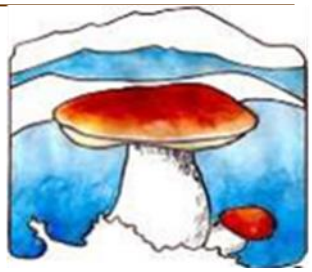
# Spore-Addict Times



The Newsletter of the Pikes Peak Mycological Society 1974-2013

**May 2013**

**Volume XXXVIIII Issue 2**

**Monthly Meeting**

**When?**

**Monday May 27th**

**The 4th Monday of the month (Apr-Sept)**

**Mushroom Identification 6:30-7pm**

**Meeting comes to order at 7 pm**

**Where?**

**Bear Creek Park**

**Administration Building**

## In this issue:



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## Foray Reports

Rain! Have monsoons arrived early this year? Snow still covers Pikes' Peak and keeps coming; a great start to the season.

**May 11, 2013**
**Beaver Creek**
**Submitted by**
**Frieda Davis**

Aericha Burroughs

About 20 members gathered at the Bear Creek Adm Building on Saturday, May 11, 2013 prior to a foray to Beaver Creek. You would think that this was a bird-watching group since everyone was looking up to admire four owls which were perched high up in a tree.

This was something new for us mushroomers since "looking down" is what we normally do.

Encouraged by recent rains, hopes were high to find an abundance of morels and Pleurotus. It seems that the earth was still a bit too cold for most of them.

Here is a list of what has been found:
5 golden morels
5 black morels
*Agaricus campestris*
*Verpa conica*
*Panaelus semiovatus*
*Coprinus nivea*
It was a wonderful day and it was so great to see so many PPMS members.

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## May Presentation

### An Overview of Gilled mushrooms on Wood

The importance of fungi as decomposers is a well known fact. If it wasn't for wood rotting fungi, forests would be strewn with durable remains of dead trees. Frieda Davis will examine some of these wood-rotters which are found in Colorado.

Photo Courtesy Mike Essam

## Mystery Mushroom

April's Mystery Mushroom was
*Pleurotus pulmonarius*
By Lee Barzee

I'm white spored, not too small. My cap is usually an inch and a half in diameter, pale buff to dull tan. My gills are light colored and only slightly decurrent, not as typical as those of most members of my genus. I am a montane to sub alpine species found near Engelmann spruce, often near receding snowbanks. My species name translates to a distinctive characteristic found at my stipe base. What is my name?

Meeting Location Bear Creek Park Administration Bldg Driving Directions I-25, Exit 141. Take HWY 24 (Cimmaron) west to 21st Street. Turn south onto 21st Street and proceed to West Rio Grand Avenue. From 21st Street turn onto Rio Grande and drive a few hundred feet to Creek Crossing. Turn right. Right after the bridge turn right, to the Administration Building. Bear Creek Regional Park will be the new location for our meetings each month! We will gather in the meeting room. Click here: map

Meetings start at 6:30pm with mushroom identification. We will end about 9:30 with refreshments after the end of each month's program. The new location has a mini-kitchen with sink in the meeting room.

Meetings are the 4th Monday of each month:
May 27th
June 24th
July 22nd
August 26th
September 23rd
October TBD for Pot Luck

## Mycelia Communication Systems

Scientists in the United Kingdom at the University of Aberdeen, James Hutton Institute and Rothamsted Research group discovered mycelia can provide a communication network between plants in which chemical signals travel to warn neighboring plants of aphid attacks.

In the study, mycorrhizal fungi were introduced to the soil of some plant collections, while control groups were kept free of fungi. Then, a limited number of plants were exposed to aphids. The plants being attacked by aphids released chemical signals that both attracted wasps (which eat aphids) and sent chemical messages to other plants, which triggered other plants to produce their own chemical barriers.

The idea that plants "communicate" by sending chemical messengers is not new, but the understanding that these chemicals, in part, travel along mycelia to reach the next plant is new. This "conduit for signaling between plants" is a surprising enhanced feature of the mycelia system.

1. Babikova, Zdenka, et.al. Underground signals carried through common mycelial networks warn neighbouring plants of aphid attack. Ecology Letters. 9May2013 Online. DOI: 10.1111/ele.12115. Accessed 15May2013.

Photo courtesy of Mike Essam

Martha Zenger at the May foray

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## May 15, 2013
## Submitted by Esther Price

On Wednesday, May 15, 2013, four PPMS members (Christa Howard, Iona Lacy, Eve Hart and Esther Price) searched Beaver Creek State Wildlife Area, again. We began at the upper trail head, spread out, and hunted through tall grass; plenty of moisture—three small, blond morels and one young, fresh fruiting of *Pleurotis ostreatus* were found. At the middle stop (the bridge) as we went down to the first spot, it began to rain, and we all decided to go home. The rain on the highway was actually heaviest. We were home by 3:30pm with pictures of many, many morels (courtesy of Christa) in our heads!

Photo Courtesy
Aericha Burroughs

## Mushrooms Can Provide as Much Vitamin D as Supplements

from www.sciencedaily.com

Apr. 22, 2013 — Researchers from Boston University School of Medicine (BUSM) have discovered that eating mushrooms containing Vitamin D2 can be as effective at increasing and maintaining vitamin D levels (25-hydroxyvitamin D) as taking supplemental vitamin D2 or vitamin D3.

These findings will be presented at the American Society for Biochemistry and Microbiology annual meeting in Boston on April 22 and also concurrently appear in Dermato-Endocrinology online open access.

Vitamin D is crucial for good bone health and muscle strength; adequate amounts help the body maintain bone density reducing the risk of fracture, osteomalacia, osteoarthritis and osteoporosis. The nutrient also plays an integral role in modulating the immune system to help fight infections like the flu and reduces the risk of many common diseases including cancer, cardiovascular disease, depression and diabetes.

The study to be presented consisted of 30 healthy adults who were randomized to take capsules containing 2000 International Units (IU) of vitamin D2, 2000 IU of vitamin D3 or 2000 IU of mushroom powder containing vitamin D2 once a day for 12 weeks during the winter. Baseline serum 25-hydroxyvitamin D [25(OH)D], a measure to determine a person's vitamin D status, were not significantly different among the groups. The serum 25(OH)D levels among the three groups gradually increased and plateaued at seven weeks and were maintained for the following five weeks. After 12 weeks of the vitamin D supplements, serum 25(OH)D levels were not statistically significantly different than those who ingested 2000 IU of vitamin D2 in mushroom powder.

"These results provide evidence that ingesting mushrooms which have been exposed to ultraviolet light and contain vitamin D2, are a good source of vitamin D that can improve the vitamin D status of healthy adults. Furthermore we found ingesting mushrooms containing vitamin D2 was as effective in raising and maintaining a healthy adult's vitamin D status as ingesting a supplement that contained either vitamin D2 or vitamin D3," said Michael F. Holick, PhD, MD, the principal investigator of the abstract.

The study is available online concurrently in the journal Dermato-Endocrinology. "These results confirm other studies that have demonstrated that ingesting vitamin D2 either from fortified orange juice, a supplement or a pharmaceutical formulation were all capable of increasing total circulating 25(OH)D concentrations for at least 3 months, and up to 6 years," added Holick, the senior author of the study.

According to Holick and his coauthors, ingesting mushrooms containing vitamin D2 can be an effective strategy to enhance a persons' vitamin D status. "The observation that some mushrooms when exposed to UVB light also produce vitamin D3 and vitamin D4 can also provide the consumer with at least two additional vitamin Ds," he added.

In a second poster presentation, the researchers were able to determine how mushrooms make vitamin D2 and found that the processes similar to what occurs in human skin after sun exposure. They were also able to show that mushrooms not only produce vitamin D2, but can produce vitamin D3 and vitamin D4.

"Although it has been previously reported that mushrooms have the ability to produce both vitamin D2 and vitamin D4, through our own research we were able to detect several types of vitamin Ds and pro-vitamin Ds in mushroom samples including vitamin D3 which is also made in human skin," added Holick.

According to the researchers, these abstracts as well as the online published study, demonstrate that mushrooms are another good natural food source for vitamin D that can easily be found in ones' local grocery store.

Boston University Medical Center (2013, April 22). Mushrooms can provide as much vitamin D as supplements. *ScienceDaily*. Retrieved May 21, 2013, from http://www.sciencedaily.com-/releases/2013/04/130422132801.htm

# Spore-Addict Times

*The Spore-Addict Times, the official newsletter of Pikes Peak Mycological Society (PPMS), is published monthly from April to September.* 

The Pikes Peak Mycological Society is a nonprofit organization dedicated to the advancement of mycology. Membership is open to anyone wanting to study mycology. Annual dues are $20 (additional $5 fee for a printed newsletter Apr to Sept) for individual and family memberships. **June will be the final newsletter if not paid. Please pay at the meeting or Mail Payment to:**

PPMS C/O Frieda Davis, 10 Swallow Drive, Colorado Springs, CO 80904

Submissions of ideas, articles, letters, artwork, and recipes are welcome. Photos and stories may also be submitted to be posted on the website.

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