

LONG ISLAND BOTANICAL SOCIETY NEWSLETTER

May - June 1993 Vol. 3, No. 3

In This Issue

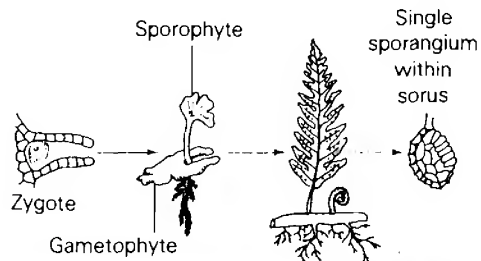
Lance T. Biechele has submitted an article about mushrooms that grow on sand dunes. You may remember that he submitted an article about Liverworts and Roy Latham which was published last issue.

Eugene C. Ogden, former NYS Botanist, submitted an article about pollen studies at Brookhaven National Labs.

We have renamed the Conservation column, the new name is **Conservation Corner**. Louise Harrison has submitted a column by Gail S. Shaffer, Secretary of State of New York State. The article is about the Long Island Sound Coastal Management Program.

The field season is upon us once again. There are numerous listings of field trips under the society news.

Executive Board Meeting: Eric Lamont has called a meeting of the Executive Board for May 25th. All members are welcome to attend. Details in the society news.



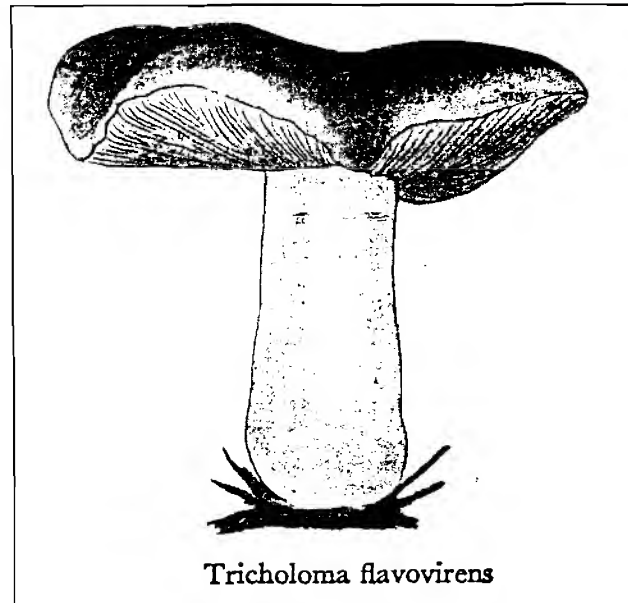
PROGRAMS

11 May 1993 - 7:30 pm, Paul Teese, "Evolution of Photosynthetic Pathways," Museum of L.I. Natural Sciences, E.S.S. Bldg., SUNY at Stony Brook.

8 June 1993 - 7:30 pm, Skip Blanchard, "Instant Speciation in the Marvelous Malvaceae," Upland Farm barn, Long Island Chapter of the Nature Conservancy.

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

Mushrooms of the Sand Dunes



Tricholoma flavovirens

from: Lang & Hora. 1963. Collins Guide to Mushrooms & Toadstools. Collins, London.

One of the most interesting and surprisingly rich mushroom collecting areas on the eastern end of Long Island is located outside of East Hampton in the sandy, pine barrens of the Promised Land, along Lazy Point Road to Napeague. What makes this region remarkable is that the mushrooms do not make their appearance until the first, frosty nights during late October and early November. The naturalist can spend endless summers in the area and never appreciate the mycorrhizal garden expanding there under his feet in the sand.

My first introduction into this area was back in 1976, along with a few members from the now defunct group of the Eastern Long Island Friends of Mycology. We were specifically looking for *Tricholoma flavovirens*, which throughout Europe is known as *T. equestre* or "the man on horseback." These good, edible mushrooms with their greenish-yellow caps, and bright yellow stem and gills epitomize this group of 'late fall' fungi found in the pine barrens at Napeague.

Along with *T. flavovirens* it is not unusual to find *T. terreum*, or the 'Mouse *Tricholoma*', another edible species with its grayish cap and white stem and gills. However, because this species can be confused with other poisonous, grayish-colored *Tricholomas*, they should be left only to the experts! When collecting these mushrooms for the table, always cut the stalk off just below the cap and brush them off gently to avoid getting sand into the gills.

It is *Leccinum aurantiacum*, 'the Red-capped Scaberstalk' however, that is really the prize of the dunes. This member of the bolete family has pores rather than gills. Often the reddish cap is 6" across and the stalk which is dotted with blackish scales sometimes reaches 7" tall and is usually an inch thick. Although the flesh bruises grayish to purplish-black when cut, this does not, in any way, affect the quality of this excellent, "sehr guter Speisepilz."

Another *Boletus* species, *Suillus pinorigidus*, the 'Slippery Jill' is common in the pine needles throughout the region during this time of the year. This mushroom has a viscid or glutinous cap which, along with the pores, needs to be removed before it can be eaten. However, the mushroom is often riddled with insect larvae and these tunnels can be seen when the cap is removed from the stem. It is not recommended for the table.

A rather familiar genus of mushrooms frequent in the pine barrens is *Laccaria* with its purplish or brownish colors and waxy gills. *Laccaria laccata*, 'the deceiver,' is one of the most variable mushrooms of the group. Also frequently collected is *L. trullisata*, the 'sandy tallowgill' with its bright purple gills and root-like base which is deeply buried in the sand. The latter, a rather attractive species, is not edible because it is almost impossible to remove the sand that is inherently embedded in the gills and flesh.

Another common mushroom of the region is *Chroogomphus vinicolor*, the 'wine-cap *Gomphidius*.' The gills of this species descend along the stalk, (decurrent) but the most obvious characteristic is the blackish spores that are often left as a deposit on the stems. This is another edible mushroom that sometimes occurs in large numbers here in the sand dunes.

A review of the mushrooms from any region would not be complete without including the *Amanitas*. Two species of this dangerous family are 'all too frequent during this season. *Amanita muscaria* var. *formosa*, the 'Yellow-orange Fly Agaric' is widespread and conspicuous throughout the sandy pine barrens. Although less common, *A. citrina* f. *lavendula* (without any common name) is no less poisonous. It is a beautiful mushroom with a distinctive lavender tint in the cap and veil.

The purpose of this paper was to introduce the

naturalist to the wild mushroom larder found in the late fall of the year under the scrub oaks, *Quercus ilicifolia* and pine, *Pinus rigida* prevalent in the sand dunes at Napeague and Montauk. The region is a delight to the mycophagist supporting at least nine species of mushrooms. It is important to remember, however, that no mushroom should be eaten until it has been positively identified by a specialist.--Lance T. Biechle

Lance T. Biechle also sent an announcement of a display of 51 mushroom paintings by **Mary Banning**. Ms. Banning was a schoolteacher and natural historian in Talbot County Maryland. Between 1868 and 1888 she created a remarkable book of watercolor illustrations of mushrooms. She donated the work to the New York State Museum where **Charles Peck** worked.

The works are on display at the Talbot County Historical Society (Maryland) through July 31. For more information call (410) 822-0773.

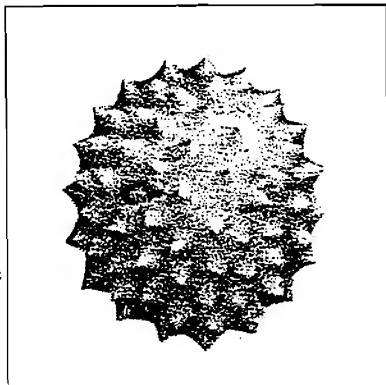
Shoreham-Wading River High School *Plant Sale and Inventory* & *Fun Fair*

May 15, Sat., Science Museum and nature trail at Shoreham-Wading River High School, route 25A, Shoreham. Starting at 9:30 a.m., a perennial-herb workshop and sale will feature discounted prices from a local grower. Afterwards, Dr. **Margaret Conover** will coordinate a species inventory of the nature trail through the pine barrens woodland on the school grounds. Participants will then proceed to Reppa Pond in Wading River for another species inventory. Call Dr. Margaret Conover at (516) 821-8155 for additional details.

Jun 5, time TBA, Science Museum at Shoreham-Wading River High School, route 25A, Shoreham. During the Science Fun Fair, the official opening of the nature trail will be held. Dr. **Margaret Conover** would like botanists to be on hand to explore the vegetation with the visitors and to manage the LIBS booth. Please call her at (516) 821-8155.

Long Island Pollen Studies

Some 30 years ago Gilbert Raynor, a meteorologist at Brookhaven National Laboratory, and I collaborated on a study to determine the accuracy of a device used for determining the concentrations of airborne pollens. "Pollen counts", especially for ragweed (*Ambrosia*), are often reported by the news media. This pollen sampler was merely an exposed microscope slide, with an adhesive coating, mounted horizontally under a rain shield. Also, we wished to measure any variations in height above ground, as samplers on buildings usually indicated higher counts than those at ground level.



Pollen of *Ambrosia trifida* from Wodehouse. 1935. Pollen Grains. McGraw-Hill, NY.

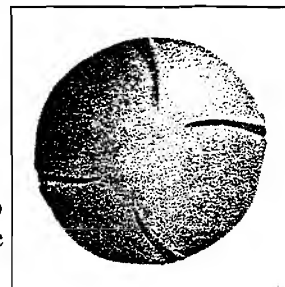
We installed two of these "gravity-slide" pollen samplers at each of the eight working levels on the 420' meteorology tower at BNL. One slide of each pair was oriented N-S; the other E-W. At four of the levels detailed meteorological data were continuously being recorded in the meteorology building. At these levels we also installed volumetric, filter samplers which had been tested to be sufficiently accurate for determining concentrations of airborne particles from the BNL reactor chimney.

The slide samplers caught more pollen at the higher levels but with the filter samplers the reverse was true. And the slides oriented N-S mostly captures more pollen than those oriented E-W. So we needed the use of a wind tunnel. The nearest was at New York University, some 70 miles away. The meteorologists suggested having one built at BNL and how much money could I put into it. Well, I had no unassigned funds. I worked for the State of New York. I had to submit my budget a year in advance and lucky if I got half what I needed. But time, tide and pollens wait for no man. They wait for no woman either, so perhaps I should say that they wait for no person, in this research of value to all personkind. However, the National Institute of Allergy was interested and I received a grant to determine what kind of sampler would be most suitable for sampling airborne particulates in the size range of pollens.

So a wind tunnel was built and tests indicated that with normal variations in wind speeds, directions and turbulence, the "gravity slide" sampler might vary as much as 500%. The filter sampler was acceptable for particles less than 5 microns but for pollens (20-100 microns) the error could be as great. The greater average wind speeds from the N or S directions and turbulence apparently caused the increased pollen catch.

The most practical sampler that was commercially available appeared to be the rotorod sampler. Because the rods were difficult to read, we made a modification that rotated standard microscope slides, obtaining the sample on the slide edges. These slides, in a special holder, are rather easy to analyze. It is called the roto-slide sampler and is recommended by the American Academy of Allergy. Unfortunately the inaccurate gravity slide sampler is still being used for reporting "pollen counts" in many areas. Using the roto-slide sampler during nine ragweed seasons, the concentrations at the different tower levels averaged about the same. Using a charter plane over the tower between 1,000' and 10,000' we found *Ambrosia* pollen in quantity to 2,000'. Also a surprising amount of *Rumex* pollen.

With additional federal grants (especially from EPA) and generous cooperation at BNL (especially the Biology Dept.), Gil and I were able to make extensive studies on the occurrence and dispersion of airborne pollens on Long Island and upstate NY. Extensive data were obtained on the dispersion of *Ambrosia*, *Phleum*, *Zea*, *Kochia* and *Ricinus*. These data are published in botanical, meteorological, medical, agricultural and other scientific journals.--Eugene C. Ogden



Pollen of *Rumex acetocella* from Wodehouse. 1935. Pollen Grains. McGraw-Hill, NY.

A Society is Born

At the April Meeting Eric Lamont announced the formation of the **South Fork Natural History Society**. The society's goal is to "promote the understanding and appreciation of the area's extraordinary flora and fauna." The society sponsors walks, field trips, conferences and they publish a newsletter. They are currently working to create The South Fork Museum of Natural History.

If you are interested you may write to: South Fork Natural History Soc., PO Box NATURE, Amagansett, NY 11930 or call 516-267-7944. I am sure they will be pleased to send you one of their color brochures.

Conservation Corner

To bring LIBS members up to date on some of the work of the Department of State's Division of Coastal Resources, I am submitting the following article by the Secretary of State. The article was prepared for the *Long Island Sound Study Update*.--
Louise Harrison

Long Island Sound Coastal Management Program

by Gail S. Shaffer, Secretary of State, State of New York

To address the specific environmental, economic, and social needs and unique priorities of each of New York's coastlines, New York State is beginning the process of replacing the State's Coastal Management Program with regional programs. This initiative is in response to one of the major recommendations of the Governor's Task Force on Coastal Resources, which released over 100 recommendations in November of 1991.

The New York State Department of State is preparing the first such regional program: the specific needs of the shorelines of Westchester, the Bronx, Queens, Nassau, and Suffolk Counties will be addressed in the Long Island Sound Coastal Management Program. Clear guidance will be developed for the best uses of the lands and waters of the Sound. When complete and approved, the Long Island Sound Coastal Management Program will replace the State Coastal Management Program for this coastline.

Recognizing that the State's marine coast is a significant region where human use and enjoyment must be balanced with protection of natural resources through wise stewardship, the Department of State also has chosen Long Island for its first regional office.

With the many individual efforts now underway to study the Sound and improve water quality, advance living resources habitat protection, provide increased public access, and support appropriate land uses, there is a wide base upon which to build a Sound-wide management program. Among these efforts are the Long Island Sound Study, New York State's Open Space Conservation Plan, New York's economic development strategies, and local waterfront revitalization programs, which provide for comprehensive land and water use management in many of the Sound's communities. The Long Island Sound

Coastal Management Program will incorporate the separate efforts into a coordinated, enforceable program to address the many urgent issues facing localities, the State, and the federal government.

Geographical areas that are critical to the economic future and environmental quality of Long Island Sound will be identified in the program. The Governor's Task Force on Coastal Resources directed these elements be included to enable New York State government to set priorities for public investment and assistance in both the protection of outstanding, sensitive natural areas and promoting economic activity.

Existing Local Waterfront Revitalization Programs will be reflected in the Long Island Sound Coastal Management Program, and in turn, the new program will provide improved guidance to municipalities that are commencing or revising their own coastal management initiatives.

A draft program will be available this summer, during the season throughout which a great many people turn their attention to the outstanding estuarine and shoreline resources of Long Island Sound. Public review and commentary will enhance the outcome of a comprehensive management program best suited to the region's specific needs and priorities. The State anticipates and will encourage all with an interest in the future of Long Island Sound to review the draft and provide feedback.

Society News

March meeting

Moreno and Dorothy Tagliapetra-Cherbavaz gave a slide show on the rare orchids of NYS. and commented on their difficulties in photographing them. The slides were of surpassing beauty and presented some plants which many of us had never seen.

April meeting

Barbara Bently of SUNY at Stony Brook discussed her work on the ecology of lupines. She has been experimenting with the effect of increased CO₂ in the air on the plants' growth, ability to fix nitrogen by their root nodules, production of alkaloids, and relationship to herbivores (caterpillar).

Eric Lamont announced that **The Nature Conservancy** has consolidated the two LI Chapters into one, and **Sara Davidson** is the new Executive Director. The Headquarters will be in Cold Spring Harbor.

Henry Bookout, who wrote two articles about quillworts for the newsletter, donated his quillwort collection to Brooklyn Botanic Garden.

Gordon Tucker, of the NYS Museum, asked Eric Lamont and Ed Horning (from Fisher's Island) to meet with NYS Senator Lavallo. There was a proposal to eliminate 13 jobs at the museum. After this meeting the positions were restored to the budget.

Dorothy & Moreno Tagliapietra-Cherbavaz will be forming a task force under the LIBS Conservation Committee, to address the issue of habitat destruction of orchid populations in East Hampton. If anyone is interested please contact Eric Lamont.

Nominations

Eric Lamont announced that in the July-August Newsletter a request for nominations will go out to the membership. In the September-October issue we will present the slate to the membership, and at the October meeting we will vote on the slate.

Executive Committee

Eric Lamont is calling a meeting of the Executive Board for May 25th at 6:30 (before the Flora Committee meeting) at the Planting Fields Arboretum Library. All members are welcome to attend. For directions to PFA call 516-922-9200.

Programs

11 May 1993 - Paul Teese will present a talk on the "Evolution of a Photosynthetic Pathway". This talk will be about his research on the evolution of a C3-C4 intermediate photosynthetic pathway in a tropical Asteraceae. The talk will be at the Museum of L.I. Natural Sciences, E.S.S. Bldg., SUNY at Stony Brook.

Note that this talk was originally scheduled for April because of a mix up in the schedule.

8 June 1993 - Skip Blanchard, Biology Department, Long Island University/ C.W.Post Campus will present a talk on "Instant Speciation in the Marvelous Malvaceae." The talk will review Chromosome-pairing detective work that clarifies evolutionary relationships among the Seaside Mallows and their relatives. The talk will be at the Uplands Farm barn, Long Island Chapter of the Nature Conservancy, Cold Spring Harbor.

Field Trips

May 1, Sat, Shinnecock Hills. The walk led by Eric Lamont, is being jointly sponsored by LIBS and the South Fork Natural History Society. Contact Eric Lamont for more details (516) 722-5542.

May 8, Sat, 2 P.M., Shu Swamp, Mill Neck, Carol Johnston and Tom McCloskey will lead this joint trip with the photo committee of the Long Island Chapter of the Sierra Club. Bring your camera as we share the experiences of nature photography. Slide film and tripod will be helpful. Trails may be muddy, so dress appropriately. Meet at the Shu Swamp parking lot across the street from Mill Neck LIRR station. Rain cancels; call Tom McCloskey (785-7329) between 12 noon and 1 P.M. on the day of the trip if in doubt.

May 15, Sat, 9:30 a.m., Science Museum and nature trail at Shoreham-Wading River High School. See page 10 of this issue

May 22-23, Sat & Sun, the SUNY Museum will have a field weekend in the Shawangunks, staying at Ashokin Camp and exploring Lake Mohonk and Minnewaska State Park. Contact Glen Richards if interested (632-8230).

June 5, Sat, time TBA, Science Museum at Shoreham-Wading River High School. see page 10 of this issue.

June 5, Sat, Bob Zarembo will lead a NYFA trip to Valcour Island in Lake Champlain. Call him at 518-869-6959 for more details.

June 19, Sat, 9:30 a.m., Wildflowers of Connetquot State Park in Oakdale. Eric Lamont will lead a this trip through pine barrens, upland and wetland habitats. Advance reservations are required. Call park office at 581-1005. If you are unable to keep your reservation, please call and cancel so that others may attend. Entrance fee is \$1.00 per adult.

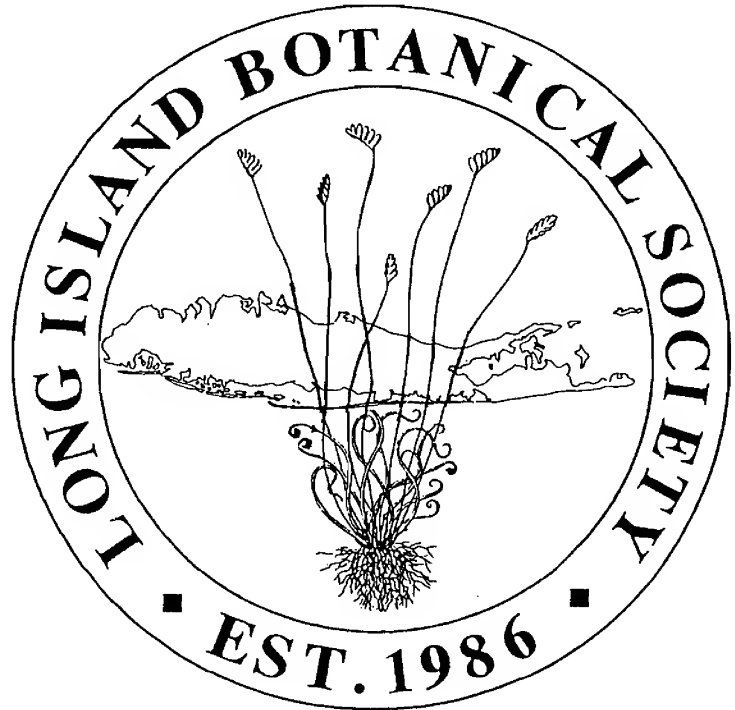
July 11, Sun, 10:30 A.M., Plants and butterflies at the Edgewood Oak Brush Plains. Skip Blanchard, who did some Natural Heritage Program work at this interesting site in summer '92, will talk about and point out butterfly-plant relationships. Participants may want to bring lunch or a snack. Canceled if raining. Directions: from LIE Exit 52 or Northern State Parkway exit 43 go south on Commack Road (rte. 4) about 2 or 3 miles, respectively, to the entrance to the site on the left. There is no sign, but there is a gate to a dirt parking lot surrounded by an earthen embankment. Contact Skip at (home) (516) 421-5619.

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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Treasurer	Carol Johnston
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Education	Margaret Conover
	Mary Laura Lamont
Hospitality	Nancy Smith
	Joanne Tow
Program	Eric Lamont
Editor	Steven Clemants



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 Rd., Oyster Bay, NY 11771-3111

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