



# THE KEYSTONE CAP

Newsletter of the Eastern Penn Mushroomers  
www.epennmushroomers.org

Autumn 2023

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## **President's Message** by Tom Warman

Can I eat that?

How many times have you heard that question, generally from a novice, about a specimen found on a foray? Personally, I don't understand the fascination with eating wild mushrooms, but I am all for it as it seems to drive a good portion of our club's membership.

In truth, there are several answers to that question, some valid and some tongue-in-cheek.

Can I eat that? You can eat anything at least once.

Can I eat that? I only eat mushrooms that my Italian grandmother says are safe to eat.

Can I eat that? I only eat mushrooms that John Dawson says are safe to eat.

Can I eat that? I only eat mushrooms that a true expert says are safe to eat.

With such an interest in fungus composition, the club wants to reinstate tastings of fungal recipes and samples at our winter meetings. We are looking for one or two members to coordinate the tastings at the three winter meetings, as well as members who are willing to share their recipes and cooking skills. The coordinators will pretty much have free rein to set things up as they wish. Please contact me directly if you are interested.

Until next time,

Tom

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## **Mushrooms: A Remedy for Aging?** submitted by Roseann Sachs

My professional society, the American Chemical Society, recently offered a webinar entitled "ERGO: A Potential Answer in Mushrooms to Healthy Aging?" It seemed like a great talk to attend, and to share with all of you!

ERGO refers to ergothioneine. Ergothioneine is a naturally occurring amino acid. Amino acids are the building blocks of all proteins and enzymes in our bodies. Twenty of them are essential to human health. Humans can make 11 of these, but we must obtain the others from our diet. Ergothioneine is NOT one of the 20 essential amino acids. It was discovered in 1909 in ergot fungus, a group of fungi belonging to the Claviceps genus. These fungi are parasitic to rye and related plants and can cause the disease ergotism in livestock that feed on affected grain.

Nevertheless, ergothioneine is a powerful antioxidant, and in small quantities can help to eliminate oxidative damage in humans. Many diseases are now attributed to oxidative stress, including cancer, Parkinson's disease,

Alzheimer's disease, multiple sclerosis and aging, in a broad sense. Ergothioneine is both concentrated and highly bioavailable from mushrooms. This means that we can easily absorb the amino acid after consumption of the mushrooms.

## **SAVE THE DATES**

Mark your calendars so you don't miss these FUNgi activities.

### **EPM 2023 Autumn Forays**

Saturday, October 14, 2023

Saturday, October 28, 2023

Saturday, November 4, 2023

### **Joint Foray at Mt. Alto!**

November 4, 2023

Watch your email inbox for notification of additional events.

## **FUNGI IN THE NEWS**

### **Mycelium Buildings!**

<https://www.fastcompany.com/90925803/this-wild-building-was-grown-from-fungus-and-fabric>

New advances in biofabrication are showing that buildings can also grow.

### **Making Mushroom Paper**

[https://namyco.org/paper\\_from\\_fungi\\_basics.php](https://namyco.org/paper_from_fungi_basics.php)

A guide to making your own paper out of mushrooms!

### **Avoiding the AI**

<https://www.theguardian.com/technology/2023/sep/01/mushroom-pickers-urged-to-avoid-foraging-books-on-amazon-that-appear-to-be-written-by-ai>

Mushroom pickers urged to avoid foraging books on Amazon that appear to be written by AI. Thoughts?

A 2006 study showed that the highest concentrations of ERGO are found in shiitake, oyster, maitake and king oyster mushrooms, and that these concentrations are 13-30 times higher than in any other food source (Int. J. Medicinal Mushrooms, 2006, 8:215-222 and J. Nutr. Sci., 2020, 9:e52:1-5).

In the past few years, researchers have begun to call ergothioneine the "longevity vitamin." In multiple studies it has been shown that blood plasma levels of ergothioneine are always higher in healthy persons than in persons with any of a number of age-related diseases (Annu Rev Food Sci Technol. 2023, 14:19.1-19.23). Ergothioneine has also been shown to decrease the risk of cardiovascular disease (Heart, 2020, 106:691-697). Other researchers have correlated ERGO consumption to life expectancy, Parkinson's and Alzheimer's death rates across several European countries, Japan and the US. In these studies, the Japanese consume the most ergothioneine and have the lowest disease rates in all categories (Nutr Today, 2019, 54:16-22). The United States falls at the other end of the spectrum!

Finally, this talk ended with a connection between human consumption of ERGO from grains in mycorrhizal relationships with fungi. It was shown that reduced tillage, cover cropping, crop rotation, reduced pesticides and reduced fertilizer use all contributed to higher levels of ERGO in crops such as corn, soybeans and oats.

So, in conclusion, my fellow mycologists, forage on and eat up!

**Women in Mycology** article submitted by Karen Beall / summarized by Ariane Leitzel

In the nineteenth century, there were a plethora of women quietly contributing to the science of mycology. "The Fungi-Mad Ladies of Long Ago" shares a brief history of some of the most impressive feminine contributions. While she gained most of her notoriety for her work as a children's writer, Beatrice Potter was actually a very talented illustrator who contributed two hundred and fifty stunning scientific illustrations, and she was one of the first people in England to cultivate mushrooms from spores! Until the twentieth century, botanical illustrators documented flora by hand. At this time, studying fungi was considered unladylike and women were unwelcome in the professional realm; the scientific establishment largely ignored these women despite their valuable professional contributions. Nevertheless, several notable women pressed on and provided us with some of the most impressive botanical illustrations of fungi. Some of these women wanted their work to be accessible and appeal to a broad audience that included mothers who'd in turn teach their own children informally about natural history. They wanted to make significant contributions to their nascent field and simultaneously promote scientific study outside and beyond the rarified environment of elite institutions.



While many of these women hailed from England, Mary Elizabeth Banning was Maryland’s first mycologist. Banning was the third woman in history to identify fungal species new to science. She spent twenty years creating *The Fungi of Maryland*, North America’s “most comprehensive illustrated record of the day. In this, she beat several male authors by a decade or less, including mycologist George Atkinson and naturalist William Hamilton Gibson.

Banning accompanied her one hundred and seventy-five stunning watercolors with notes on mushroom classification, appearance, and where she encountered them.” While she may not have gotten the support she deserved at the time, we can remember Mary Elizabeth Banning always when we find *Hypomyces banningii*, named in her honor.

<https://daily.jstor.org/the-fungi-mad-ladies-of-long-ago/>

### A Tribute to Eva Abraham

The Eastern Penn Mushroomers Club was so fortunate to have been graced with the company of Eva. A former club president, Eva was beloved by many of us. She was a sharp-eyed collector who found many interesting fungi on our forays, and she often brought delicious mushroom dishes to our winter meetings. Her pickled mushrooms (especially *Lactarius indigo*) were especially memorable. Eva’s enthusiasm for fungi forays was palpable even into her 90s, her excitement for mushrooms was truly contagious. Eva and her husband escaped from Hungary to Austria before settling in Abington, PA. A retired nurse, Eva stayed active at Briar Bush Nature Center, Militia Hill Birding/ Raptor count and Eastern Penn Mushroomers, where she was president from January 2014-2016. She enjoyed crocheting, sewing, watercolor painting, pottery, gardening, canning, cooking, bird watching and mushroom foraging. She spent many vacations visiting with family in Hungary and getting to know her expanding extended family. She was actively involved with the Philadelphia and Vicinity Hungarian Sports Clubs and enjoyed many events, including supporting the scout troops by cooking for summer camps, playing cards on Tuesdays at the club with her friends and helping with Magyar Nap activities.



The memories we made with Eva will always be held dear, and her presence with EPMC will truly be missed.

### Mushrooms from Head to Foot by John Dawson

Learning the Latin names of fungi is a stumbling block for many mushroomers. But most mushrooms don’t have common names, so there really is no alternative. How, then, to go about learning Latin names efficiently?

One good way is to learn a few basic Latin combining forms, such as suffixes and prefixes; and a useful list of them can be found near the back of David Arora’s *Mushrooms Demystified*. One can then focus on learning lists of names that all involve the same form. As an example, I’ve compiled the lists below, based on the forms –cybe, -cephal-, and –ceps, all meaning ‘head’ or ‘cap’, and –pes, meaning ‘foot’ or ‘stipe’.

Note that both the generic name and the specific epithet may be of such forms: one example is *Clitocybe brunneocephala*, a mushroom with a sloping brown cap.



## Head

<i>Agrocybe</i>	Field head
<i>Calocybe</i>	Beautiful head
<i>Clitocybe</i>	Sloping head
<i>Conocybe</i>	Conical head
<i>Dermocybe</i>	Skin head
<i>Inocybe</i>	Fiber head
<i>Psilocybe</i>	Smooth head
<i>Rhodocybe</i>	Red head
<i>Simocybe</i>	Flattened head
<i>Tephrocybe</i>	Ash-colored head
<i>anthocephala</i>	flower head
<i>brunneocephala</i>	brown head
<i>iocephala</i>	violet head
<i>pyrrhocephalus</i>	flame-colored head
<i>rugeocephala</i>	wrinkled head
<i>sphaerocephalum</i>	spherical head
<i>albiceps</i>	white head
<i>angusticeps</i>	narrow head
<i>badiceps</i>	reddish-brown head
<i>Claviceps</i>	Club-shaped head
<i>Cordyceps</i>	Swelled head
<i>echinoceps</i>	spiny head
<i>rugosiceps</i>	wrinkled head
<i>tenuiceps</i>	thin head

## Foot

<i>auripes</i>	golden foot
<i>brevipes</i>	short foot
<i>caerulipes</i>	blue foot
<i>cavipes</i>	hollow foot
<i>cepaestipes</i>	onion foot
<i>chromapes</i>	brightly-colored foot
<i>clavipes</i>	club-shaped foot
<i>daucipes</i>	carrot foot
<i>flavipes</i>	yellow foot
<i>funosipes</i>	smoky foot
<i>glabripes</i>	hairless foot
<i>lagodipes</i>	rabbit foot
<i>longipes</i>	long foot
<i>maculatisipes</i>	spotted foot
<i>nigripes</i>	black foot
<i>niveipes</i>	snow foot
<i>picipes</i>	pitch-black foot
<i>pulcherripes</i>	beautiful foot
<i>punctipes</i>	pointed foot
<i>retipes</i>	netted foot
<i>spongiosipes</i>	spongy foot
<i>strictipes</i>	straight foot
<i>tenuipes</i>	thin foot
<i>validipes</i>	robust foot
<i>variipes</i>	varied foot
<i>velutipes</i>	velvet foot
<i>ventricosipes</i>	swollen foot

Some of the names above might even be useful in other contexts. For example, we all know people whose heads are a bit swollen. So we might say, “He’s a real *Cordyceps*”, thereby indicating to those in the know that the person is not only conceited, but a parasite! Or how about *Dermocybe* as an epithet for a motorcyclist with tattoos and shaven head?

### A Bit about Black Trumpets submitted by Ariane Leitzel

In August I had the opportunity to spend some time camping with longtime friends along the borderline of Perry and Snyder counties. What made this trip even more special was the variety of mushrooms we were able to find! *Craterellus fallax* or Black Trumpets littered the forest floor, I had never felt so lucky in my life!



Finding these *Craterellus fallax* encouraged me to do some research into the beautiful and delicious mushrooms. In my research I found that Black Trumpets appear in large groups (verified) under deciduous trees and damp slopes, often in the accumulated litter layer that houses its mycelium (bingo). It is said, however, that the Black Trumpets do not grow every year. Over a decade, we may see two to three annual harvests. My luck accumulates! One place you may likely find them growing is under Beech trees, as this is their preferred habitat.

Also known as the Horn of Plenty, *Craterellus fallax* has a fine texture. When cooking, it develops fruity aromas and an umami-like flavor. Due to its high glucose content, the Horn of Plenty is a bit sweeter than some of its other forest floor friends, perhaps why it is so favored.

Most of us like things a little sweet! The Black Trumpet is also a good source of highly assimilable proteins, and rich in iron and zinc, another added bonus.

## 2023 Helen Miknis Memorial Recap submitted by Niles Lavin

The Club hosted its annual memorial foray in memory of one of the club's long-time members and mushroom enthusiast. We gathered for a fantastic fungal weekend deep in the Micheaux and Caledonia forests. Penn State Mont Alto provided lodging and fine cuisine for the folks who signed up for the full experience. Rainfall had been par excellence leading up to the event so the species list that was produced and the presentation for species identification on Sunday was a very informative and interesting affair. Thank you Paula and Dave for the hard work of identification and presentation, and to Paula a double thanks for the excel spreadsheet species list!



We found some very bizarre specimens, and I for one found a bicolor bolete that smelled so much like beef bouillon that its status as bicolor bolete was extremely questionable. Dave sent a piece off to Utah for DNA sequencing! The variety of edible species foraged was uncanny (speaking of beef bouillon) and many people took edible varieties home with the intention of making deliciously discussed meals from them.

We enjoyed the virtual tour of the fungi of Dave Wasilewski's Williamsport area property for entertainment on Saturday evening. John and Cheryl Dawson arrived with a laboratory and research library in tow. Some of us were up burning the midnight oil by the light of microscope! Sunday morning came too fast, and the vast array of mushroom species were showcased to behold. There were several contest winners with fun (and fungal) prizes. Thank you to: George Morrison and Mike Mettler for coordinating the event. We hope to see everyone next year! P.S. A Joint Foray with the D.C. and Central PA Mushroom Clubs will be held at Mont Alto SP (meet at the pavilion) 11/4/2023 10a-3p. Tom McCoy and Kevin Hoover of the D.C. and Central PA Mushroom Clubs (respectively) will be giving us presentations and we will have several foray locations to choose from!

## Autumn Forays Schedule

### 10/14/2023 – Memorial Lake State Park – Fort Indiantown Gap

**GPS:** (40.423205, -76.592559)

**Directions:** from Harrisburg: Follow I-81 N to PA-934 N in East Hanover Township. Take exit 85B from I-81 N - 17 min (18.1 mi)  
Take Fisher Ave, Asher Miner Rd and Boundary Rd to Upper Rd in Fort Indiantown Gap - 3 min (1.6 mi)

**Address:** Upper Road Fort Indiantown Gap, Pennsylvania 17028

### 10/28/2023 – Buck Ridge Trail – King's Gap, Dickinson Twp

**GPS:** (39.83897, -77.53735)

**Directions:** From Harrisburg: Follow I-81 S to Walnut Bottom Rd in Cumberland County. Take exit 45 from I-81 S - 19 min (20.1 mi)  
Merge onto I-81 S - Take exit 45 toward Walnut Bottom Rd (0.1 mi)  
Keep left at the fork, follow signs for Mooredale (164 ft)  
Continue on Walnut Bottom Rd. Drive to Kings Gap Rd in Dickinson Township - 21 min (11.1 mi)

\*\*\*Park At Scenic Vista Parking

**Address:** 500 King's Gap Road Carlisle, Pennsylvania 17015

## 11/4/2023 Mont Alto State Park – Mont Alto

*Joint foray with the DC and Central PA Mushroom Clubs. There will be two presentations held by the DC and CPM Clubs. More information to come soon. Wear a sweater!*

**GPS:** (40.08394338307239, -76.89080117088102)

**Directions:** From Harrisburg: Follow I-81 S to PA-997/Black Gap Rd in Scotland. Take exit 20 from I-81 S - 42 min (45.9 mi) Continue on PA-997/Black Gap Rd. Drive to PA-233 N in Quincy Township - 17 min (10.9 mi)

**Address:** Mont Alto State Park Mont Alto, PA 17237

### Mushroom Sour Cream Chowder Recipe

As we turn into the cooler weather of fall, what more appropriate than a delicious mushroom soup? A great way to utilize a variety of mushrooms including chanterelles and black trumpets, this recipe is from Marian Tracy's *The Art of Making Real Soups*.



1/2 lb of fresh mushrooms, coarsely chopped  
1/2 cup finely chopped onion  
4 tbsp butter  
1 cup diced raw potato  
Salt and pepper  
Pinch of mace  
Pinch of clove  
Dash of tobascosauce  
1/4 tsp thyme  
2 cups milk  
2 egg yolks  
1/4 cup sherry  
2 cups sour cream  
Finely chopped parsley  
Croutons, cooked in butter

Cook the mushrooms and onion in the butter over low heat for 6 or 7 minutes or until the mushrooms are slightly limp. Stir in the diced raw potato and cook for 12 to 15 minutes more. Season with the salt, pepper, mace, cloves, tobasco sauce, and thyme. Add the milk and bring to a boil. Remove the fire and add slowly the egg yolks, which have been well beaten with the sherry and sour cream. Return to the fire. Heat but do not boil. Check the seasoning and serve at once with croutons and sprinkle with finely chopped parsley. Serves 4!

### EPM Annual Photo Contest

Snap some pics of your fungal finds and share them on Groups.io and you will automatically be entered into EPM's annual photo contests. In the past, the contest was limited to the fall but now will begin in the spring and last through the fall.

There will be two categories with three winners in each category. First place winners will receive fifty dollars, second place twenty-five, and third place a free one-year membership. The first category will be judged on photos that are aesthetically pleasing and the second category will be judged on photos that best describe the mushroom. In the latter mentioned category more than one photo can be posted with features that help identify the mushrooms from the photos.

The only rule is the photos must be posted on Groups.io and taken this year. The contest starts now, and winners will be posted in the winter newsletter.