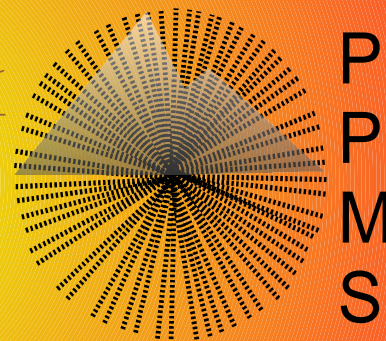


Spore-Addict Times



Pikes Peak Mycological Society

The Newsletter of the Pikes Peak Mycological Society

1974 – 2009

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ISSUE 7

October 2009

MONTHLY MEETING:

WHEN? Monday, October 26, 2009 – The fourth Monday of the month.

WHAT TIME? 6:30 pm; The eating will come to order at 7:00 pm.

WHERE? Pikes Peak National Bank, 2401 W. Colorado Ave. (across from Bancroft Park). Enter at the door on Colorado Ave., just west of the bank door. There you will find stairs and an elevator. You may use either. The room is on the second floor near the head of the stairs.

WEBSITE: <http://www.pikespeakmushrooms.com/>

PROGRAM:

Our end of year program will be the traditional pot luck dinner and celebration of fellowship. There are no assigned dishes, so bring a main dish, salad, a dessert or whatever you wish to share with other members. Drinks will be provided, but please bring your own paper plates, flatware, and serving utensils.

President's Notes: by Judy Willey

I can hardly believe it is the end of summer and mushrooms. Then, low and behold, I found a salmon-colored spore mushroom in the Garden of the Gods yesterday on a warm afternoon. It goes to show that the mushrooms are hardy to get through that faux-winter we had. Needless to say, the weather this year has been different. I can't wait to see what winter has in store for us.

Speaking of mushrooms, I took the split stinkhorn egg from last month's program home to bury and then noticed that it was growing in the jar. I should have left it in the jar to see if the jar would break, as I have read on two occasions in my pursuit of knowledge of the stinkhorn. I did bury it and it grew although in separate directions. Life goes on.

I look forward to our next and last meeting. I am planning on bringing a squash and mushroom soup. I hope the weather cooperates for us to have a good turnout. This will be the last time we may see one another for many moons. Speaking of moons, December is having two full moons, a blue moon month, December 1 and 31, just in time for New Year's!

Search for Officers:

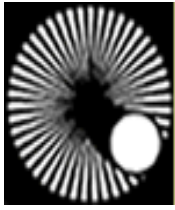
A nominating committee will probably be formed at the October meeting. An active club requires participation from members. These positions don't require a great deal of time or effort (with the possible exception of the newsletter editor...) If you are contacted by a member of the nominating committee, please step up and give some of your time. If you would like to volunteer for any of the club officer positions please contact one of the committee members above.

New Logo Contest – A bust

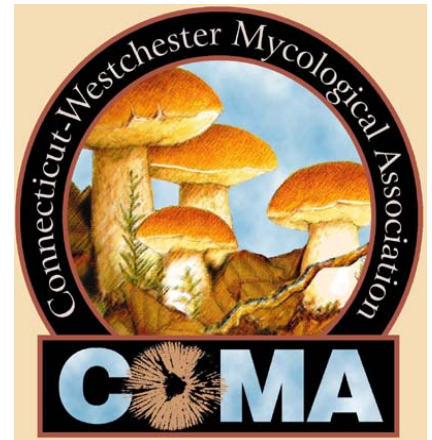
Not one single entry was received for the club's new logo contest. This leaves us with a few options:

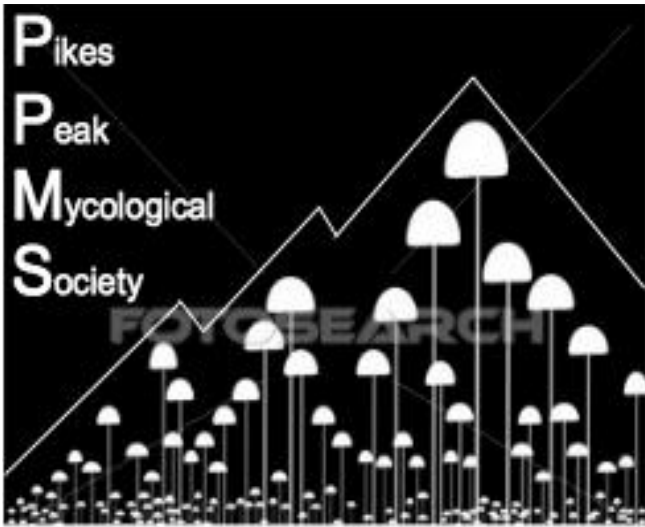
1. Reinstate the old logo.
2. The newsletter editor will simply update or modify the newsletter banner every year to suit himself. This is the path of least resistance, but will not yield a viable logo.
3. Extend the contest over the winter months. This way you will have all winter to conjure a new logo for the club.

Here are a few ideas from other clubs or organizations - maybe they will stoke the creative fires. See my attempt on the banner above.



Colorado Mycological Society
Stalking the Wild Mushroom





Very stylish, and not free.



Logo for Kauai Fungi



Logo for Shanghai Edible



This is very simple and can be modified without much effort.



Yikes!

Bits & Pieces:

Freaky findings shed light on evolution of luminescence in nature

By Jeanna Bryner



As if teensy night-lights were dangling from tree trunks and branches, glow-in-the-dark mushrooms illuminate the forests across the globe. Now, scientists have discovered several species of such radiant 'shrooms.

The freaky findings, reported today in the journal *Mycologia*, increases the number of aglow mushroom species from 64 to 71, shedding light on the evolution of luminescence in nature.

the darkness, and you'll see them glow very nicely."

Here are some of the highlights:

Found on sticks in an Atlantic forest habitat, *Mycena luxaeterna* is tiny, each cap spanning 0.3 inches (8mm) in diameter, with jelly-like stems. (The species' name, which means "eternal light," was inspired by Mozart's "Requiem.") One psychedelic-looking mushroom, called *Mycena silvaelucens*, was found on the bark of a standing tree at the Orangutan Rehabilitation Center in Borneo, Malaysia. Each mushroom cap measures just over a half inch (18 mm) in diameter. So-called *Mycena luxarboricola* was collected from the bark of a living tree in an old growth Atlantic forest in Paraná, Brazil. Each cap measures less than 0.2 inches (5 mm) in



Cassius V. Stevani / Chemistry Institute, University of Sao Paulo A newly identified luminescent fungus called *Mycena luxaeterna* was discovered in a forest in Sao Paulo, Brazil. The mushroom caps are tiny, under a half inch (8 mm) in diameter and the stems have a jelly-like structure. The glow is easier to observe at night (right).

The newly identified mushrooms, which emit a bright, yellowish-green light 24 hours a day, were found in Belize, Brazil, Dominican Republic, Jamaica, Japan, Malaysia and Puerto Rico. They include four species new to science and three new reports of luminescence in known species.

"If daylight was not so bright you could see them during the day, but the greenish-yellow light does not stand out against daylight so we cannot visualize them," lead researcher Dennis Desjardin of San Francisco State University told LiveScience. "But take them into a dark room at any time of day, and wait until your eyes adjust to

diameter. (The species' name, which means "perpetual light," was also inspired by Mozart's "Requiem.")

Three quarters of [glowing mushrooms](#), including the newly identified species, belong to the *Mycena* genus, a group of mushrooms that feed off and decompose organic matter.

"What interests us is that within *Mycena*, the luminescent species come from 16 different lineages, which suggests that luminescence evolved at a single point and some species later lost the ability to glow," Desjardin said.

He and other scientists still have many

questions about such glow-in-the-dark fungi, including how and why they light up. They know the luminescent process is similar to that of glowing bacteria and other luminescent organisms. For instance, the glowing involves a luciferin-luciferase mediated reaction that emits light in the presence of water and oxygen. But they are not sure of the exact chemical compounds involved in the reaction.

As for why, Desjardin says some fungi glow to lure in nocturnal animals that aid in the dispersal of the mushroom's spores, which are similar to seeds and are capable of growing into new organisms. Fungi, along with plants, animals and protists are considered eukaryotes by biologists, meaning "true kernel," due to the packaging of the genome into the membrane-bounded compartment called the nucleus. (Simple bacteria and archaea, which lack a cell nucleus, are considered prokaryotes.)

This research was supported by the National Science Foundation and the National Geographic Society.

National Nutrient Database Updated to Include Vitamin D Values

The next time you run nutritionals using the government's database, you might be pleasantly surprised that some of your favorite foods seem to have received a nutrient boost, virtually overnight.

The addition of vitamin D values to nearly half of all food entries - including mushrooms, the only fruit or vegetable with natural vitamin D - topped the list of important updates made to the United States Department of Agriculture's (USDA) release 22 of the National Nutrient Database for Standard Reference. The database is available for anyone to search or download from the Nutrient Data Laboratory Web site and can be found here:<http://www.ars.usda.gov/nutrientdata>.

Study Finds Breast Cancer Fighting Properties within Mushrooms

A recent study published in the *International Journal of Cancer* found evidence supporting that mushrooms have breast cancer-fighting properties.

This study was conducted at the University of Western Australia in Perth. The study included

2,018 Chinese women. Half of the women were diagnosed with breast cancer. After adjusting for lifestyle patterns such as education, smoking, overeating, and exercise levels, the researchers discovered that the women who ate at least 10 grams of button mushrooms per day were 64 percent less likely to develop breast cancer. Dried mushrooms also significantly reduced the risk, but not as much as fresh mushrooms.

A substance found in mushrooms called linoleic acid may be the key to the reduced risk of breast cancer. Linoleic acid inhibits aromatase activity. Aromatase is an enzyme that helps the body produce estrogen. High estrogen levels are a well-known risk for breast cancer. As many breast cancers depend on estrogen to grow, the aromatase-inhibiting actions of mushrooms may be responsible for the reduced risk.

Aromatase inhibitors are used as treatment to prevent certain types of breast cancers from recurring. Examples of these drugs are Arimidex, Femara, and Aromasin.

This study also revealed that women who combined a mushroom diet with regular consumption of green tea saw even greater benefits: a reduced risk of almost 90 percent! This well-known antioxidant and anti-inflammatory helps prevent breast cancer by decreasing the amount of estrogen a woman's body produces. (Like cholesterol, estrogen has a good kind and a bad kind -- and an excess of the bad can promote breast cancer.)

In addition to the theory of the benefits of linoleic acid, mushrooms have been found to strengthen the body's immune system and also possibly block tumor development. In several lab studies, mushroom extract has been shown to actually stop the growth of breast cancer cells. There is an ongoing study examining whether or not taking a mushroom extract twice a month can prevent the recurrence of breast cancer. Earlier studies have suggested that the traditional medicinal mushroom, *Phellinus linteus*, hampers the growth of skin, lung, and prostate cancer cells.

In another study conducted by Dr. Shiu-an Chen of the Beckman Research Institute of the City of Hope in Duarte, California, it was found that in laboratory and animal experiments, mushroom extracts reduced the proliferation of breast cancer cells. This study also surmised that it is the linoleic acid that may be responsible for the anti-cancer effects.

What's Cookin'

MUSHROOM AND FONTINA QUICHE

- 1 refrigerated pie crust (half of 15-oz. pkg.)
- 2 tablespoons (1/4 stick) butter
- 2/3 cup chopped shallots (about 3 medium)
- 5 cups sliced assorted mushrooms (such as chanterelle, stemmed shiitake, oyster, crimini, and button; 12 to 14 oz.), large mushrooms halved
- 4 large eggs
- 2/3 cup half and half
- 1/3 cup whole milk
- 1/2 teaspoon salt
- 1/2 teaspoon freshly ground black pepper
- 1/2 teaspoon freshly grated or ground nutmeg
- 1 1/2 cups (packed) coarsely grated Fontina cheese (about 7 oz.), divided

Preheat oven to 450. Unroll crust completely. Press firmly onto bottom and up sides of 9-inch-diameter deep-dish glass pie dish. Bake until light golden brown, pressing on sides of crust with back of spoon if crust begins to slide down sides of dish, about 17 minutes. Reduce oven temperature to 325 degrees. Meanwhile, melt butter in heavy large skillet over medium-high heat. Add shallots; saute until beginning to soften, about 2 minutes. Add mushrooms; sprinkle with salt and pepper and saute until mushrooms are tender and beginning to brown, about 8 minutes. Transfer to plate; spread out to cool slightly. Whisk eggs, half and half, milk, 1/2teaspoon salt, 1/2teaspoon pepper, and nutmeg in large bowl to blend. Stir in 1 cup Fontina cheese and sauteed mushrooms. Pour filling into crust. Sprinkle remaining 1/2 cup cheese over quiche.

Bake quiche until puffed, golden brown, and just set in center, about 45 minutes. Cool 30 minutes. Cut into wedges. Makes 8 servings.



Fettuccine & Roasted Mushrooms

- | | |
|----------|-------------------------------|
| 1 oz. | Olive oil |
| 2 Tbsp | Butter |
| 1 1/2 oz | Yellow Onion (Julienne) |
| 1/2 Tbsp | Garlic (sliced) |
| 1/2 oz. | Pancetta |
| 4 oz. | Pulled chicken (oven roasted) |
| 3 oz. | Portobello Mushrooms |
| 8 oz. | Fettuccine pasta |

Gruyere Cream Sauce:

- | | |
|------------|----------------|
| 4 oz . | White Wine |
| 6 oz. | Heavy Cream |
| 3 oz. | Gruyere Cheese |
| 1 Tsp | Fresh thyme |
| 1 1/4 Tbsp | Kosher salt |

1. First make the sauce. In a sauce pan, bring the white wine to a boil and reduce by half, add the heavy cream.
2. Bring the mixture to a boil and add the cheese while whisking to melt. Add your herbs and salt. Allow mixture to reduce until thick.
3. In a sauté pan, heat the olive oil. Add the yellow onions, garlic, and Portobello mushrooms. Cook until vegetables begin to soften and garlic is golden brown.
4. Add pancetta and chicken and continue to cook until onions are translucent and mushrooms are cooked through.
5. Add the Gruyere Cream sauce and bring mixture to a simmer. Add your hot noodles and toss together.

The Pikes Peak Mycological Society, a nonprofit organization dedicated to the advancement of mycology, publishes Spore-Addict Times monthly from April-October. Membership is open to anyone wanting to study mycology. Annual dues are \$15 for individual and family memberships. **Submission of ideas, articles, reviews, letters, artwork and recipes are welcome.**

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September's Mystery Mushroom was Phallus impudicus

MYSTERY MUSHROOM

By Jack Richards

I can be found in large clusters and rings. around cottonwoods and rarely aspen. Abundant in the fall, usually half buried under leaves in loose sandy soil. I am dingy pinkish brown with whitish wavy margins, white stalk and gills, staining red brown. My cap is 3-12 cm broad at maturity flaring and irregular. My surface is slightly sticky-moist. my gills are white staining red brown, close, moderately narrow, edges even. Odor and taste of fresh meal.

Who am I?

The Spore-Addict times is the official newsletter of the Pikes Peak Mycological Society (PPMS) and is published monthly April – October. All articles appearing in this newsletter may be freely reproduced, unless otherwise noted, for use in other newsletters provided the source and author are acknowledged. We consider this to be a reciprocal agreement for clubs that send their newsletter to us unless we are advised to the contrary.

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