LONG ISLAND MYCOLOGICAL CLUB

L.I. SPOREPRINT

VOLUME 10 , NUMBER 3, AUTUMN, 2002

LIMC JOINS BIOBLITZ 2002

The NYS Biodiversity Institute, in cooperation with the NYS Museum, has been conducting 24-hour inventories of various natural areas, hence the name "Bioblitz". The goal is to generate species lists for as many of the taxa present at the site, so as to raise the awareness of biodiversity.

The 2nd Annual Long Island BioBlitz was conducted from noon 9-13 to noon 9-14, and four member of LIMC - Peggy, Eric Schultz, Paul Horman and myself- participated by collecting and identifying macrofungi during a 4 hour period. Despite the drought, 40 species were found, which represents a great increase over the previous year, which tabulated only 2, due to a lack of knowledgeable collectors.

Foraging in this productive spot was quite enjoyable, as was meeting the park staff, and participants. Our club has been invited to return at other times of the year to continue to collect and document fungal diversity.

An added benefit was 2 species new to the LI list, common but ordinarily overlooked: *Hydnochaete olivaceum (*a toothed species) and *Hymenochaete tabacina* (a parchment fungus).

MUSHROOM DAY

Last year at Planting Fields Sardo Censi

PLANTING FIELDS ARBORETUM

OCT. 20, 2002

As I write this, the first copious rainfall of the year descends, bringing promise of generous autumnal fruitings. By the time of our annual Mushroom Day display we expect that Mother Nature will have compensated for the arid meagerness of the season up to now.

We invite all members to pitch in and help, by collecting and bringing specimens for display, and by arriving at noon to assist in setting up. Art items (non-sale) created by members may also be exhibited. The public display is scheduled to run from 1 PM to about 4 PM, although we may close a bit early to allow time for the **ANNUAL MEMBERSHIP MEETING, which will include a presidential ballot. BE SURE TO COME AND VOTE.** Mention your membership at the gate, in order to avoid paying the entrance fee.

Some of our members have not as yet attended this autumn celebration of nature's plenitude, and we encourage them to do so. We would like to make the acquaintance of more of our members, and in turn, they will become acquainted with more species of mushrooms than they have seen before.

If you would like to help, get in touch with Peggy or me, or any of our board members.

PRESIDENT'S MESSAGE

Since this will be my only message as Interim President, I'll keep my words to a minimum. It is imperative that **all members** try to attend the annual general meeting right after Mushroom Day at Planting Fields. We not only get to vote for a new president but also can have some input as to how the club proceeds in the future. One issue is that the by-laws have no provision as to who presides when a president resigns midterm, is unavailable or incapacitated. Perhaps we should also have a vice president to step in if such an occasion arises.

A few people have brought up the possibility for interesting new areas to forage in. Since the LIMC's participation in the Second Annual Bio Blitz at Caleb Smith State Park, we have been invited to return there (by prior arrangement) to compile a species list for them; it is an interesting area. Areas both further west (Cunningham Park) and further east (Southaven County Park) might be foray sites if there is enough member interest. If anyone has an area in mind, please bring it up at the above meeting. Although the idea of mid-week forays was brought up in the past, none were ever scheduled. These are just some ideas that can be discussed. Any suggestion you may have would be considered at that time also.

In closing, I wish you all a very fruitful fall. There are so many mushrooms right now that it is possible to get "mushroomed out." Last week everything I thought was a colorful leaf on the ground turned out to be a mushroom instead. What fun!

EDITOR'S NOTE

Those of you with email have already been informed that our Treasurer, Peggy Horman, has been appointed interim president by a unanimous vote of the LIMC board. It was also decided that her name will remain in nomination for a formal vote of the membership on Mushroom Day. Other nominations can be submitted at that time as well.

The last (Summer, '02) issue of the LI Sporeprint has been converted to electronic format and added to our club's web page by our webmaster, Dale Robins. Future issues will be posted as soon as they are published. We therefore will give those of our members with convenient web access the option of receiving future issues electronically instead of by "snail mail". By electing to forgo the printed edition, you can save us the cost of printing and mailing. The advantages are immediate receipt, easy availability, reduced clutter, and the ability to view all images (including mushrooms!) in full color. If you wish to avail yourself of this option, please email me at the address given below.

This issue contains a fun photo by one of our newer members, Sue Gaeta, for everyone's enjoyment. If you have an interesting photo, please submit it for consideration. Other contributions such as interesting mushroom recipes, anecdotes or experiences, descriptions of memorable collect-

Material for the Winter, 2002 edition should reach the editor by Nov. 30th

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

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Whom can we call "common"?

by Joel Horman

We all know, or think we know, what a common word, or a common bird is. Calling a particular individual common has another connotation, however, and is considered an insult. But what do we mean when we call a particular species of mushroom, "common"? Usually, it is not meant to be insulting, though at times it may verge on that- for example, the expression "just another Russula" (JAR) is meant to be dismissive, and a comment on that genera's ubiquity. When we get down to the species level, the attribution of commonness becomes somewhat iffy.

As a number of studies have shown, the annual appearance of any particular mushroom species is so irregular that few can be truly designated as common, in the sense that e.g., the American Robin is common, i.e., appearing without fail annually in its known range. Unfortunately, when dealing with mushrooms, we do not know with any precision the range of most of the known species. We cannot take any existing mushroom field guide in hand and find species range maps, as we can for birds, trees, and butterflies. This, however is only a small part of the problem.

G.Straatsma, F.Ayer, and S.Egli in Mycological Research, #105, 2001 have presented what seems by far the longest lasting study of species abundance and occurrence. Entitled "Species richness, abundance, and phenology of fungal fruit bodies over 21 years in a Swiss forest plot", the study examined a 1500-meter area every week from May to November over this time period. 71,222 fruit bodies comprising 408 species were found during this time. Amazingly, only 8 of these species were found every year. Even more astounding, the number of new species found each year did not seem to decline, so that even in the last year of the study, 19 new species were found. If this hold true generally, our Long Island Species List will soon outgrow its two page format; we have continued to find new species (as much as 30) every year for the past four years. We have to remember that although we may not see a particular species in any one year, it must of necessity remain present in the soil (or other substrate), unless it is a newly introduced interloper.

However, 1500 meters squared is less than a square mile, and the total area we habitually glean on Long Island is many times that, so results are not directly comparable. We certainly see more than 8 species return annually, but the principle remains valid. Not every species is seen each year, and some make only a rare appearance. While the total species found each year in the Swiss study ranged from 18 to 194, I would estimate that we never fail to find less than 200 species in any given year, out of a total number of about 400 thus far enumerated. If "common" mushrooms are defined as those which invariably occur annually, how many years do we have to count before we are satisfied with this definition? Twenty years seems like a good number, although necessarily arbitrary. We can all agree that long-term studies must be carefully and thoroughly carried out before a clear picture of fungal diversity emerges.

Public Mushroom Lecture

LIMC member George Davis, former President of the Boston Mycological Society, will deliver a lecture at the **Islip Public Library on Thursday, Oct. 17th, at 7 PM**. entitled "Local Mushrooms". Geared toward beginners, this will be an overview of mushroom biology and diversity, and will also cover the basics of collecting. It should prove especially valuable to our newer members and a refresher course for our more seasoned foragers.

The library is located at 71 Monell Av, Islip, just south of Montauk Highway (27A).

THE LONG ISLAND MYCOLOGICAL CLUB WELCOMES THE FOLLOWING NEW MEMBERS:

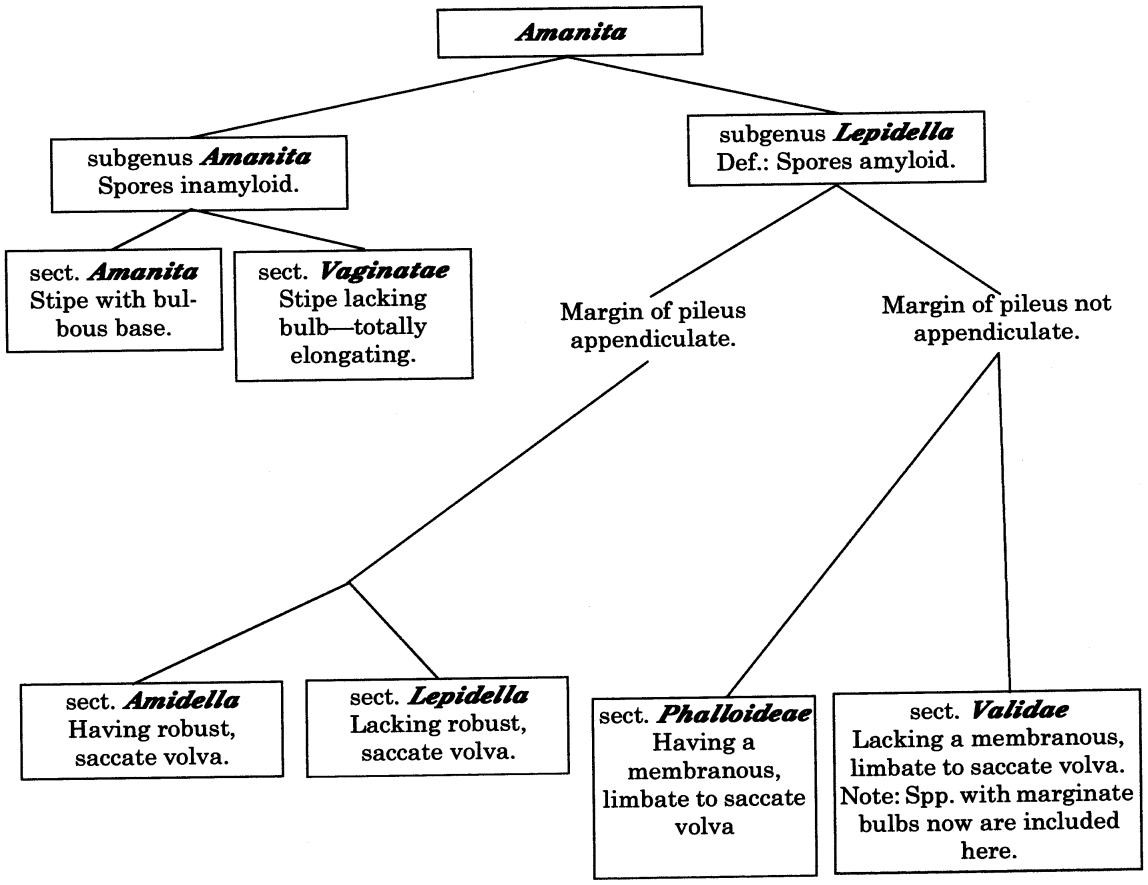
BARBARA ALVAREZ

MONIKA LUTZ

CLAUDINE MICHAUD

AMANITA: SUBGENERA AND SECTION TREE

COURTESY OF DR. RODHAM E. TULLOSS



Dr. Rodham E. Tulloss, expert on the genus Amanita, has graciously made available his revised key to the sub-genera of Amanita, reproduced above. It is self-explanatory, with the first major division being between those with amyloid spores (subgenus *Amanita)* and inamyloid spores *(*subgenus *Lepidella).* Melzer's solution, the reagent used to elicit this response (a blackening or darkening of the spores), is not readily available to the public, since it contains sodium amytal, a controlled substance. However, I have found tincture of iodine to be a satisfactory substitute.

Note that species with a marginate bulb, traditionally placed within *Phalloideae* are now relegated to section *Validae.*

The following are some excerpts from the "In the Field" section of Dr. Tulloss' "Notes on Methodology for Study of Amanita":

"**Photographing:** ….make color slides of the whole fruiting body and unique features such as the universal veil material on the pileus...lower stipe and bulb…

Collecting:..Remove the fruiting body from the soil carefully. Having the whole fruiting body is often necessary for the determination of a collection.

Basket Design: ..use a very deep basket that is crosslaced with strings so that many rectangular "compartments" are outlined…specimens are wrapped in waxed paper and arranged with stipes vertical...supported by the web of strings…

Field Annotation: ...note ..locality, date, quantity and distribution of fruiting bodies, soil and habitat...Trees in the area of collection (not just the closest tree) are important to know about…."

With the kind permission of Dr.Tulloss, I can make the entire paper available to interested parties via PDF file. Send me an email and I'll forward it on.

Taxonomic Corrections and Issues in Mushrooms Demystified, 2nd. Ed. by David Arora

(Reprinted with permission of Nathan Wilson, creator of the Website, "Arora Changes". Further details available at http://www.collectivesource.com/taxonomy/arora-changes.html)

The first name is the one that appears in the text. The second name is the alternative. Further discussion is available for some of the changes by clicking the lines.

Three classes of changes are indicated by the symbol separating the names:

-> Indicates a widely accepted name change. In these cases the name in the text is considered synonymous with the alternative and the alternative takes priority for some reason

<-> Indicates a debatable name change. In these cases the name in the text is considered synonymous with the alternative, but which names takes priority is debatable.

<-**R**-> Indicates a regional change. In these cases both names are valid because they actually are different taxa that occur in different regions of the world. The name on the right is correct for the west coast of the United States.

(E.g., *Lactarius vinaceorufescens* is good name on the east coast, but we don't get it on the west coast. Also *Xerocomus* is not generally accepted on the east coast, but most of the rest of the world (Europe, western US and Asia) use it.)

Aleuria rhenana -> Sowerbyella rhenana
Amanita aspera -> Amanita francheti
Amanita calyptrata (fall) -> *Amanita lanei*
Amanita calyptrata (spring) -> *Amanita "calyptroderma"*
Amanita flavorubescens ->*Amanita flavorubens*
Amanita rubescens <-**R**-> *Amanita novinupta*
Armillaria albolanaripes -> Floccularia albolanaripes
Armillaria caligata -> Tricholoma caligatum
Armillaria olida -> Tricholoma vernaticum
Armillaria ponderosus -> Tricholoma magnivelare
Armillaria straminea -> Floccularia straminea
Armillariella mellea -> Armillaria mellea
Boletus chrysenteron <-> *Xerocomus chrysenteron*
Boletus dryophilus <-> *Xerocomus dryophilus*
Boletus mendocinensis <-> *Xerocomus mendocinensis*
Boletus piperatoides -> *Chalciporus piperatoides*
Boletus piperatus -> *Chalciporus piperatus*
Boletus porosporus <-> *Xerocomus porosporus*
Boletus spadiceus <-> *Xerocomus spadiceus*
Boletus subtomentosus <-> *Xerocomus subtomentosus*
Boletus truncatus <-> *Xerocomus truncatus*
Boletus zelleri <-> *Xerocomus zelleri*
Calvatia gigantea <-> *Langermannia gigantea*
Clitocybe brunneocephala <-> *Lepista brunneocephala*
Clitocybe cyathiformis -> *Pseudoclitocybe cyathiformis*
Clitocybe inversa <-> *Lepista inversa*
Clitocybe nuda <-> *Lepista nuda*
Clitocybe tarda <-> *Lepista tarda*
Collybia acervata -> *Gymnopus acervatus*
Collybia butyracea -> *Rhodocollybia butyracea*
Collybia confluens -> *Gymnopus confluens*
Collybia dryophila -> *Gymnopus dryophilus*
Collybia fuscopurpurea -> *Gymnopus fuscopurpureus*
Collybia maculata -> *Rhodocollybia maculata*
Collybia oregonensis -> *Rhodocollybia oregonensis*
Dentinum albidum -> *Hydnum albidum*
Dentinum albomagnum -> *Hydnum albomagnum*
Dentinum repandum -> *Hydnum repandum*
Dentinum umbilicatum -> *Hydnum umbilicatum*
Entoloma madidum -> *Entoloma bloxami*
Entoloma niderosum <-**R**->*Entoloma ferruginans* (under oak with odor)
Entoloma rhodopolium <-**R**->*Entoloma lividioalbum* (and various others)
Gymnopilus spectabilis <-**R**->*Gymnopilus ventricosus*
Hydnum calvatum -> *Sarcodon calvatus*
Hydnum crassum -> *Sarcodon crassus*
Hydnum cyanellum -> *Sarcodon cyanellus*
Hydnum fennicum -> *Sarcodon fennicus*
Hydnum fuligineo-violaceum -> *Sarcodon fuligineo-violaceus*
Hydnum fuscoindicum -> *Sarcodon fuscoindicus*
Hydnum imbricatum -> *Sarcodon imbricatus*
Hydnum laevigatum -> *Sarcodon laevigatus*
Hydnum martioflavum -> *Sarcodon martioflavus*
Hydnum rimosum -> *Sarcodon rimosus*
Hydnum scabrosum -> *Sarcodon scabrosus*

(Continued on page 6)

Arora corrections *(Continued from page 5)*

Hydnum subincarnatum -> *Sarcodon subincarnatus*
Laccaria amethystina <-**R**-> *Laccaria amethysteo-occidentalis*
Lactarius fragilis <-**R**-> *Lactarius rubidus*
Lactarius vinaceorufescens <-**R**-> *Lactarius xanthogalactus*
Lepiota cepaestipes -> *Leucocoprinus cepaestipes*
Lepiota clypeolaria <-**R**-> *Lepiota magnispora* Murrill
Lepiota lutea -> *Leucocoprinus birnbaumii*
Lepiota naucina -> *Leucoagaricus leucothites*
Lepiota procera -> *Macrolepiota procera*
Lepiota rachodes -> *Macrolepiota rachodes*
Lepiota rubrotincta -> *Leucoagaricus rubrotinctus*/*Lepiota sp.*
Leucopaxillus amarus -> *Leucopaxillus gentianeus*
Naematoloma aurantiaca -> *Hypholoma aurantiaca*
Naematoloma capnoides -> *Hypholoma capnoides*
Naematoloma dispersum -> *Hypholoma dispersum*
Naematoloma fasciculare -> *Hypholoma fasciculare*
Russula emetica <-**R**-> *Russula silvicola*
Russula rosacea -> *Russula sanguinea*
Russula sororia <-**R**-> *Russula amoenolens*/*Russula pectinatoides*
Suillus pictus -> *Suillus spraguei*
Tricholoma pessundatum <-**R**-> *Tricholoma ustale* (bitter)/*Tricholoma dryophilum* (mild)
Tricholoma terreum <-**R**-> *Tricholoma myomyces*
Tricholoma zelleri -> *Tricholoma focale*

WHO IS THIS UNWELCOME VISITOR?

Erupting from a basement rug in Ronkonkoma, this invader grossed out the occupant. Can you guess what it is?

(*Answer below.*)

Peziza domiciliana

FUNGAL EXUBERANCE

LIMC member Sue Gaeta is transported by a non-psychoactive mushroom. Way to go!

NOTES FROM UNDERGROUND

"Most of the world's plants—more than 90 percent of the known species—are connected by a vast subterranean network of fungal filaments, in a symbiotic association that goes back to the very origin of land plants, 400 million years ago. These fungal filaments are essential for the plants' well being, acting as living conduits for the transmission of water and essential minerals (and perhaps also organic compounds) not only between the plants and fungi but from plant to plant. Without this "fragile gossamer-like net" of fungal filaments, **David Wolfe writes in *Tales from the Underground,*** "the towering redwoods, oaks, pines and eucalyptus of our forests would collapse during hard times." And so too would much of agriculture, for these fungal filaments often provide links between very different species—between legumes and cereals, for instance, or between alders and pines. Thus nitrogen-rich legumes and alders do not merely enrich the soil as they die and decompose, but can directly donate, through the fungal network, a good portion of their nitrogen to nearby plants. United by these multifarious underground channels (and also by the chemicals they secrete in the air to signal sexual readiness or news of predator attack, etc.), plants are not as solitary as one might imagine, but form complex, interactive, mutually supportive communities."

(From "Oaxaca Journal" by Oliver Sachs)

Cleanings

■ **TERMITOMYCES:** *Natural History* magazine of July, '02 reports that African termite mounds, made by the fungus-cultivating termite *Macrotermes michaelseni,* are constructed so that prevailing winds refresh their internal environment, maintaining high humidity, slightly lower oxygen levels, and higher carbon dioxide levels. These conditions not only favor the resident fungus species, *Termitomyces,* but also suppress their major competitor, *Xylaria* (Dead Man's fingers), which would grow quickly enough to overwhelm *Termitomyces,* whose fruiting bodies occasionally break through the mound surface. The largest edible tropical agaric is *Termitomyces titanicus* which, growing up to 3 feet in diameter, may be the largest mushroom in the world.

■**COOL TRICHOLOMAS:** A study by Spanish scientists carried out in the mountains near Madrid concluded that deciduous oak forest is the habitat richest in *Tricholomataceae* and that the most important factor influencing the biodiversity was climate. The greatest richness and diversity of *Tricholomataceae* is attained in cool, subhumid climates on siliceous soils. Pine forests were the most similar, which may help explain why our native pine/oak forests on Long Island are so rich in *Tricholoma, Collybia,* and *Cantherellula,* all members of the *Tricholomataceae. (*Reported in the Journal, "*Cryptogamie Mycologie*", Dec.'01)

■ **LIVING ON THE EDGE:** A recent study of fungal succession along the edge of the retreating Lyman Glacier in Washington State demonstrated a regular sequence of ectomycorrizhal species. As plant communities such as pine, hemlock, willow, larch and establish themselves, their symbionts move in, though none established themselves with the earliest arrival, a fir species. Only four species (*Cortinarius decipiens, C. tenebricus, Inocybe lacera,* and *Laccaria* cf. *montana*) occurred on soil deglaciated for less than 40 years. . An additional five species (one unidentified species each of *Cortinarius* and *Lactarius*, *Cortinarius mutabilis*, *Lactarius uvidus* var. *montanus*, and *Suillus cavipes*) occurred only on the oldest substrate.

■ **THE MORELS OF MEXICO:** In addition to the six known species of Morchella in Mexico, G. Guzman, (the senior author of an article in *Mycologia,* Vol.90, no.4) reveals the discovery of a seventh from the State of Veracruz, which he has named *Morchella rufobrunnea.* It belongs to the blushing species, a fourth group of species in the genus proposed by the authors. Surprisingly, it was concluded that microscopic features, for the most part, were not important in the taxonomy of the genus. The form and color of the ascomata, the position of the ribs, the length of the alveolae, and the staining are the most important taxonomic features. It was good to learn that some subtle identifications can be made solely by field marks.

■ **NOT SO HARDY "APATITE":** The calcium cycle in northeastern forests is thought to be unbalanced, with more being depleted than is being replaced. data (from a study reported in *Nature* #417, 2002) suggest a new source of calcium in the mycorrhizal weathering of apatite (calcium phospate). Calcium from this source was utilized largely by ectomycorrhizal tree species, suggesting that mycorrhizae may weather apatite and absorb the released ions directly, bypassing the soil pool.

(*compiled by editor from various sources*)

IN THIS ISSUE

"Heaven is under our feet as well as over our heads."

Henry David Thoreau, Walden

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