



Newsletter for Wild Mushrooms PNW ❖ www.wildmushroomspnw.com

Can Fungi Survive on Mars?

An experiment conducted on the international space station found that even after 18 months on board, more than 60% of the fungi's cells remained intact. The samples used were from the genus *Cryomyces* and came from remote and hostile areas on the Earth to see if they could also survive extreme environments beyond our planet, and they did. (from earthsky.org)

Fungi Create Raindrops

Mushroom spores are released into the atmosphere every day by the billions. This amounts to 50 million tons each year. Together with pollen, bacteria, and other biological particles, they serve as nuclei for cloud formation, and therefore rain. (extracted from NAMA March/April 2016 – Elio Schaechter)

How Fast and How Far Can a Spore Fly?

On the underside of some mushroom caps there are gills or pores. Because of internal pressure from maturing spores and humidity, the contents of asci (tubes where spores are formed) can simultaneously eject spores into the air with an initial velocity of close to 7 feet/second. This is sustained only for a brief time or the spores would hit the opposite gills. Since they cannot overcome the viscosity of air, they drop vertically to be caught by air current and may be carried a long distance. *Sphaerobolus stellatus* (Cannonball Fungus) can travel over a 20 foot horizontal and a 7 foot vertical distance. (extracted from NAMA March/April 2016 – Elio Schaechter)

When is a Mushroom Important?

You found a mushroom and just can't identify it. What to do? You've asked friends that know more about mushrooms than you do and they were of no help. You took it to a meeting at your local mushroom club and still no help identifying it. Now what do you do?

1. Take a good picture of your mushroom while still fresh.
2. Show each part of the mushroom including the flesh and any bruising reaction on any part of the mushroom.
3. What was the habitat like or take pictures of where you found the mushroom.
4. Where was the location either by GPS or taken from your notes.
5. Do you have and know how to use a microscope to describe the spores?
6. What is the spore deposit color?

One of the websites that may be helpful is *Mushroom Observer*. Post your pictures and information there. Mycologists sometimes watch this site and may contact you to help identify your find.

Fungi and Alzheimer's Disease

Current research suggests that the ultimate cause of Alzheimer's is fungal. When brain tissue was examined from people who had Alzheimer's disease when alive every one of them had signs of fungal cells of various sorts growing in their neurons. None of the Alzheimer's-free brains was infected. Do fungi usher in the disease or does the disease usher in the fungi? If a fungus is the cause then with all the antifungal agents available

today there could be a cure on the horizon. Or is the presence of fungi just the reflection of a susceptibility to infection? (extracted from the *Economist*, Oct. 2015)

Mushroom Video on YouTube

Go to [youtube.com/foxandbeemedia/playlists](https://www.youtube.com/foxandbeemedia/playlists) and click on Up Close then Up Close: Mushrooms. This 3 minute trip through the world of mushrooms is a visually-appealing introduction to mushrooms. It was created by Fox & Bee Media from Vancouver Island.

Mushroom of the Month – *Schizophyllum commune* (Split Gills)



I always thought this was a beautiful mushroom, but everything I had read about *Schizophyllum commune* indicated it was inedible. Then someone told me that they ate it when they visited Mexico, and so I was off and running to find out more. Just in time the March/April newsletter from NAMA (North American Mycological Association) came in my email inbox and there was an article by Wendy So and David Arora about this very mushroom.

It seems that in central Africa and SE Asia they gather this wild mushroom and simmer it for 2 hours, then pinch off the tough base and split the split gills into little strips. They season it with salt. Then put it into a frying pan with some of the soaking water, stir peanut meal in, and add one small chili. Everything is cooked briefly. They say it is delicious.

Well, I couldn't stop there. I found another recipe on the Project Noah website. There were no amounts given here either, just the ingredients. Wash to remove dirt and other foreign material, then set aside. In a separate pan put enough coconut milk with chopped onion, garlic, ginger, and 3 bulbs of lemon grass. Blend them until the coconut milk comes to a boil. When the coconut milk is already boiling, add the remaining ingredients: the mushroom, a hot pepper, chopped pork, and salty shrimp paste. Add salt if needed. Simmer for ten minutes or until cooked. Serve. This recipe is used in the Philippines where Split Gills is known as Kurakading fungi.

Schizophyllum commune grows on hardwoods with a shell-shaped cap fixed at a lateral point of attachment. The cap becomes wavy and lobed and is very narrow with a split edge that becomes rolled inward when wet. It is tough, felty to hairy to the touch, and slippery when moist. It can grow up to 4 cm in diameter. The color is a grayish-white with pale reddish or gray gills that become split when dried out and appear closed when rehydrated. It is the only fungi with gills that are split along their length and open and close depending on the level of moisture. It causes white rot, a very successful form of wood decay. It is also known to colonize burnt wood after forest fires. Fruits predominately in the fall. (*Omphalina*, Dec. 2014)

Photographs above: left Matt Trappe, right Ben Pruitt

Spring Mushroom Season is Here!

Morels are one of the most hunted mushrooms in the PNW in the spring. Morels are poisonous when eaten raw or if undercooked, but delicious and safe for most people when cooked. Some directions say they should be boiled first and the resulting liquid strained off before cooking them. It is because they contain some MMH (Monomethylhydrazine) and since this toxin is water soluble it is lost in the liquid that is then discarded. Use ventilation and do not breathe in the steam from the boiling water. If you pick more morels than you can use right away, they dry every well. For more information on drying see "Collecting and Preserving Mushrooms from the Wild" in the member's section.

Be sure you can tell a morel from more toxic mushrooms that also fruit in the spring, such as in the genus *Gyromitra* and *Verpa*. All morels are hollow inside the cap and stalk; *Gyromitras* have chambers in the stalk; and *Verpas* have stuffing in the stalk.

Photographs below: left top Kit Scates, left bottom Michael Beug, center Harley Barnhart, right Kit Scates



Verpa bohemica (False Morel)

1. Cap thumb-shaped; attached only at the top
2. Stalk hollow with pith inside
3. Spore deposit white
4. Taste not unpleasant to slightly bitter; odor unpleasant in age
5. Edible with caution; never eat it raw; some people are sensitive to this genus raw or cooked; some people don't like the taste.
6. Usually appears before Morels in the spring



Morchella esculenta (Yellow Morel)

1. Bottom of the cap is attached to the stalk
2. Hollow interior
3. Spore deposit whitish
4. Taste is strongly mushroomy flavor to sweet; edible and tasty; do not eat raw
5. Habitat: burned areas, old apple orchards, stream side, sandy soil; fruits in the spring

Gyromitra esculenta (Brain Mushroom/False Morel)

1. Cap has brain-like convolutions, wrinkled to irregularly lobed
2. Stalk chambered
3. Spore deposit white
4. Taste sweetish; odor strongly mushroomy;
5. Toxicity will vary, but poisonous to most, especially if eaten raw or undercooked
6. Habitat: sandy soil under conifers; fruits in the spring