LONG ISLAND MYCOLOGICAL CLUB **http://limyco.org**

L.I. SPOREPRINT

VOLUME 13, NUMBER 1, SPRING, 2005

-Mushroom Poisoning-
Adventures with the Poison Control Center

by Dom Laudato

Receiving a phone call from the PCC is in itself an adventure because it can arrive during any time of the day and, not uncommonly, at 11PM or later. It continues when the medical professional attempts to describe a mushroom from information imparted by the victim's close relative, hoping for an "over-the-phone" ID. As you can surmise, an ID via the phone is, at the least, quite risky. Descriptions given by anxious people can be incomplete, vague, distorted or exaggerated. As an example, a bulb at the base of the stem of a mushroom is meaningful for a mushroomer but not for an inexperienced person. Therefore, it is good practice to ask to see the mushroom in question, if available, together with entire, freshly dug-up specimens of the same type, which should include a trowel-full of soil beneath the stem so as to unearth any bulb, swelling, rhizomorphs or other rooting or stem structure. This is placed in a paper bag and delivered to me. The delivery part is tricky since it requires allowing strangers to enter my premises, sometimes very late in the night, who sometimes arrive with a demanding, im-

(Continued on page 4)

The Season's Bounty: 2004

by Joel Horman

Annual Rainfall was a little above average, with the first three months of the year being below the norm, perhaps accounting for our dismal morel harvest in Spring. June, August, and October were also below average, while May, July and September were above average, with almost 8 inches in July and 11.5 in September, including a record one-day total of 3.84 inches. Two weeks later, our Oct.9th foray at Muttontown produced an unprecedented harvest of edibles. Cause and effect?

Amanita cinereopannosa

As expected, we continue to add to our Long Island checklist, with about 45 "new" species collected during the past season. Some have already been mentioned in our "Foray Results" or "Findings Afield" columns throughout the year, but many were not. To summarize, there were multiple species of *Amanita, Clitocybe, Cortinarius, Hygrophorus, Lactarius, Mycena, Russula,* and *Tricholoma* among the gilled mushrooms. *Boletus hortonii* was the only Bolete. Other gilled genera were *Armillaria, Coprinus, Entoloma, Inocybe, Laccaria, Melanophyllum*, and *Pseudoclitocybe,* each producing one new species. The most striking of these was the unique red-gilled species *Melanophyllum echinatum*, found by Sue Gaeta. Some, such as *Armillaria gallica, Amanita rhopalopus, Laccaria amethystine,* etc., were no doubt collected previously, but somehow overlooked.

Among the non-gilled contingent, we came across *Bulgaria iniquinans,* (found and ID'd by Michael Strenk, Jr.), *Galiella rufa* (found and ID'd by Lyle Peters), *Hydnellum peckii,* and *Hydnum umbilicatum* (probably more prevalent than we think). Peggy discovered the only slime mold, *Hemitrichia calyculata,* and although it

(Continued on page 6)

PRESIDENT'S MESSAGE

At this time of year it seems appropriate to thank all the board members who help me guide the club. Without their input, the club would not be democratic. So, "thank you board members." And a special thanks to Rita Blinderman who has hosted our meetings for several years and always provides delicious homemade goodies. What a treat.

At the last meeting, different ways to honor Rosario Censi were discussed. In the end, it was decided that the best memorial would be a donation to further mycology education through NAMA. I think Sardo would have liked this idea since he loved mushrooming so much.

We were hoping to have Gary Lincoff as a speaker this year but it did not work out. I have several new copies of his Audubon Guide that are available at $16. This is a very good deal as they sell for $19.95 plus tax in book stores. I'll bring them to the forays until all are gone.

This spring we are hoping to have an exploratory foray on a weekday to Cunningham Park in Queens. This site was a popular one many years ago but fell out of favor when it did not produce. We'll give it a try and if productive, add it to next year's list. An e-mail will go out to members with a date and time. If you don't have e-mail and think you might want to attend, please let Joel or me know and we'll give you a call.

As I write this it is damp and dreary outside. Am I sad? No way! Snow. Rain. Lots of precipitation these past few months have given me hope that we'll have a really good mushroom season this year. Can't wait for our first outings. See you then!

EDITOR'S NOTE

The advent of spring seems to rouse a migratory impulse in all, feathered, finned or not. To help satisfy this urge, this issue contains news of several far-flung forays, from Pennsylvania to Mexico. A faithful contingent of our members attend the NEMF foray, and we urge our newer members to give it a try; to that end, reservation forms are included here. Further afield, this year's NAMA foray will take place July 21-24 in the unique habitat of La Crosse, Wisconsin, considered a refugium for many species not occurring elsewhere, as it was spared glaciation. Some details and a link to the registration form can be found at Tom Volk's website: http://botit.botany.wisc.edu/toms_fungi/NAMA2005.html. LIMC is affiliated with NAMA, so it is not necessary to pay the $35 registration fee.

The Western PA club will again hold its Morel Madness weekend, which was described in these pages by Doris Fleischer and Phil Cimino last year. Another famous morel hunt, in the form of a contest, is held in Magnolia, Il, and details can be accessed at the morelmania.com website.

We hope many of you will avail yourselves of these opportunities. Those without web access can contact the editor for registration forms.

MATERIAL FOR THE SUMMER, 2005 EDITION SHOULD REACH THE EDITOR BY MAY 30TH

(Submissions should preferably be typed or submitted in Rich Text Format on PC floppy disk or by e-mail)

LONG ISLAND MYCOLOGICAL CLUB

President: Peggy Horman
Treasurer & Membership Secretary: Peggy Horman
(631) 744-4965 e-mail: owls2@optonline.net
Recording Secretary: Monique Dussault
Foray Chairman: Jacques Brochard
Species Recorder: Position Open
Webmaster: Dale Robins

Sporeprint Editor: Joel Horman
11Ramblewood Rd., Ridge, NY 11961
Tel: (631) 744-4965
e-mail: jlhorman@optonline.net
Editorial Ass't: Peggy Horman
Board Members: Rita Blinderman, Paul Fox, Ken Gobright, Lyle Peters Leonard Schecter.

Fungal Farming in a snail

by Lance T. Biechele

In the article "Fungal Farming in a snail," the authors Brian R. Silliman and Steven Y. Newell (2003, *Proceedings of the National Academy of Sciences USA*. 100:26) provide evidence that a marine mollusk, *Littoraria irrorata* has developed a method of fungal cultivation that previously had only been known in certain insect species of ants, termites and beetles. Their studies concluded that *Littoraria* does not actually consume the live tissue of the salt marsh cordgrass, *Spartina alterniflora,* but grazes fungus-infected wounds which acts synergistically with fungal action to suppress these marsh grasses.

Two genera of ascomycetes, *Phaeosphaeria* and *Mycosphaerella* have been isolated from the wounds on the leaf surfaces of *Spartina* plants and at least 50% of the mycelium from these fungi remain in the snail's fecal matter. Field observations reveal that *Littoraria* also deposit their fecal pellets into the wounds caused by their radulations (tongue scrapings) and that the fungi benefit by utilizing the nitrogen in the feces to gain access to the living inner tissues of the plants. Likewise, the consumption of these fungi had an important growth effect upon the snail's shell size.

Experiments were conducted throughout the geographical range of *Littoraria* where 16 marshes were randomly selected along the eastern coastline of eight states. The *Spartina* leaves were analyzed for fungal biomass by determining the content of ergosterol in the plant tissue. Additional field surveys were conducted to establish the specific patterns between the interactions of the snail grazing activities and effect of the fungi upon the leaf abrasions. Snails were also removed to the laboratory to survey the growth rates of juvenile snails that were fed grazed marsh grasses, one to two month old razor-cut leaves and freshly collected green, undamaged leaves of *Spartina*.

The results of their study revealed that the fungal biomass was more than 15-fold higher on leaves that had been grazed by snail radulation and almost undetectable on normal green leaves of *Spartina*. Snail growth also increased with higher amounts of fungal biomass and as many as 48% of juveniles actually died when fed only green-leaf treatments. In fact, the study concluded that the purpose of grazing was not to feed but to prepare the substrate for fungal growth and consume the fungi.

Lastly, the author's research concludes that the snail's top-down grazing activities reduces *Spartina* growth by as much as 40–100%. The radulation of new green leaf blades results in microbial invasion from spores that are already present in the marsh detritus and is further supplemented by the snail's fecal material. This has caused increasing concern for the ecological effects of marsh grass die-off because of the effects of invasive fungal destruction that has been observed along southeast salt marshes.

This was a well-documented and carefully monitored study that introduces the reader to a new phylum of animals (Mollusca) that has developed a low-level mutualism with intertidal fungi. In contrast to certain insect species that have evolved higher levels of fungus relationships that include: the isolation of a single fungus species; weeding and protecting their crops; and the capability of nourishing their fungal cultivar for increased production, low-level mutualism may be more common than previously recognized. With the increasing concern for salt marsh ecology, this study is a timely reminder of the need to explore the relationships between other invertebrates and microbial communities that inhabit the marine environment.

ROGER PHILLIPS NEW MUSHROOM WEBSITE

For all those who have been trying to obtain the Roger Phillips' out-of-print 1991 "Mushrooms of N.A." at a more reasonable price than eBay's $150 or so price, help is at hand. Mr. Phillips' new website, originally a paysite, is now free and also includes all the photographs of his European mushroom book as well. The site's URL is www.rogersmushrooms.com. While the synoptic species key has its limitations, the more than 3000 photos make this a useful resource if you wish to see a photo of a species not otherwise available. Its not quite the equivalent of thumbing through the book, however.

TREASURER'S ANNUAL SUMMARY FOR 2004

Balance from 2003		$1749.81
Receipts		
Membership Dues	1315.00	
Interest	24.36	
Total	1339.36	3089.17
Disbursements		
NAMA affiliation 2005	30.00	
Newsletter expenses (includes printing, mailing, supplies, & misc. notices)	504.04	
Treasurer's expenses(raffle, postage, supplies)	142.34	
Luncheon	195.00	
Total	813.92	
Balance as of Dec. 31, 2004		$2218.79

Poisoning

(Continued from page 1)

patient demeanor.

The victim might be distressed due to eating a perfectly harmless mushroom that became tainted because it was allowed to deteriorate unrefrigerated after cooking. This occurred when a couple ate *Grifola frondosa* (Hen-of-the-woods) that was allowed to remain in the skillet for a day and a half prior to ingestion. Another gentleman, of Mediterranean origin, ate mushrooms that his friend "knew well" which resulted in his being hospitalized for 3 days with severe gastro-intestinal disturbances; he had ingested *Amanita muscaria v formosa*. The 14 year old boy who ate *Chlorophyllum molybdites* on a dare, suffered for his folly by being hospitalized for 3 days with projective vomiting and severe pain. Who can explain why the two teenage high school girls ate a *Pluteus petasatus* that was growing on the school grounds and then became anxious and queasy because of it? The mushroom is quite edible but I have never eaten it raw and I'm not about to experiment with doing so. **(Gary Lincoff cautions ((NEMF 2004 lecture)) that even the common mushroom, *Agaricus bisporus*, could be toxic if consumed raw).** The agitated father of a two year old child banged on my front door and screamed for me to open it quite in vain since I could not hear a thing while showering. He was understandably concerned for the welfare of his son and was assured by me, while still dripping wet, that the PPC was informed that the mushroom fragments were from a *Russula*. The pieces exhibited the brittleness of the gills common to many *Russulas* and microscopic examination of the spores showed that they were reticulated. I breathed a sigh of relief over this episode. Another child ingested parts of a white- gilled mushroom. There was no stem available and no other mushroom of its kind in the sample received. The cuticle was darkish tan-brown. The mushroom could have been any of a number of possible species that could be found at that time of year. A squashed gill slide revealed pleurocystidia with horn-like projections emanating from their tops. The mushroom was a *Pluteus* and the gills of the sample finally turned pink: another sigh of relief. A number of years ago, a well-known edible wild plant advocate consumed a mushroom that caused gastric disturbances and vomiting; he ate *Agaricus placomyces*. I'd rather eat a dandelion. Thankfully I have never had to identify *Amanita verna, A. virosa* and kin for the PCC but they are quite common and widespread; ditto for *A. phalloides*, not as common, but sometimes abundant in some north shore spots.

The PCC has all the textbooks and expertise necessary to treat the various types of toxicity that accompany ingesting suspect mushrooms. They are well aware of the time elements involved with the onset of symptoms that occur with toxic species and they advise the emergency staff as to which protocol to follow. Ergo, careful monitoring by the medical staff and a mushroom ID to genus, and preferably to species, is desirable. If an ID cannot be made due to poor sample quality, e.g., overcooking, decay, greatly digested contents, etc., the PCC is informed and the matter, if life-threatening, is referred to

(Continued on page 7)

■ **Jack-O-Lantern Ancestry:** Recent nuclear DNA sequencing performed at the Institute of Microbiology, Univ. of Innsbruck, of the genus *Omphalotus*, offered some unequivocal answers to some long pondered questions. 32 collections from different geographical areas: (Europe, North America, Mexico, Central America, Australia and Japan were analyzed. The results showed a split into two major clades: the first consisting of *O. illudens* (NA & Europe) and *O. mexicanus* (Central America) and the second comprising *O. olearius* (Europe) *O. olivascens* (NA), *O. japonicus* (Japan), *O. nidiformis* (Australia), and *O. subilludens* (NA). *O. illudens* and *O. olearius* were found to be distinct, separate species, perhaps putting to final rest an old debate. (*Mycologia, Dec., 2004, Vol.196, issue 6)*

■ **I'm Going Out to Eat Worms:** Another edible mushroom has joined the ranks of predator. We previously noted in this column that both *Pleurotus ostreatus* and *Laccaria laccata* trap and digest nematode worms. Now, new research by H. Luo & J.Zhang of Yunnan University, China, reveals that *Coprinus comatus* also immobilizes, kills and digests the nematode *Panagrellus redivivus,* apparently by means of "spiny balls", burr-like structures that are apparently toxic to the nematodes. They become inactive within hours and are colonized by "penetration pegs" and consumed within days. So, if "you are what you eat", *Coprinus comatus* fanciers are indirectly consuming nematode worms. (*Mycologia, Ibid.)*

■ **More Dangerous than Bullfighting:** While the official registry of mushroom poisonings shows only a very small number of toxic events nationally, as recounted in these pages by Dr. Michael W. Beug (*LI Sporeprint, Winter, 2005)* the situation abroad is very different. A article about poisonings in Spain on a consumers health web site, based on the researches of Dr. Josep Piqueras, states that From 1982 to 1999, 615 patients were admitted to Vall hospital d'Hebron in Barcelona for emergency treatment of mushroom poisoning. Epidemiologists estimate that this is only about half of all cases. Of these, 40% were catalogued as serious (Amanita type), with a recent mortality rate of around 7%, reduced from about 30% earlier in the century. This works out to at least one death per year in the Barcelona area alone. *(http://www.consumaseguridad.com/web/es/sociedad_y_consumo/2001/10/08/486.php)*

(Compiled by editor from various sources.)

COMA's 27th Clark Rogerson Foray

This Conn. Mycological Association event will be held August 25-28, Thurs.-Sun., at Cave Hill Resort, Moodus, CT, with Gary Lincoff as chief Mycologist. Other myco-experts include Roz Lowen, Sam Ristich, and others.

Last year the fee for a full four days was $275 pp, including 3 night's lodging and all meals from dinner on Thursday to lunch on Sunday. This years fees have not yet been published. Only a limited number of double occupancy units are available, with priority to be given to couples. The remainder are apparently multiple occupancy units which hold up to 4 persons. It is suggested that reservations be made by April 27 in order to insure a space.

For further information, contact Don Shernoff at 914-761-0332 or donshernoff@yahoo.com.

.

MOREL MADNESS WEEKEND

The Western PA Mushroom Club is hosting a morel foray on April 30th– May 1st, rain or shine, in Mingo Creek Park, located in the southwest corner of PA near the Ohio and WV borders. The event is open to non-members for a fee of $5; $10 if you wish to camp there for the next day's hunt.

Check-in and registration will be from 11 AM to 12 at roadside near the "Henry House", and after an instructional talk and slide show, morel hunting will commence at 1:15 PM, on your own or with a group leader.

Directions: Take I-70 west to Exit 9, then proceed North on Rt.519 for 2 miles. At a red light, turn right onto Route 136 and go 4.4 miles and turn left at the sign for Mingo Creek Park (just across from sMingo Inn). Follow signs to the park and registration area roadside near Henry House.

LIMC members are welcome, and if you have any questions email John or Becky Plischke at Morelbp@aol.com or call 724-834-2358. Be sure and drop by to say hello to them.

See their website for more information: www.wpamushroomclub.org

(Continued from page 1)

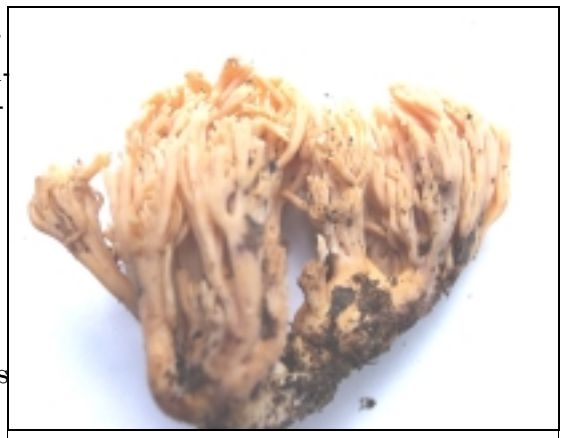
is no longer numbered among the fungi, we include it in deference to the long established custom of myxomycetes study by mycologists.

One of the most interesting specimens was a minute species found by Michael Strenk, Jr: growing on haircap moss, barely visible even if peering closely. Not to be found, even by genus, in any guide book, it turned out to belong to the genus *Tomentella*, a resupinate basidiomycete, meaning it belongs to the same order as our gilled mushrooms, and grows in a layer. Details will be made available in a future "Findings Afield" column.

At this point, our checklist has reached a respectable total of 600; with no diminution of the new numbers encountered yearly, we can expect continued growth. If you are aware of any omitted species please notify me.

Remember that these photos can be seen in color on our website.

Armillaria gallica (Note cortinacious veil)



Ramaria formosa

Thelephora vialis

Tomentella sp. (on Haircap moss)

Mycena epiterygia v. lignicola

Boletus hortonii

Scleroderma bovista

Poisoning

(Continued from page 4)

professionals.

The causes of these few examples of mushroom poisonings follow somewhat of a pattern. Children are allowed to forage unattended; "expert" friends may not be experts or for that matter, may not be friends; and misidentifications can and do occur although the eater may be a knowledgeable naturalist. Fortunately, children, by nature, do not persist in swallowing bitter, hot, putrid and otherwise distasteful matter that makes its way into their mouths. Adults and young adults on the other hand, allow peer pressure and recklessness to overcome their qualms, with unfortunate and potentially serious results.

Amanita virosa

In all cases the fear factor kicks in. Second thoughts about its edibility arise after the fact. The mind plays mean tricks and the review process is replayed over and over. The overwhelming fear that one may have eaten a possibly toxic, if not fatal, mushroom is paramount.

During the thirteen plus years that I have volunteered to ID mushrooms for the PCC, I have found that of the dozen or so cases that I am called upon to assist with yearly, the majority occur from mid to late June until early November. You guessed it, the height of the mushrooming season.

There is no formula that can be used to determine which mushroom a person decides to devour or when they decide to do so. It could be any mushroom that one might encounter during a mushrooming foray. It could also be some "snake oil" mushroom that was bought by an adult as a curative for whatever ailment the person wished to "cure". One such was *Tremellodendron sp (pallidum?)* that when allowed to steep in warm milk for a number of days deteriorated and caused nausea and gastric problems. The instructions in the package came with a vial in which a few dried mushrooms were mailed. *Tremellodendron* is harmless but its poor flavor coupled with soured and possibly bacteria-laden milk taken over a period of days is enough to cause havoc with one's GI system.

In closing, what has been repeated in the past holds equally true today: Prevention (and education) is worth a pound of cures.

3 Exotic Mexican Forays in 2005

Mexican Mushroom Tours (Excursiones de Hongos Mexicanos) is now in their 6th year of organizing small group tours for "fungi aficionados with a taste for the exotic" and have asked us to include a notice of their upcoming tours in this newsletter. Ex-Toronto fungi enthusiasts, Gundi Jeffrey and Erik Purre have, since 2000, organized small groups of intrepid foragers to explore the mushroom treasures, both taxonomically and gastronomically, of their adopted country. This year, they offer three different 7-day tours in Copper Canyon (July 24-31); Tlaxcala/ Puebla (Aug 28-Sept 4); and Veracruz (Oct.16-23). Prices, from the starting point in Mexico, include lodgings, all meals, bilingual, local mycology experts as guides and technical presenters and vary from $1,475 to $1,575 pp double occupancy. Group size is limited to a maximum of 18.

For further information, visit their website at www.mexmush.com., or email them at gundi@mexmush.com

The 11th Annual Samuel Ristich Foray, sponsored by Northeast Mycological Federation and the following Mushroom Clubs:

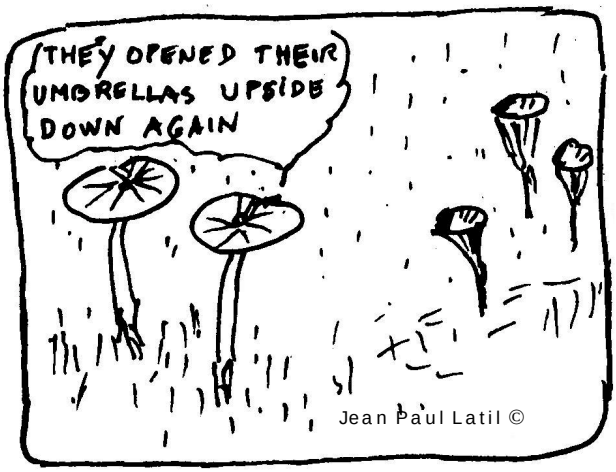
Eastern Penn Mushroomers,

NJ Mycological Association,

Western Pennsylvania Mushroom Club will be held Aug. 11-14 in Mont Alto, PA at Penn. State Univ. Copies of the Reservation Form are enclosed in this issue. If you are interested in attending, it is best to submit the form as soon as possible. Note that the accommodations consist of suites comprising two double rooms, with a shared bathroom. Therefore, if you don't want to share with strangers, make arrangements with friends who are attending to share the suite. There is an entry on the form (enclosed) to do so.

This promises to be an exceptional foray, both as to site and personnel. Many rich forests are nearby, and a very distinguished international cadre of mycologists will be attending, including Doug Bassett, Ernst Both, Glenn Freeman, Gary Lincoff, Rosalind Lowen, Walt Sturgeon, Rodham Tulloss, Tom Volk. Roy Watling (England) and Bart Buyck (France).

For more information, visit their website at www.nemf.org.



IN THIS ISSUE

April.....stirring dull roots with spring rain.

T.S. Eliot, The Waste Land, 1922

LONG ISLAND MYCOLOGICAL CLUB
11 RAMBLEWOOD RD.
RIDGE, NY 11961