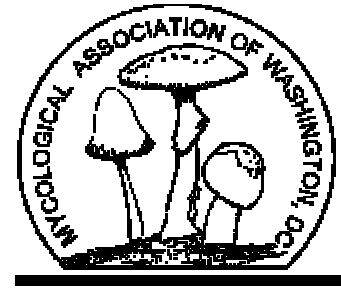


Potomac Sporophore



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Upcoming MAW Monthly Meeting Locations

December 7, 2004 - Chevy Chase Library
January 4, 2005 - Chevy Chase Library
February 1, 2005 - Chevy Chase Library
March 1, 2005 - Davis Library
April 5, 2005 - Davis Library
May 3, 2005 - Chevy Chase Library
June 7, 2005 - Davis Library

MAW's 2005 Nominees

-Jim Sherry

On November 2, at D.C.U., the MAW nomination committee presented the following slate of nominees to the membership. These were the only nominees presented, though the nominating process remains open until the election which will be held on the first Tuesday of December at the Chevy Chase Library.

The slate:

President—Jon Ellifritz
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Membership—Katherine White-Horn
Culinary—Waldemar Poppe
NAMA Representative—Paul Goland
Newsletter Editor—Jim Sherry

We are delighted to say that Derya Slivka is willing to remain as MAW mail person and that Karin Adams will continue to be the hostess with the willing assistance of Maria Dobrowolsky and Nancy Sellar. Also, Ilona Conolly is willing to help with the culinary work. However, these commitments are largely dependent on the slate of candidates presented last night being elected to office and to the board.

The 2004 Nominating Committee:

Nancy Sellar
Nathan Ballard
Jim Sherry

Achtung! Use This Common Name!

–Part Deux

-Jon Ellifritz

In 2000 the North American Mycological Association and the Mycological Society of America (MSA, the professionals' association) embarked on a joint project to draw up "a list of recommended common (vernacular) names for mushrooms from North America." The commission on common mushroom names for North America has a website, reached via mushroomnames.org. Last year the site started with a list of about 20 Amanita species, with one to several possible "common names" for each that site visitors can choose from, or enter their own suggestions. This year, a list of more than 100 boletes in thirteen genera was added, again with the option for site visitors to indicate a "common-name" preference for each species or species variety. There is also a page for comments, and one of these includes a link to a British Mycological Society website with agreed-upon "common names" for over a thousand species.

What is the impetus for this joint project? Although the website gives a brief explanation of the process, it only hints at the reasons for the project itself. The target audiences for the final list include amateur mushroom hunters, chefs, publishers, teachers and interested scientists. My guess is that there are two major reasons. One is the frequently-expressed view that learning "Latin" names is too difficult and confusing. I believe people who think this underestimate themselves, overemphasize the difficulties, and ignore several relevant considerations.

Many if not most scientific names, particularly genus names, are ultimately Greek in origin, albeit in Latinized form. I recognize that as a pedantic quibble, but there's also the fact that more than half of the vast vocabulary of English is derived from Latin or Greek, even many of the words used in talking about mushrooms. "Mushroom" itself comes from late Latin by way of French, and "fungus" is from Greek via Latin. And what about the "common names" we use most frequently, often those found in the Audubon and Peterson series field guides? "Fawn," perhaps a true common name, comes ultimately from late Latin. "Gypsy" derives from "Egyptian," referring to the ancient Greek name for the

country (although the Rom, or “Gypsies,” are believed to have come originally from India), but the “English-language” name for the mushroom may be just a translation of German “Zigeuner.”

For the general or genus part of common names, Gary Lincoff’s Audubon guide coinings favored use of the full genus name (e.g., Rooted Oudemansiella), a truncated form (Cort for *Cortinarius*), a general group name applicable to species from many genera in that group (Bolete and Polypore, each derived from one Greek genus name in its group), or a translation (“milky,” for *Lactarius*), prefaced by a descriptive word or phrase that often translated the Greek or Latin specific name, e.g., Oak-loving *Collybia* for *Collybia dryophila*. Dr. McKnight’s coined names were often translations from the Greek or Latin (“Coincap” for most *Collybia* and a few species in three other genera) or from German “Forest Friend” for *Collybia dryophila*, from Waldfreund-Rübling; “Cavalier” and “Rider” for most species of *Tricholoma* and *Tricholomopsis*, based on the German “Ritterling” used in the “common names” of most species in these two genera. (Gary Lincoff had used “Trich” and “Mop,” along with a playful “Platterful Mushroom” for *Tricholomopsis platyphylla*, despite its questionable edibility for a few.) After all this, one must ask whether it’s easier to learn Oak-loving *Collybia* and Forest Friend (who is she when she’s at home?) and Common *Collybia* (the “common name” used in a 1998 common-name-for-all guide for which Gary Lincoff was co-author/editorial consultant) and whatever name, if different, is on the British list and whatever name shows up on the eventual NAMA/MSA list, or just to buckle down and learn *Collybia dryophila* (and *Gymnopus dryophilus*, a new name that showed up in some recent guides!). But one might also ask which is easier, to learn Rooting *Collybia*, Rooted Oudemansiella, and Lesser Rooting *Xerula* (notice a common theme?), or to venture into *Collybia radicata*, *Oudemansiella radicata*, and the most recent, *Xerula furfuracea* and *Xerula megalospora*.

The other likely basis for the common names project may have been voiced best by Gary Lincoff at the September 2002 annual “Mushroom Mania” foray of the Western PA Mushroom Club. While conducting the tour of the display tables, he vehemently stated, “I don’t want to learn any more new names. I’m too old to learn new names.” Since Gary and I are probably both “of a certain age,” yet much younger than the venerable Sam Ristich (who is probably still learning new names for old forest friends, along with a multitude of other fungal facts and fancies), I imagine Gary was expressing his frustration and disinclination, rather than an actual inability to learn. He also voiced his concern that newcomers to serious mushrooming might become discouraged, asking, “What are we going to do before a foray; ask them ‘everybody got your DNA sequencer?’?” He was pointing out the

great increase in mushroom names of late, some because of the splitting of species “complexes” (*Armillaria mellea*, *Laetiporus sulphureus*), others resulting from the increase in knowledge of evolutionary relationships that is used to move species from one genus or family to another. Most of this upheaval comes from DNA analysis.

I too get a bit annoyed by new names, but doubt that the common names project will help. It will just add another list of often new, albeit “English,” names to learn, and could make the situation worse unless the final product is extremely well thought out. I just want “them” (the DNA sequencers and taxonomists) to get it all figured out pronto, and then set it all out in one place, etched in stone, so those of us who are so inclined can sit down and learn it all and not have to fret about any more changes. Alas, ain’t gonna happen in my lifetime. The only constant in life, and in the study of life, is change.

This may only be part deux of trios (or more!). A number of aspects of the NAMA/MSA project cry out for comment, so stay tuned (or tell me, “Enough! Enough! No more, please!”).

The Mushroom Chronicles

-William Needham

Biology originally relegated all living things to two kingdoms: Plantae and Animalia. This was always problematic when classifying single celled organisms like the Euglena, which has the mobility of an animal and the chlorophyll of a plant. Fungi were considered members of the Plant Kingdom (the division Eumycota) even though they reproduced with spores and relied on chlorophyll-producing plants and other hydrocarbon sources of less repute such as manure and decayed rags for nutrition. In that dinosaurs were once considered reptiles, it is not at all surprising that the somewhat arbitrary nature of classification by taxonomy could yield anomalous results. With the increasing use of DNA testing to validate these relationships, the classification scheme originally devised by Carlolus Linnaeus will no doubt be subject to additional revisions.

In 1969, R. H. Whittaker of Cornell University proposed five principle kingdoms: the original Plantae and Animalia with the addition of Fungi, Protista and Monera. Fungi included mushrooms, molds, mildews, yeasts, brackets and puffballs. Monera were the bacteria. The problem was that the fifth Kingdom, Protista, was for anything else that didn’t fit one of the other four categories, such as amoebas, algae and slime molds, containing as many as 200,000 different species. To complicate matters, Carl Woese of the University of Illinois posited three domains: Bacteria, Archaea and Eukarya to take into account the unique genetics of bacteria and Harvard zoologist Ernst Mayr later suggested two empires: Prokaryota for simple

bacterial entities and Eukaryota for the more complex organisms. This debate rages on, but the key point is that fungi are not plants in any of these organizations. Fungi are fungi (the preferred pronunciation according to Webster’s Dictionary is funj-eye but I have heard fung-eye, funj-ee and fung-ee with almost equal frequency).

Wild mushrooms are highly regarded by most cultures of the world as an important and delectable food source. Many fungi have the taste and texture of meat, attributable to their conversion of the plant nutrients into chitin, the same material that is used by insects for their exoskeletons. Appellations such as “Chicken of the Woods” and “Beefsteak Fungus” reflect this gastronomic verisimilitude. However, the British make a distinction between the edible field mushroom that is cultivated commercially, and all others which are called toadstools and are considered poisonous. The etymology of this term is curious, as it has nothing to do with the notion that toads may use the mushroom as a perch, as they are so frequently depicted in ceramic caricatures and children’s fantasies. Toadstool is a calque of sorts as it is of German origin, the word *todesstuhl* meaning death chair. Apparently the British took to the notion of a warty toad using the hated fungus as a throne. Americans have for the most part followed British traditions in their general apprehension of any mushroom not purchased in a proper commercial establishment.

The word mushroom itself is of dubious etymological origin. It derives from the French word *moisson* which is in turn derived from *mousse*, the French word for moss. Perhaps this is due to the dark, dank mossy habitat where mushrooms thrive and *moisson* became mushroom as a calque, using existing English words as antonyms for the French. Interestingly, the French word for mushroom is *champignon* from *champs* meaning fields (the Champs Elysee in Paris is the primary artery to the Arc du Triomphe. It means Elysian Fields, where fallen warriors live in perpetual bliss). *Champignon* is also the German word for mushroom, evidently taken directly from the French. And to really confuse things, the Latin word for mushroom is *fungus*, which in turn derives from the Greek *spoggos*, or sponge. Presumably, the Greeks, well known for sponge diving, thought that there was a resemblance between sponges and fungi, as both are fibrous, compartmentalized, and “spongy.”

The mystifying, spontaneous emergence of mushrooms after rain is so notable that the very term “to mushroom” suggests explosive growth (both before and after the advent of the atomic bomb cloud of the same name). To understand why this occurs, it is necessary to delve into the recondite realm of spores, hyphae and mycelia. The evolutionary reason why mushrooms have caps is so that the spores which are located on small club-like structures called basidia attached to the gills under the cap remain dry. Thus, when the spores drop, the wind can then carry them to

new habitats (wet spores would be too heavy). When a spore lands in an auspicious locale, it will start to grow, sending out an initial filament called a hypha that will branch repeatedly to create a fibrous mass called a mycelium.

The mycelium is the corpus of the fungus (what would we do without Greek?). It is as elusive to the casual naturalist as are the roots of a tree, as the hyphae are interwoven into the soil and detritus of the forest floor and thus virtually impossible to discern. Mycelia can grow to gargantuan proportions, limited only by the extent of a benign ecosystem. It is part of the accepted common folklore that the largest living thing in the world is a fungus that occupies some forty acres in Michigan. As I recall, the Soviets claimed during the Cold War that they had the world's largest fungus. They probably did and still do for that matter.

The mycelium that results from a single spore cannot create a mushroom. It takes two compatible hyphae growing from two compatible spores to do that. In this sense it is like the male and the female genders of most plants and animals. But with fungus, it is much more complicated, as there are a lot more pairing possibilities. There has been limited study in this area due to the difficulty in distinguishing different hyphae based on appearance.

Understanding pair-wise behavior is dependent on a large number of tedious empirical observations. What testing has been done has shown more than 20,000 pairing combinations in some mushrooms. Each hypha brings one nucleus to the union, creating a cell with two nuclei, called a dikaryon. In this combined form, the mycelium grows, taking its nourishment from a variety of organic sources.

Mushrooms form from the dikaryon mycelium by coalescing into a more dense fibrous mass known as a primordium. The structure of the mushroom is established in embryonic form at this point with a distinct cap and stem, poised in the mycelium for the appropriate environmental stimulus, moisture. After a rain, water permeates the ground and the inchoate mushroom absorbs it, expanding rapidly with the preexisting structure now enlarged by the addition of the fluid. This is why mushrooms pop out of the ground overnight after a rain. The moisture trigger is also relevant to the propagation of the species, as the mushroom will open and release its spores when environmental conditions are likely to favor their successful incubation.

Fungi are among the most notable features of any woodland trail. The bright orange glow of Jack-O-Lantern mushrooms huddled at the base of a tree is as striking as the delicate structure of the Pink Lady's Slipper orchid. Their spontaneous appearance and ephemeral presence are like the wildflowers that enjoy universal adulation for their aesthetic qualities. But in spite of the esthetics of their geometric balance, mushrooms are maligned, subject to all manner of hyperbole

about their toxicity and hallucinogenic nature. It is a matter of education, as fungi are of great importance to woodland ecology and to the economics of any agricultural enterprise. And that is the motivation for learning mycology and for transmitting that knowledge to others... the mushroom chroniclers.

Winecap Stropharia

-John Plischke III



(*Stropharia rugosoannulata*)
(*Stropharia ferii*) (*Naematoloma ferii*)

OTHER COMMON NAMES:

Wine Red Stropharia

FAMILY: Strophariaceae

DESCRIPTION: It is from 2 to 8 inches tall. It has a wine colored cap hence the common name. The Wine Cap can often be transplanted from one location to another easily by taking a bucket full of mycelium covered mulch and adding it to another pile of woodchips.

Flesh: Its flesh is white and similar in thickness to the gills on mature specimens.

Cap: It is from 3/8 to 1 inch tall and from 1 1/8 to 10 inches wide. The convex caps on the young mushrooms are a deep purple to purplish brown sometimes with reddish tones in the purple. Once the caps mature the sun can fade them and they can become dark tan to beige. It is shaped like a bell then convex then almost flat at maturity. It is dry to somewhat moist and smooth to the touch and there can be cracks on it at maturity. It is often somewhat shiny. The skin can peel back to almost the middle of the cap. The young mushroom's cap margin can have small whitish colored flecks from its partial veil on it.

Gills: They are an off white color before the cap expands to reveal the gills becoming a light purplish gray color becoming almost purple black with age. They are straight becoming wavy with age. They are closely spaced and are attached to the stalk. There are often white particles (patches) of the veil on the gills. On young unopened specimens you can not usually see the gills.

Spore Print: Dark purplish to purplish brown.

Stalk: It is from 1 5/8 to 6 1/4 inches tall and from 3/8 to 1 1/8 inches wide. It has a thick pointy ring on the upper part of it. It is a creamy white color, sometimes with some beige. The bottom of the stalk on older specimens can be wider than the top and the base can be swollen. It is not hollow but can be pithy in the center. It is smooth but has lines running down it and on the top by the gills you can often see marks left by the gills on mature specimens. It often has white threadlike mycelium attached to it when

pulled out of the mulch. It can also be a little cottony there.

Odor: Mild.

RANGE: United States and Canada.

WHERE TO LOOK: In mulch and wood chips, such as places where the tree trimmers dump out truckloads. They can often be found for several weeks to over a month on the same pile of mulch. To find them I often go to parks and look in their mulched areas or in mulched landscaped areas of buildings and mulched trails. My friend Bobby has picked a few at his farm. Do not look in cypress mulch, colored mulch or pine bark because not much grows there and do not look in freshly chipped mulch unless it was dumped over older mulch because not much grows in it until it starts to rot. Mulched areas without any shade are seldom productive.

HOW OFTEN THEY'RE FOUND:

Somewhat common.

HOW THEY'RE GROUPEd: They are occasionally found singly or to several spaced out but are more often found in large quantities that are closely spaced. Several to over 100 can be found in a mulch pile.

SOCIAL PLANTS: There may be none or there can be grass, dandelion, broadleaf plantain, sour grass, ground ivy, thistle, and smart weed coming up through the mulch right next to them.

WHEN TO LOOK: The end of April to October. May and June and September-October being the best months since these are the two main flushes when they can be found in larger quantities. Remember that one spot will have both flushes so check it twice.

LOOK ALIKES: Species of *Agrocybe* are often growing in mulch alongside the Wine Cap *Stropharia*. The unknown edibility *Hard Agrocybe* or *Hardcracked Agrocybe* (*Agrocybe dura*) and (*Agrocybe praecox*) do not have purplish gills. The *Green Stropharia* (*Stropharia aeruginosa*) who's cap is bluish green. The unknown edibility *Questionable Stropharia* (*Stropharia ambigua*) has a yellow colored cap. *Hard's Stropharia* (*Stropharia hardii*) does not have a purplish colored cap. The *Lacerated Stropharia* (*Stropharia hornemannii*).

EDIBILITY: Edible and Choice.

COOKING INSTRUCTIONS: It has a mild taste and is good cooked in butter. This mushroom has been served at The Gary Lincoff Mushroom Mania.

MACROCHEMICAL REACTIONS: KOH and sodium hydroxide indents and darkens the flesh and makes the cap turn somewhat olive green and makes the gills a greenish purple but only the caps which are wine colored and not faded out by the sun have the green color reaction on the cap. The faded ones do not turn green on the cap but still do on the gills. Also note that if the green colored cap is wiped off it will be yellowish orange colored. **BLACK LIGHT:** The cracks in the cap and stem turn white to light purple, and the stem slightly purple at places. On young immature specimens the interior stalk and ring which has not yet broken away has some yellow but I have not yet observed this on mature ones.

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