Potomac Sporophore

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Website:**http://mawdc.org**

BOARD OF DIRECTORS

2010 Scheduled Events

Monthly Meeting Location:

Kensington Public Library

Located at 4201 Knowles Avenue. phone number 240 773-9515

All monthly meetings start at 7PM and include a brief review by each of the MAW board members and a summary of monthly events and mushroom finds by the President. The program starts at about 8PM.

Please note that foray dates are tentative and may change depending on the weather or other factors. If you are not on the foray e-mail list send an e-mail to the foray chair (left) to ask to be put on it. The Website should have info on the current status of the forays as well.

September 4 - Foray Cosca Regional Park, Clinton ,MD

September 7 - Noah Siegel, a mycologist from Massachusetts - Topic: Common Edible Mushrooms of the Northeast.

September 19 - Foray Greenbelt Park, Greenbelt, MD

September 25 - Foray Scott's Run Nature Preserve, Mclean ,VA. Let's hope the Hens are coming up!

October 2 - Multiple forays for the Annual MAW Mushroom Fair at Brookside Gardens.

October 3 - The Annual MAW Mushroom Fair

October 5 - Annual MAW's Wild Mushroom Culinary Event.

October 8-10 - Annual Camp Sequanota Foray - see below

October 24 - Foray Bennett Regional Park, Clarksburg, MD.

November 9- Walt Sturgeon, a noted amateur mushroom expert from Ohio.

December 7 - Election for MAW Board for 2011.

From the MAW President

Well, it's that time of year again. Meadow mushrooms are fruiting, lots of other mushrooms are getting pumped up in preparation for their fall fruiting, and the MAW Nominating Committee is beating the bushes for volunteers to serve on next year's Board of Directors. We are fortunate to have Connie Durnan and Larry Goldschmidt among others to draft a slate of candidates. While I expect that many of the incumbents

would be willing to continue to serve in their present positions, I know that every one of us on the Board could use help even if someone else doesn't take over our position. So, I'm asking each of you to please, please, please get in touch with the Nominating Committee and let them know how you're willing to help run MAW. Maybe you'd be willing to assume one of the ten elected positions on the Board—President, Vice-President, Treasurer, Secretary, Program Chair, Foray Chair, Newsletter Editor, Membership Chair, Culinary Chair, and NAMA Trustee. More likely, you are a bit intimidated by that much responsibility because you've never served as a Board member. No problem— I assure you that your involvement as an assistant backing someone up would be greatly appreciated. Maybe you can lead a foray or help identify mushrooms at monthly meetings. Maybe you'd be willing to put up a visiting mycologist overnight to help keep our program costs down. Maybe you've got skills in Microsoft Excel and can help put together budget spreadsheets. Maybe you'd be willing to ghost write columns for the President (heh heh, just kidding; but I'll bet there are things you could do to help produce our newsletter). Whatever assets you can offer will help the Board keep MAW going strong. If nothing else, just say that you'd like to help the ____ Chair, and I'm sure your offer of assistance will be eagerly accepted.

I'd also like to solicit your thoughts on what you'd like to see MAW do differently or better. We got a lot of positive feedback about the demonstration of basic techniques for cleaning and cooking mushrooms at the August meeting (and also some negative feedback about not getting around to showing the Russian DVD that was supposed to be on the program. As a result, we're going to try to include a short instructional feature every meeting on some aspect of mushrooming so as to help improve novices' mushrooming skills. We're also committing to showing that DVD before too long (January or February if not sooner). You can convey your thoughts to me, any other Board member, or the Nominating Committee orally or by email.

Finally, I'd like to remind you that we've several great special events planned that you won't want to miss. Our annual Mushroom Fair is coming up on October 3 at Brookside Gardens In Wheaton, MD, and the Fall Tasting meeting will be on the following Tuesday evening at the Kensington Park library. To top things off, we'll be going out to Jennerstown, PA for our annual Camp Sequanota foray October 8-10. This year should be especially good because we're doing it as a NAMA-sanctioned event together with the Western Pennsylvania Mushroom Club. Details of these events are posted on our website at www.mawdc.org. I hope to see you there! - Ray LaSala

Camp Sequanota Joint Foray

The annual Camp Sequanota foray weekend, begun in 1988 by MAW, will this year be co-sponsored by MAW and the Western Pennsylvania Mushroom Club (WPMC), and has been endorsed by the North American Mycological Association (NAMA). Participants must be or become members of one of the co-sponsoring clubs or NAMA to register.

The foray will take place Columbus Day weekend, from Friday, October 8, to Sunday, October 10. Camp Sequanota, located near Jennerstown in the Laurel Highlands of western Pennsylvania, has very comfortable, mostly two-bed, rooms in the Bowersox Enrichment Center, which will accommodate 40 to 45 people, and also houses a combination dining room/great room with a fireplace, where we'll get together for meals, for socializing, and for mushroom programs on Friday and Saturday nights. If a larger number should register, some overflow can be housed in dormitory style cabins.

Over the years, the Sequanota foray has come to be seen by its participants as a relaxed get-together with like-minded (about mushrooms) fungal foragers, whom we get to know better in the evening snackfests, at meals, on the mushroom trails, and around the display tables. The more participants, the more species we're likely to find (our best year was a little over 260 species), and the more we're likely to learn, and possibly to eat! We'll have forays on and off the 600-acre campgrounds on Friday afternoon, Saturday morning and afternoon, and maybe on Sunday morning.

To help identify more of those species and to present programs in the evenings, we'll have two excellent guest mycologists, WPMC's John Plischke III and Noah Siegel of Royalston, Massachusetts. John has a nationwide reputation as a mushroom photographer, with 80 regional and national awards to his credit, and has presented hundreds of mushroom programs for clubs, parks, schools, and other groups, and co-

founded WPMC ten years ago, then only 20 members (now over 500 in ten western Pennsylvania counties). A recipient of NAMA's Knighton Award for service, and elected first vice president of NAMA last November, John wrote "Morel Mushrooms and Their Poisonous Look-alikes," edited WPMC's two mushroom cookbooks, and is one of the editors of Fungi magazine. He's also a trustee and faculty member for both NAMA and the North East Mycological Federation (NEMF), as well as chairman of the fungus section of the Pennsylvania Biological Survey. Some MAW members like to think that John's early participation in Sequanota forays was an important impetus for his eventual intense enthusiasm for everything fungal.

Noah Siegel, too, is a nationally known mushroom photographer and identifier, and has been photographing and collecting mushrooms for almost 20 years. He is president of the Monadnock Mushroomers Unlimited in Keene, NH, and he too is a NEMF trustee, as well as a presenter and identifier for mushroom clubs all over the northeastern United States. He has also searched for fungi in California, the southern Appalachians, on the Gulf Coast, both sides of Canada, and Down Under.

The full foray weekend includes two nights' accommodations, linen service, and six meals, from Friday evening dinner through Sunday lunch. Double-occupancy participants pay only $135 each, and those who opt for a room to themselves, $174.50. Those who just want to come for the day, all day Saturday, including three meals, forays, wild mushroom dishes with dinner (depending on quantities of choice edibles!), and the evening programs, will pay only $48.25. (The cost for children 3 to 10, occupying a room with their parents, is $46.50, and if they're just there for Saturday meals and programs, $10.75.)

Registration forms can be found on the two clubs' websites, www.mawdc.org and www.wpamushroomclub.org. If you're unable to access the sites or can't print out the form, contact foray registrar Connie Durnan (MAW's Membership Chair) at czdurnan@msn.com, by phone at (202) 362-1420, or by regular mail at 4509 Windom Place, NW, Washington, DC 20016, and ask that she mail you a form. (Registration forms received after September 7 will be subject to a $15 per person late fee.)

Feature Article

Morel Adventure

On May 14 of this year, we drove north for nine hours to join the Mycological Society of Toronto (MST) at their spring foray which was held on May 15th and 16th. We stayed at the home of Danny's 90 year-old aunt. Since she could not cook, we ate at different restaurants. Danny even got Larry to eat at a Filipino restaurant. The food was good. It did not take Larry very long to learn that Canadians' are very honest. At one eating place he dropped several hundred dollars out of his billfold by accident. A local citizen found the money on the ground and gave it right back to him.

We joined the first foray which was held at the Dufferin Forest Tract, about 60 miles north of Toronto. About 50 people attended the foray. The forest is 2596 acres divided into twelve tracts dotted across the six Dufferin county rural municipalities. The major tree species growing at this forest includes red pine, white pine, white spruce, eastern white cedar, larch, oak, sugar maple, white ash, black cherry, birch, and cottonwood. To keep track of all participants, the attendees were required to write their names and their car license plate numbers on a sheet of paper. The foray started at 9:45AM and ended at 12 noon. At the end of the foray, the names and license plates were checked against the list to make sure that no one was left behind in the woods. A table was set, the morels were counted, and the collected mushrooms were identified.

Larry Goldschmidt and Danny Barizo (flipping the "morel")

We found that morels in Ontario fruit differently and emerge at a later date than the ones found in Maryland, Virginia and Washington DC. In Ontario we found morels growing under cottonwood, apple, aspen (large tooth) and occasionally along paths near pine trees. Although, we were told that this year's harvest was one of the worst in recent memory, we were able to find about 3.5 pounds in one day. Danny found most of them.

Almost all of the fungus we found was yellow morels of the later

variety, larger *Morchella esculenta* type. A few were of the earlier, smaller *M deliciosa* type. All these mushrooms were generally larger than the ones we find in our area of the United States. Although we found that most of the morels were growing singularly in small areas, we were surprised to find a few morels growing in a cespitose manner, that is, two clusters had at least ten morels growing close together. The morels also were found in open fields (not in the forest,) in grassy areas bordering the woods, as well as along paths and the roadside. We did not find any tulip poplars, ash, or dying elms trees during our mushroom hunt.

The morel season in the Toronto area starts after the April showers. The first morels that appear are the black morels or the *M elata* type**.** They usually come out during the end of April and the start of May. As the beginning of the season rolls on, less and less black morels are found and more of the yellow morels appear. Depending on weather conditions, the morel season starts at about the end of April and last to about the first week in June each year, and reaching its peak in the middle two weeks of May.

Earlier this year during late April, we forayed for morels in conjunction with the Mycological Association of Washington (MAW) at Watkins Regional Park, Maryland. MAW has been quite helpful in showing folks how to find morels.

The forest consists mostly of tulip poplars and some mixed in oak trees. The foray started at about 10:00AM and ended at 12 Noon. Participants then separated into small groups and searched the rest of the forest.

We found that morels fruit in relatively the same locations each year depending on the amount of rainfall and gradual increase in temperatures. This year, however, was different as temperatures reached high levels early in the season. Then we had a cold spell. Rainfall was quite limited. Only small amounts of the *M elata* were found at Watkins Regional Park, but two varieties of the Yellow Morel were found at this site. They include the smaller *M deliciosa* type which usually fruits first, and the other is the larger *M esculenta* type which usually fruits last. The large *M esculentas* fruited early this year. The quantities of morels found at this park were much less than those found during most previous years.

In forests of Virginia, Maryland and the District of Columbia, morels associate with tulip poplar, white ash and dying elm trees. They are normally found under these trees in the forest. Morel fruiting normally occurs from about the 12th of April until the end of the first week of May each year. This year's morel season has been relatively short due to the fluctuating air temperatures and limited amounts of rainfall.

Morels have been known to grow in a variety of soils. These soils can vary from sandy to clay consistency. Most soils encountered in these areas of the United States are more of a clay soil consistency. The soils encountered in the Toronto areas of Canada consist mostly of a sandy soil consistency.

It does not matter whether you foray for morels in Canada or the United States. In both cases you need moisture. Depending on overall weather conditions, rainfall is needed every 4 to 7 days for proper morel growth. If it's very windy, rainfall every 4 days might be needed. Otherwise rainfall every 7 days might be enough. Good soil for morels is usually somewhat spongy, but not real hard or sticky wet.

One of the most important things we learned about finding morels is you must look in the proper habitat. And it certainly differs considerably in the two areas we encountered during this adventure. Thanks to both MST and MAW for all their guidance in finding morels."

- Larry Goldschmidt and Danny Barizo

Nine MAW members attend NAMA Foray

The Mycological Association of Washington was well represented at the 50th North American Mycological Association foray held at the Snow Mountain Ranch (elevation: 9000 feet), in Colorado from August 10-15. The MAW members who attended the convention were: Daniel Barizo, Ophelia Barizo, Drew Minnis, Yun Young Hye, Bruce Boyer, Bruce Eberle, John Harper, Diane Holsinger and Paul Knowles. Unlike in years past, there was a dazzling array of wild fungi that were found. The rain and the weather in Colorado helped create the ideal conditions for mushroom growth. Local residents have commented that this year was the best ever for hunting mushrooms. They found several mushrooms that they had never seen before. There was also a bumper crop of choice edible mushrooms such as the North American version of the famed Boletus edulis. It also was exciting for MAW members to find several species not found in the

Maryland/Virginia, DC areas. There were two kinds of forays: The first was the group forays where participants were ferried by bus to a particular location to forage for mushrooms. And there were the individual forays where people could go on their own, or in small groups. Several fungi experts were in attendance. Michael Kuo, founder of mushroomexpert. com gave a whole day's presentation on how to do mushroom fieldwork. He also talked about morels. "In my many years of morel hunting, Kou's lecture on morels is, by far, the best lecture I have heard," declared Bruce Boyer. Other lectures were given by Todd Osmundson on Laccaria, Michelle Seidll on Cortinarius, Jack States on one of the rarest of fungus in North American –truffles, Rick Kerrigan on Agarics, and Tom Volk on various aspects of fungi. Walt Sunberg demonstrated the proper use of hand lens to study mushrooms. Gary Lincoff and Vera Evenson, well known authors, were also present. The chief identifier was Cathy Cripps, associate professor from the Montana State University. Some forays were held at the same time as the lectures, which put some members in a quandary as to whether to go on the forays or attend the lectures, both of which were attractive options.

- Danny Barizo

Editorial Mushrooms with Sherry

THE BOLETE

In the world of mushrooms, some mushrooms have very little mystique and others have more than most. Take, for example, the russula- who bothers with it. Well, yes, some green ones (*Russula variata, R .virescens)* may be enjoyed, but the reds are the ones we usually find and most of us don't know which of them is edible-so we just mumble: "jadrr."

Does the morel have a mystique? It's very popular; it has its own season and many books have been written on where it "should" be found. It has festivals and its shape gives it a uniqueness that Americans can relate to and last, but certainly not least, lots of Americans love it.

I think what might give the morel any mystique is the effort you must make to find it. Even after you find "your" patch you really have to look to see a morel. I once marked a morel with a stick and still had trouble finding it the next day, though I found the stick easily. The morel seems to emerge in front of your eyes and when you spot it there's a moment of uncertainty. Anyway, the fuss over the morel is a bit overdone.

But the bolete, there's a mushroom that has something- a charisma-a cachet or a mystique. Maybe it's because the bolete's family includes the great Boletus edulis-perhaps the most celebrated of all wild mushrooms. We don't find this mushroom in the MAW area but in Europe it's their 'morel.' Each European country has its own name for the edulis and many Americans have learned these names.

Americans haven't established a popular name for this bolete- in the DC area we tend to call it by its binomial-*Boletus edulis*. New Englanders and Westerners, who do find it (though now it's thought that they are finding a different species) call it "king" and others refer to it as "porcini"-the Italian name for edulis.

The first time I encountered *Boletus edulis* was in Italy. Maria and I went with a group to Italy to hunt for mushrooms in Italy's Emilia - Romagna district. Out group left the Milan airport by bus and on our way to our hotel we stopped to refuel. We were hungry and found a vending machine that dispensed sandwiches and one of the sandwiches was made of sliced porcini and mayo. Maria still remembers how incredible tasty that sandwich was-at that time I didn't know a porcini from a portabella.

The edulis has many contenders in America for its crown. The California king bolete we bought from Oregon didn't contend. Tom Volk speaks of the white king bolete (*B barrowsii)*, found in the southern Rockies, and John Plischke likes the *B. separans.* But I feel certain that none compare to the European edulis

Another reason for the bolete's mystique might be that it is a pored mushroom in a world where the terrestrial, fleshy-type mushrooms have gills (it's now thought that the pores evolved from a gill structure). Polypores have pores but they digest dead stuff; the bolete has a mushroom shape and is ectomycorrhizal with both conifer and deciduous trees and, therefore, lives with the living.

The word "bolete' is not a scientific word-it refers to the many bolete-like mushrooms that belong to a variety of genera-over twenty-five, which include, in addition to the Boletus genus, the commonly found genera:: Leccinum, Tylopilus, Gyroporus and Sulius. All of these genera, including the Boletus genera, are in the Boletaceae family, except for the Sulius, which is in the same order as the others (Boletales).

You can usually tell that a mushroom is a bolete and you may be able to identify the genus of a bolete, but there are many disputes over the name of a particular bolete.There are many boletes that have not been definitively named and some have never been named. Many others

belong to a “species complex”- a phrase of evasive meaning which seems to refer to members of the same species that that have slightly different field characteristics or even different microscopic characters. Sometimes, with further study, a member of a species that is thought to be part of a complex is determined to be of a different species. Anyway, people who like to argue about these things are likely to have many disputes over which bolete they have found.

Then there are rules about eating bolete: Don’t eat those with red or orange pores and discard those which taste bitter and there’s the rule about not eating a bolete that turns blue when you bruise it.
All good rules I hasten to add-it is politically incorrect not to-but the one that is consistently true is “discard all unpleasant-tasting boletes.”

I don’t find many boletes; I find one or two here and there, often, but only three times have I found a memorable number of a particular bolete: they were all ones that turned blue and all were edible and one was “choice.” The choice one was the bicolor (*Boletus bicolor)*, found six years ago in large quanity, on the banks of a Pennsylvania forest road.

The bicolor is a beautiful mushroom to behold-so bold and solid, colored in soft reds and white, with a sunny yellow pore surface, often found with smaller ones standing in attendance with it. It’s more resistant to worms than many boletes, which is a substantial problem with boletes. Another of my bolete finds has occurred over the years in my backyard-the *Boletus rebellus*. The third big find was the *Boletus badius*, found seven years at Sugarloaf Mountain (Maryland). It was wormy.

I have read somewhere that worldwide there are over a thousand boletes; Michigan is said to have more than two hundred, but the state which writes the most about its boletes is California. William Roody, who was a member of our club, wrote, with others, a tome on boletes: *North American Boletes*. In another publication Bill said that one way of identifying a bolete is to focus on its stem. The stem holds the clue and much of the identification of a bolete is detective work

- Jim Sherry

Fungus Notebook

Common Name: Jack O'Lantern, False Chanterelle - The term Jack O'Lantern is an obsolete term for a man with a lantern - a night watchman. It is synonymous with i*gnis fatuus* (Latin for 'foolish fire'), one of the names for the luminous swamp gas sometimes called 'will-o'-the-wisp.' The name is more prominently associated with the carved and illuminated Halloween pumpkin. It refers here to the fact that the mushroom glows in the dark.

Scientific Name: *Omphalotus illudens* - The generic name is from the Greek *omphalos* which means navel, probably in reference to the long, tapering, umbilical stem. The specific name is likely from the Latin *illudere*, to mock or jeer, which is taken to mean deception in similar fashion to its association as the root for the word illusion. Also known as ***O. olearius*** and ***Clitocybe illudens***.

The jack-o-lantern-like glow of *O. illudens* known as bioluminescence is its most well-known and most controversial feature. The quantity and quality of its light is highly subjective to the age and habitat of the mushroom, to the mode of storage if picked and to the time and location of light observation. If you pick a young mushroom and observe it in a very dark place, the gills will glow with a faint green hue. Michael Kuo (mushroomexpert.com) declared the illumination as the "largest and most insidious conspiracy in the mycological world," though he subsequently issued a corrigendum that the degree of light was dependent on whether the mushroom was kept moist after picking. In the just published The Complete Mushroom Hunter, Gary Lincoff states that the "light can be so bright that you can read a newspaper" and that they have been used to mark a path in the woods at night. Bill Russell in the Field Guide to Wild Mushrooms of the Mid-Atlantic proffers that the glow can be sustained by storing the mushrooms in a paper bag in the refrigerator to retain the moisture and reduce the oxidation rate during the day and bringing them out for a light show at night. The more creative if outré David Aurora tells the tale in Mushrooms Demystified of a shipwrecked sailor who wrote his last message with the light from a jack-o-lantern using the ink from a shaggy mane and a pen made from an agaric, only to die of starvation because he was afraid to eat the mushrooms, certainly an apocryphal fabrication.

It is not likely that the Jack O'Lantern would have helped the sailor very

much, as they are widely, though not universally, listed as poisonous; the most commonly listed symptoms are vomiting and diarrhea for several days after ingestion. According to Tom Volk, the noted mycologist from the University of Wisconsin, "*Omphalotus olearius* won't kill you - it will just make you wish you were dead." However, Charles McIlvane tells a different story in One Thousand American Fungi, which was originally published in 1900 and was for many years the preeminent North American reference; it has a stated raison d'être for the promotion of eating toadstools (in McIlvane's words). His description concerning the Jack O'Lantern is that "strong stomachs can retain a meal of them" and that the taste is "rather saponaceous" which is to say soapy. Further, he quotes a certain H. I. Miller of Indiana who testifies that "I have several times eaten of it without other than pleasurable sensations."

However, the Jack O'Lantern is now considered to be one of the mushrooms most often implicated in poisoning. This is because of several factors: they are found in large quantities in clumps growing conspicuously on wood; they are very easy to find due their bright orange-yellow hue; they have an appealing aroma; and, most importantly, they bear a not inconsequential resemblance to among the most common of the choice edible mushrooms - the chanterelles (*Chantarellus spp*). The similarities are that they are about the same color, they both have the same basic cup or horn-like shape, and they can both be found growing on the ground. Chanterelles, however, can be distinguished by several features: they have ridges or folds instead of gills on the underside of the cap (pileus); they grow singly on the ground; the cap has a irregularly shaped or wavy edge; and they have an aroma that is similar to apricot. To someone with fungi field experience, the differences can be readily discerned, even from a distance. However, some Jack O'Lantern mushrooms grow on the ground drawing nutrients from tree roots and some chanterelles have ridges that look a lot like gills. And both mushrooms have a pleasant aroma.

There are three species of Jack O'Lantern that are distinguished mostly by their geographical dispersion, as they have fairly superficial physical differences. *O. olivascens*, which is indigenous to western North America, is described as having either a brownish or golden-olive color and *O. olearius* (from the Latin *olea* meaning olive tree) is native to Europe (and grows on olive trees) and is not distinguishable from *O. illudens*, the eastern North American variant. Since they all glow in the dark and they are all poisonous, it is not unreasonable to consider that the different species of Jack O'Lantern are really one and the same. There is also an Asian variant (*O. japonicus*) known in Japan as tsukiyotake that has been verified as a relative of the Jack O'Lantern.

The poisonous compounds of the Jack O'Lantern mushrooms have been isolated and identified as a family of sesquiterpenes (hydrocarbon terpene compounds that have a two to three ratio of primary radicals) that have been named illudens. Research conducted at the University of California in San Diego in the 1990's revealed that illudens are toxic to tumor cells in general with long exposure times and selectively to those of myelocytic leukemia as well as lung, ovarian and breast carcinoma cells with shorter exposure times. Since the naturally occurring Jack O'Lantern illudin compounds have been found to be too toxic for humans, a synthetic version is being developed. Irofulven (also known as HMAF of MGI-114) is being tested by MGI Pharma as a possible drug for the treatment of ovarian, prostate, liver, breast, lung and colon cancers.

Bioluminescence is not all that uncommon among plants and animals; it is estimated that about 90 percent of deep-ocean marine life produce some light. The mechanism of light production is chemical and involves a reaction between a type of small molecule pigment named luciferin and oxygen in the presence of an enzyme called luciferase. The names of both the pigment and the enzyme derive from lucifer, which means "light-bearer" in Latin and originally was used to refer to the appearance of the planet Venus in the morning sky. Its association with the devil in Christian parlance is based on a passage in the book of Isaiah that refers to a "day star" fallen from heaven - a fallen angel. The oxidation of luciferin to produce light is nearly 100 percent efficient in that it produces almost no heat and is accordingly called cold light. The use of bioluminescence in plants and animals is generally thought to involve either protection or survival. However, for the fungi and bacteria the purpose is not so clear. It is thought that it may have evolved to remove oxygen when it may have been harmful to the organism. Another theory for fungi is that it attracts nocturnal insects that assist in spore dispersal. - William Needham


IT's Boletus Projec
No! BoleTus ZELLERi
"BUT MY NAME IS FRED!!"
Jim Sherry

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