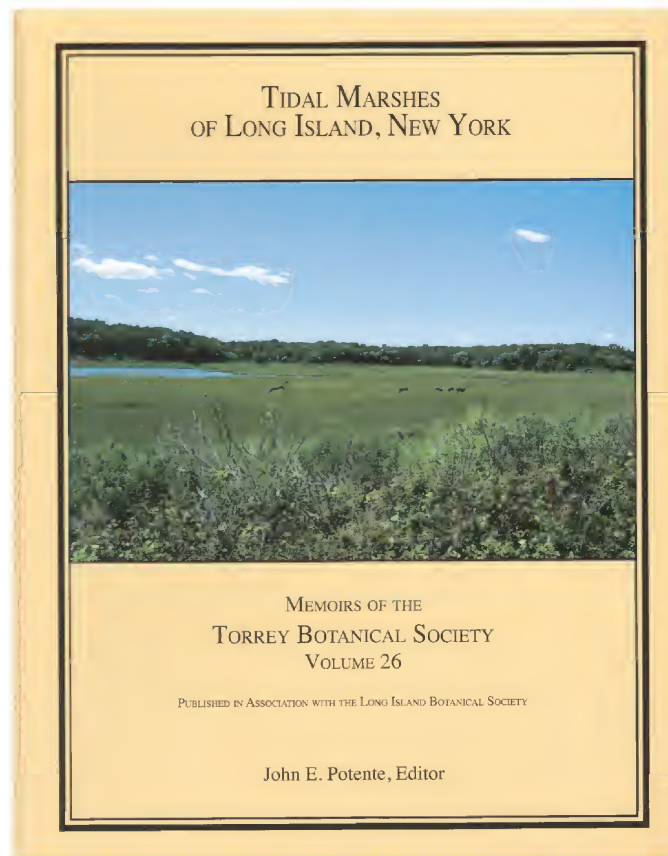


Figure 1: Cover of Memoirs of the Torrey Botanical Society Volume 26.

(see article by A. Lindberg in LIBS *Newsletter*: vol. 7, no. 3, 1997). Robert Parris of the refuge showed us mosquito ditches that had been dammed (Figure 2), thus flooding the high marsh and *Phragmites*. We then observed former dense stands of *Phragmites* that had been significantly thinned out by the flooding. This type of marsh management technique was called OMWM, and it appeared to be effectively controlling *Phragmites* in the marsh.

In 2002, LIBS became aware of another OMWM project being proposed for Orient Beach State Park. The park supports globally rare plant communities and numerous rare plant species, according to park ranger and LIBS chair of education Mary Laura Lamont. The purpose of the project was to "enhance natural mosquito control . . . and restore and enhance salt marsh habitat by removing

approximately 55 cy of material from an existing ditch to between 0" to 5" below MLW." The high marsh area to be "restored" was flagged and excavation plans were ready to be implemented when New York State decided to retain a professional botanist to first survey the site for rare plants. The botanist was LIBS vice-president Skip Blanchard who found that the site supported one of New York's largest populations of a rare glasswort, *Salicornia bigelovii*. The State cancelled the project.

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Long Island Botanical Society

Founded: 1986
Incorporated: 1989

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

Visit the Society's Web site
www.libotanical.org

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Society News

Twenty LIBS members and friends are participating in **LIBS' 25th Anniversary Field Trip to Florida** from March 30th to April 8th, 2011. They will be visiting orchid hotspots, pitcher plant bogs, live oak/palmetto forests, old-growth pond cypress stands, and other interesting botanical sites, and reporting back through a [travel blog](#) set up by Donald House. Find the link at www.libotanical.org

The LIBS Flora Committee began a series of meetings in December 2010 to review species maps for the *Atlas of Vascular Plants of Long Island, New York*, in terms of accuracy and reasonableness. These maps were computer generated in 2010 by Adam Negrin, working with New York Metropolitan Flora (NYMF) data from the Brooklyn Botanic Garden. Species records are shown for herbarium specimens and observations, new versus old records, and by USGS grids across the four counties of Long Island. Township boundaries are also shown on the maps.

The committee is supplementing the newly mapped data with LIBS data from the 2005 draft atlas as well as other more recent data. Emphasis is on filling in recent specimen data for native species where entire townships were not represented in the NYMF data. Current nomenclature is also being reviewed during this process. As of March 2011, approximately 850 species maps have been reviewed. This represents about 37% of the grand total of 2300 species. The Flora Committee review meetings have been attended by Barbara Conolly, Andy Greller (Co-Chair), Carol Johnston, Rich Kelly, Eric Lamont (Co-Chair), Al Lindberg, Lois Lindberg, and Adam Negrin.

Carol has been investigating printing options, and reports that, despite the need to print color maps, we are hoping to be able to offer the atlas for around \$40.00 per copy to LIBS members. To achieve this, we will probably run a modest batch of perhaps 25 copies, with the option to print additional copies on demand. The Flora Committee wishes to thank Margaret Conover for all of her valuable help and insight on the matters of printing and publishing.



LIBS T-shirts & Sweatshirts are once again available for a limited time. They can be picked up at monthly meetings. The cost is \$15 for T-shirts and \$25 for sweatshirts. For more information, contact Mary Laura Lamont at 631-722-5542.



**Invitation to the 2011 Joint Field Meeting of the
Botanical Society of America - Northeastern Section,
Torrey Botanical Society, and Philadelphia Botanical Club**

**Cosponsored with the Finger Lakes
Native Plant Society and
the New York Flora Association
June 19-23, 2011 at Ithaca College,
Ithaca, New York**

Contact Larry Klotz LHKLOT@ship.edu



(Tidal Marshes cont. from cover)



Figure 2: A piece of plywood being knocked into a ditch with the bucket of a backhoe. The plywood acts as a plug. The blocked ditch ceases to serve as an artificial channel for marsh drainage, and as a result, large ponds can form on the marsh (behind the blocked portion of the ditches). Figure 39, page 140 of the *Memoirs* (image credit: National Park Service).



Figure 4: High marsh, vegetated with *Spartina patens*, is chosen to be sacrificed in the OMWM excavation. Note that the invasive *Phragmites australis* is left in place. From Figure 16, page 130 of the *Memoirs* (image credit: Suffolk County Department of Public Works).

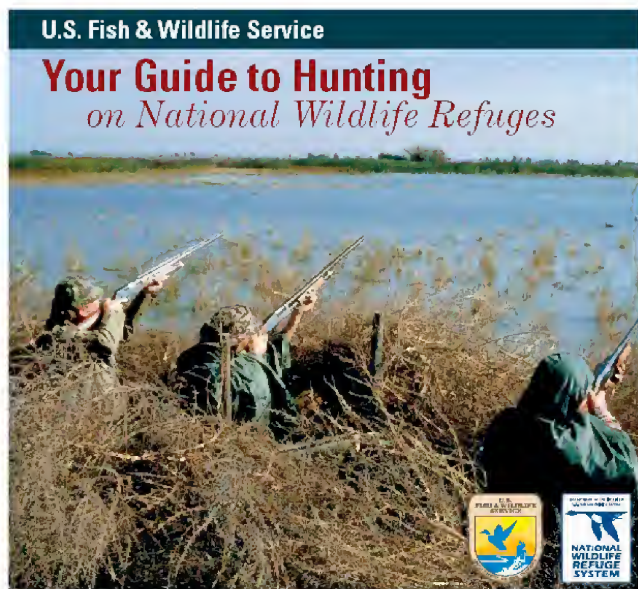


Figure 3: Cover of a booklet on hunting in salt marshes of National Wildlife Refuges; from www.fws.gov.

A third OMWM project was being implemented during this same time at the William Floyd Estate, a unit of Fire Island National Seashore. The high marsh was being flooded for the purpose of enhancing habitat for waterfowl, especially black ducks. Ducks Unlimited, a national duck hunting group, was involved in this project as well as the OMWM project at Wertheim NWR (Figure 3).

LIBS had now learned about three different reasons for implementing OMWM: 1) *Phragmites* control, 2) mosquito control, and 3) management for duck habitat. A fourth claim by OMWM

proponents was emerging: OMWM will 4) “restore” marshes, through the digging of large artificial ponds in undisturbed salt marshes (Figure 4).

Fred Mushacke’s Research

At the September 2002 LIBS meeting at Stony Brook University, Frederick Mushacke and Karen Chytalo, of Marine Habitat Protection, Bureau of Marine Resources, New York State Department of Environmental Conservation, presented a program entitled *Tidal Wetlands Loss in Nassau and Suffolk Counties*. The program was based on Mushacke’s 30-plus years of research and unpublished data that would be later published in the 2010 *Memoirs of the Torrey Botanical Society*. Mushacke reported on the “dramatic” loss of Long Island’s salt marshes during the past 30 years, caused by natural and anthropogenic impacts that could be acting singularly or synergistically. Perhaps the single most-suspected cause of vegetation loss in tidal wetlands, Mushacke proposed, is sea level rise.

Questions now were being raised concerning some OMWM practices. For example, should ponds be dug into salt marshes for mosquito control when sea level is rising and marshes are already slumping and collapsing? Between 2005 and 2006, 24 artificial ponds were dug in the salt marsh at Wertheim NWR near the mouth of the Carman’s River (Figure 5).

Council on Environmental Quality (CEQ)

In furtherance of New York State’s environmental laws, Suffolk County created the CEQ in 1970 to advise and make recommendations to the County Legislature on “activities likely to have a significant impact on the environment.” In 2005 and 2006, three LIBS members served on the CEQ: John Potente, who had been appointed by the Legislature; and Larry Penny and

(Cont. on page 14)

FIELD TRIPS

APRIL 30, 2011 (SATURDAY) 10 AM

Alley Pond Park, Queens Co., NY

Trip leader: Dr. Andrew Greller

Email: agreller2@optonline.net

This site has a wide variety of beautiful spring wildflowers, interesting weed species, combined with ponds, and the local fauna. Bring lunch, a hat, water, suntan lotion, and insect repellent. Carrying your lunch is optional. (This is a joint trip with the Torrey Botanical Society.)

Directions: Grand Central Parkway
(From Manhattan and Western Queens)

Take Long Island Expressway to Exit 30 (toward E. Hampton Blvd/Douglaston Parkway. Merge onto the service road of the LIE (Horace Harding Blvd). Turn right on W Alley Road. Make a right under Grand Central Parkway overpass into the park. Follow this entry road into the parking lot.

Grand Central Parkway (From Long Island)

Take Grand Central Parkway to Exit 23. Follow signs for Union Turnpike. Make a left on Union Turnpike at the traffic light. Proceed until you reach Winchester Boulevard and make a left at the light. Pass the large hospital building on your right. Immediately make the next left under the highway into the park. Follow this entry road into the parking lot.

By Public Transportation: Take the E or F train to Union Turnpike station. Transfer to the Eastbound Q46 bus and get off at the Winchester Boulevard stop. Walk north on Winchester Boulevard towards the Grand Central Parkway overpass. The entrance is on your left underneath the Grand Central Parkway.

MAY 15, 2011 (SUNDAY) 10AM

Forest Park, Queens Co., NY

Trip leader: Michael Feder Email: mdfeder2001@yahoo.com

Designed by Frederick Olmsted in the 1890s, Forest Park is the third largest park in Queens. We will get a last look at some fading spring ephemerals, visit some oddball plant populations, see a restoration site that was formerly a Norway maple stand and find good representation from the Apiaceae family. If you'd like to do some bird watching before or after the walk, bring binoculars. Forest Park is an excellent place to view migrating warblers.

Directions: We will meet at 10AM at Wallenberg Square which is located at the southwest corner of Park Lane South and Metropolitan Avenue in Kew Gardens. Take the Grand Central Parkway or Van Wyck Expressway to the Jackie Robinson Parkway. Get off at exit 6, Metropolitan Avenue. Make a left onto Metropolitan Avenue. Wallenberg Square will be about 1/4 mile down the road on your right at the intersection with Park Lane South.

JUNE 4, 2011 (SATURDAY) 9:30AM - 12:30PM

Tiffany Creek Preserve, Oyster Bay Cove, Nassau Co., NY

Trip Leaders: Al and Lois Lindberg

The 200-acre Tiffany Creek Preserve is composed of several former estates, offering a variety of ecological communities within a North Shore oak forest. The trip begins at the 45-acre parcel west of Sandy Hill Rd, where upland species include oaks, hickory, flowering dogwood, American beech, and black birch. We will then cross the street to an upland meadow and woods, where glacially-formed ravines descend to a wetland community. Highlights should include hillsides dominated by mountain laurel in full bloom, and a unique opportunity to see three species of magnolia that occur within the forest – *Magnolia tripetala*, *M. acuminata*, and *M. macrophylla*.

Directions: From the intersection of Route 106 and Northern Blvd (Rte 25A):

Go East on Rte. 25A for 1 1/2 miles. At 2nd traffic light, turn sharp Left onto Berry Hill Rd. Continue 3/4 mile. Where Berry Hill Rd. curves to the left, bear slight right onto Sandy Hill Rd. Entrance is the first driveway on the left. Do not search MapQuest etc – they all lead you to the opposite end of the road!

JUNE 18, 2011 (SATURDAY) 10AM

Roosevelt Preserve, Nassau Co., NY

Trip leader: Dr. Andrew Greller

Email: agreller2@optonline.net

Wildflower walk. LIBS members only, limited registration. Please call Michael Feder at (917) 714-4461 to register.

JULY 23, 2011 (SATURDAY) 10AM

Christie Estate South (Muttontown South), Nassau County, NY

Trip leader: Rich Kelly Cell: (516) 509-1094

Email: vze2dxmi1@verizon.net

This is a former Winthrop estate, and the habitats include mixed upland woods, successional fields, and kettle hole ponds. There will be a wide variety of summer wildflowers. Bring plenty of water, suntan lotion, and insect repellent. This will be a long but easy walk. The trails may be muddy, but you would have to make a special effort to walk in standing water on this trip. It would be best if you could carry your lunch. Please contact the leader prior to the trip. (This is a joint trip with the Torrey Botanical Society.)

Directions: Meet at 10:00 AM at the parking area for Nassau Hall at 1864 Muttontown Road, Syosset. *By car only:* From either the Long Island Expressway or Northern State Parkway, go north on North Broadway (Rtes. 106/107) in Jericho. Very soon after passing under Jericho Tpke. (Route 25), bear right onto Rte. 106 which is Jericho - Oyster Bay Road. Continue north for 2.2 miles and turn left onto Muttontown Road/Eastwoods Road. Go west 0.4 mile and turn left at Nassau Hall. If the gate is locked, backtrack a few feet and take the driveway that goes through the building.

Volunteers Needed to Compile Long Island Plant Lists

Steve Young
New York Natural Heritage Program

At the New York Natural Heritage Program we have scores of plant lists in our files from sites across Long Island, and we want to make more of them accessible on the web (and on mobile devices in the field). To see a sample list, go to <http://nyflora.wordpress.com/> and click on the link in the right sidebar. It will take you to a Google map. To volunteer contact me at young@nynhp.org and I can send you some plant lists and instructions. No typing of plant names is involved, but you must be comfortable with computer spreadsheets.

THE PLANTING FIELDS HERBARIUM

The Planting Fields Herbarium collection of pressed dried plants currently contains about 12,000 specimens. This includes nearly five thousand specimens of both native and cultivated plants just from the Arboretum grounds. The herbarium is listed in *Index Herbariorum*, a worldwide compilation of herbarium information, and is known by its official acronym, OBPF.

As conceived in 1964 by The Arboretum's first Director, Gordon Jones, the initial goal of the Herbarium was to document the flora of Planting Fields. To this end, Jones asked Grace E. (Betty) Lotowycz, to be Curator for the Planting Fields Herbarium. Betty began this task by collecting and preserving specimens of the various shrubs, trees, and wildflowers growing on the Arboretum grounds.

An enthusiastic and peripatetic field botanist, Betty also collected many specimens from one end of the island to the other. As a result, it was not long before she had extended the Planting Fields collection to include native and naturalized plants: trees, wildflowers, grasses and almost anything else growing on Long Island. She was assisted in these collecting efforts by many of the current and former members of the Long Island Botanical Society.

The Herbarium was further enlarged by the acquisition of the personal collections of several well-known Long Island botanists, including George Peters, Arthur McManus and Henry Hicks, whose collection dates back to 1890.

In 1969 LIBS member Carol Johnston, a recognized fern expert (in 1974 she designed and established the fern greenhouse at Planting Fields) was hired as Assistant Curator. Carol, who travels widely, generously donated her own collection of over 600 prepared specimens of domestic and exotic ferns and fern allies to the Herbarium.

In the summer of 1991 Betty decided to retire in order to pursue her many other activities. She remained active in LIBS and continued to collect specimens for the Herbarium until she moved to Boulder, Colorado in 2003. Carol Johnston and Jane Hoar continued on as co-curators.

By 1983 the collection had grown and was bursting out of its crowded, makeshift rooms on the second floor of the Arboretum Center. Fortunately a renovation of the Haybarn had just been completed and two spacious rooms next to the new Library were dedicated to housing the Herbarium. A generous grant from the Friends of Planting Fields provided much-needed equipment and professional herbarium storage cabinets.

In the spring of 1983, Carol and Jane initiated what was called "The Great Herbarium Migration." With the help of park staff and a great many volunteers the herbarium's nearly 10,000 specimens as well as furniture and equipment was carried to the new quarters.

In 1988, and again with the help of the Friends of Planting Fields, the Herbarium acquired its own computer, and Jane quickly devised a program to hold all the specimen information and began the task of transferring the data from individual 3x5 file cards to the computer. When this was finally completed, in 1996, all specimen data, from 1890 to the present, became easily accessible and shareable with other institutions or individuals.

At the end of 1995 Carol retired from her curatorial job, but continued collecting and volunteering at PFA. The Herbarium continued to operate under the direction of Jane Hoar, with some assistance from this writer. A year later, with the computerized database finally up to date, Jane decided she too wanted to have more time with her family and also retired from PFA, leaving the management of the Herbarium to me.

By 2004 nearly a thousand more specimens had been added. Meanwhile, over the years, taxonomists had made many changes in nomenclature. Approximately 200 species in the database needed to be renamed. At about this time, however, the Haybarn was scheduled for its major renovation and the actual re-labeling of specimen sheets was postponed while the collection was put into "storage." For the next several years the collection was shuttled between various construction sites in and around the Haybarn until, in 2009, it finally came to rest in its new home: the climate-controlled LI State Park Archives in the Haybarn. Specimen damage was, surprisingly, minimal.

Since its inception the PFA Herbarium has been a useful source of information to scholars and researchers from all over the US, as well as Canada and Australia. Data from the Herbarium has been included in the *Atlas of New York State Flora* as well as *The Flora of North America* project, and has been crucial to The Long Island Botanical Society's soon-to-be-published *Atlas of the Vascular Plants of Long Island*.

The Herbarium is open Wednesdays, as a rule, from about 10 to 3:30 or 4, or by request almost any other day, same hours. My home phone number is 631-368-1877. Email at daveandrem@prodigy.net.

David Papayanopulos, Curator
January 2011

(Tidal Marshes cont. from page 12)

Mary Laura Lamont who served as official representatives from the Townships of East Hampton and Riverhead, respectively. Historically, the politicians of the Suffolk County Legislature enforced the recommendations of the CEQ.



Figure 5: To fill a ditch, excavators must find a source of fresh peat. So peat is excavated from intact high marsh. In the process, new ponds and ditches are dug. Areas scouted for peat removal are those that are wet with puddles or small pannes. From Figure 21, page 91 of the *Memoirs* (image credit: National Park Service)

After two years of reviewing plans to expand OMWM in Suffolk County, the CEQ recommended against approving the plans and concluded that the practice of digging ponds in salt marshes was not substantiated as a means of mosquito control and/or marsh restoration. However, the County Legislature ignored the CEQ's recommendations and approved plans to expand OMWM in Suffolk's salt marshes. This action prompted four CEQ members with strong environmental backgrounds to resign in protest. Matthew Atkinson has summarized the details of these events and related litigation in his article *The Saga of Suffolk County's Mosquito Control Program*, in the 2010 *Memoirs*. And Larry Penny published *Healing Salt Marshes from the Scars of Mosquito Ditches*, also in the 2010 *Memoirs*.

LIBS Decides to Publish

By 2007, Long Island's environmental community at large, and several townships, opposed the County's long-term plan to continue implementing OMWM by digging out ponds in salt marshes. Compounding the issue was a lack of ecological studies on OMWM in the published literature. Claims were being made in environmental impact statements and other reports that could not be substantiated with scientific evidence.

The LIBS board in 2007 unanimously approved plans to publish a book on tidal marshes of Long Island; the OMWM controversy would be highlighted by peer-reviewed articles from the scientific and academic communities. Within several months, editor John Potente had received 13 high-quality articles, comprising more than 170 pages of text and images, from estuarine ecologists, environmental law experts, and others. (See Table 1.) Because the project was escalating in scope, the LIBS board appointed vice-president Andrew Greller to ask the Torrey Botanical

Table 1.

Articles and authors included in *Tidal Marshes of Long Island, New York, Memoirs of the Torrey Botanical Society*, Volume 26.

Long Island's Wetland Laws: Safeguarding an Irreplaceable Resource, by Philip Weinberg

Geological Setting of Tidal Marshes on Long Island, by Gilbert N. Hanson

Diversity and Classification of Tidal Wetlands on Long Island, New York, by Lesley Sneddon and Eric E. Lamont

The Role of Salt Marshes in Sustaining Long Island Fisheries, by Jake Kritzer and Andrew Hughes

Quantitative and Qualitative Trends of Vegetative Tidal Wetlands with a Focus on Long Island Sound and Peconic Bay, by Frederick M. Mushacke

Effects of Mosquito Ditches upon Water Quality and Plankton Communities in Estuaries, by Florian Koch and Christopher J. Gobler

Human Impacts, Old and New, Push the Limits of New England High Salt Marshes, by Keryn B. Gedan and Mark Bertness

Open Marsh Water Management: Impacts on Tidal Marshes, by Don Riepe

Salt Marsh Productivity, by Andrew M. Greller

Salt Marshes: Using Science to Support Restoration, by Michele Dionne

Fundamental Flaws of Open Marsh Water Management, by John E. Potente

Healing Salt Marshes from the Scars of Mosquito Ditches, by Larry Penny

The Saga of Suffolk County's Mosquito Control Program, by Matthew R. Atkinson

Society if they would be interested in co-publishing the book. The answer was yes, if all the articles pass peer review by Torrey-appointed reviewers. Torrey's manager of publications, Eric Lamont, worked with John Potente on the details of getting the volume published, and LIBS officers Barbara Conolly and Carol Johnston served on the advisory committee.

Early Reviews

Karl Grossman, professor of journalism at the State University of New York and host of the nationally-aired TV program *Enviro Close-up*, published a review of *Tidal Marshes of Long Island, New York*, and had this to say: “. . . a comprehensive book on the variety of life in the wetlands, its vital importance and the destruction that has been going on.” . . . “It is full of fascinating essays, vivid color photos, maps and charts.” . . . “*Tidal Marshes* is a forceful yet elegant book illuminating a battle – that continues on Long Island – as well as much of the rest of the U.S. and world.”

UPCOMING PROGRAMS

April 12, 2011* Tuesday, 7:30 PM

Larry Liddle: “The Seaweeds of Lake Montauk.” This study is part of a larger initiative of the East Hampton Town Department of Natural Resources to prepare a complete inventory of the bios of the lake which has been open to the bay since the late 1920s. A comparison of the seaweeds of the lake will be made with other East End sites. Larry is Professor Emeritus in Marine Biology from Long Island University.

Location: Museum of Long Island Natural Sciences, Earth and Space Science Building, Gil Hanson Room (Room 123), SUNY at Stony Brook, Stony Brook

May 10, 2011* Tuesday, 7:30 PM

Susan K. Pell: “The Cashew Family (Anacardiaceae): Fruits, Genes and Dermatitis.” Anacardiaceae includes many familiar edibles including cashews, pistachios, mangos, and pink peppercorns, but is more notorious for its contact dermatitis-causing members, including poison ivy and poison oak. This lecture will present an overview of the family from our local sumac species to the characters that distinguish Anacardiaceae. Recent research on its evolution will be highlighted with an explanation of the

taxonomic, biogeographic, and morphological implications of the results. Susan earned her Ph.D. in Plant Biology from Louisiana State University studying the systematics of the cashew family (Anacardiaceae). She has continued this research as the Plant Molecular Systematist and Laboratory Manager at Brooklyn Botanic Garden (BBG), where she also teaches botany courses through Continuing Education. In addition to her duties at BBG, she serves as the Program Chair and Corresponding Secretary for the Torrey Botanical Society and as the Continuing Education Botany Program Coordinator at the New York Botanical Garden.

Location: Bill Paterson Nature Center, Muttontown Preserve, East Norwich

June 14, 2011 Tuesday, 5:30 PM

(please note early start time for the barbecue)

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

Location: Bill Paterson Nature Center, Muttontown Preserve, East Norwich

* Refreshments and informal talk begin at 7:30 p.m.

Formal meeting starts at 8:00 p.m.

Directions to Muttontown or Stony Brook: 516-354-6506