



June 2016 - Mushroom Highlights

Newsletter for Wild Mushrooms PNW ❖ www.wildmushroomspnw.com

Could the Largest Organism on Earth be a Fungus? The discovery of this giant *Armillaria (ostoyae) solidipes* in 2003 is a new record holder for the title of the world's largest known organism. The giant blue whale is big but nowhere as large as this sprawling fungus in eastern Oregon. It covers 2,384 acres and is estimated to be 2,400 years old but could be as old as over 8,000 years. It causes *Armillaria* root disease which kills conifers in many parts of the U.S. and Canada. All fungi in this genus are known as honey mushrooms because of the yellow-brown caps and sweet fruiting bodies they produce. (from Scientific American, Anne Casselman, Oct. 2007) Photo by K. Scates



How Smart is a Slime Mold? Do you need a brain to learn something new? Not if you're a slime mold. Scientists who watched *Physarum polycephalum* search for food found that the slime mold could learn to ignore certain chemical threats. The findings contradict the idea that learning always requires neurons, and may shed light on the early evolution of learning in living things. For a long time scientists thought only creatures with nerves and noggins truly had access to these special skills.



The slime mold is not really a fungus, but an amoeba-like, single-celled organism filled with multiple nuclei. It munches on bacteria, fungi, and other forest debris and has been around for hundreds of millions of years. They can manage all kinds of intellectual feats. For example, they can solve mazes, anticipate

predictable changes, create tubular structures such as a fake foot to help them crawl along until they find a more satisfactory spot. They were also able to learn a specific reaction to a specific chemical. What does this say about how learning abilities evolved in the first place? (from PSMS May 2016 Newsletter-Amina Khan) Photo left by M. Trappe, right C. Ardrey

Fungus Beer? When it comes to unusual beers, Meadowlark Brewing's new Fungus Shui is hard to beat. The amber/gold liquid is brewed with local honey, honey malt, and candy cap mushrooms which have a maple syrup smell and taste. It's like drinking maple syrup pancakes. It was first presented at the recent Bakken Brew Fest and placed second only to Bowser Brewing Company's Jalapeno Hefeweizen. (from PSMS Newsletter June 2016 - Kristen Inbody)

Could Inhaling Mushroom Spores Cause Death? A rare infection from the wood fungus *Schizophyllum commune* (Split Gill) claimed a woman in New Zealand. The infection started in her lungs and caused one to collapse, as well as growths in her brain. Even with international medical advice, her condition became terminal because the fungus had spread into her heart. Only a couple of people world-wide have died from this fungus; they were mostly people with compromised immune systems. It is believed to be caused by inhaling spores that had been released into the air. *Schizophyllum commune* grows on dead or dying wood or vegetation in all parts of the world except Antarctica. See May's Newsletter for more information about this mushroom. (stuff.co.nz - May 2016)

Coming Soon. Tasty or Toxic - a Comparison

Here's a preview of what's to come on this website. You will be given a choice of two similar mushrooms. One is tasty and the other will be toxic, or at least not edible. Which one will you choose to eat? Remember, if you are not 100% sure of your identification, don't eat it!

Tasty



Western Cauliflower Fungus

Sparassis (crispa) radicata (Western Cauliflower Fungus)

1. Large size; ribbon-like; cauliflower-looking or sponge-like; yellow-brown.
2. Waxy texture.
3. Spore deposit white, pale yellow, to yellow-gold.
4. Edible; taste pleasant, nutty; odor pleasant and faintly of aniseed or cinnamon.
5. Favors pine, sometimes spruce, or growing on living trunks; occasionally grows inside hollow stumps or on the roots of trees. Look for them in the same spot every year.

Toxic



Jellied-base Coral

Ramaria gelatinosa (Jellied-base Coral).

1. Medium size coral family; densely branched from a fleshy base; color varies from dingy pinkish-orange to pinkish-brown, sometimes is a faint purple-gray with golden yellow tips; often has a yellow color band on lower branches.
2. Gelatinous veins running throughout rooting base; stalk often deeply rooted.
3. Spore deposit pale golden-brown.
4. Toxic; taste bitter; causes gastric distress in most people.
5. Grows on the ground in duff under conifers such as hemlock or fir..

Single Dose of Hallucinogen May Create Lasting Personality Change

Could a single high dose of the hallucinogen psilocybin, the active ingredient in “magic mushrooms” (*Psilocybe cubensis*) be enough to bring about a measurable personality change lasting at least a year? In nearly 60% of the 51 participants in a new study this seems to be true? Change was found in the part of the personality known as openness which included imagination, aesthetics, feelings, abstract ideas, and general broad-mindedness. These changes were larger in magnitude than normal changes in most healthy adults. It is cautioned that the sessions were closely monitored and volunteers were considered to be psychologically healthy. Overall, it may have applications to some medical conditions. (from PSMS Newsletter June 2016) Photo by K. Scates



How Squirrels and Truffles Save the Forests - The Oregon White Truffle and the Northern Flying Squirrel both live in the Douglas fir dominated forests in the PNW and they both play an important part. The truffle has a mutually beneficial association with the tree roots and

supports the growth of its conifer hosts by increasing its ability to absorb water and nutrients. In return the truffle obtains carbon from the tree’s photosynthesis. Truffles develop underground. As they mature they emit an odor that advertises their presence to small mammals. After being eaten by the squirrel, the truffle disperses its spores in the animals’ droppings. This ensures a new generation of truffles that will mature to support the growth of trees that in turn provide habitat for the animals. (from the Mt. Pisgah Arboretum Newsletter, *Tree Time*, Fall 2015, by Susan Holmes & Bruce Newhouse)

Mushroom of the Month - The Butter Bolete Now Has a New Genus Name, *Butyriboletus*

Butyriboletus appendiculatus may be found in large colonies beneath oak trees and frequently found growing with old oaks in ancient woodlands from late spring to early fall. This bolete is edible and considered a tasty choice, but caution is advised since some people have reported a reaction to it. The earthy flavor makes them suitable for cream-based dishes, soups, sauces, and stews. Cooked portions will often turn blue, then gray, they back to their original yellow color.



Caps may be rounded to flattened, brown to yellowish-brown, measuring up to about 8 inches in diameter. They have a dry to slightly sticky surface that may crack in age. The flesh is yellowish and very firm and may slowly change to blue when injured. The pores on the underside are butter yellow (this is why it has the common name Butter Bolete) and may also bruise blue, but less likely in young mushrooms. The stalk is 2-6 inches long and up to about 2.5 inches thick at the



top near the attachment to the cap; thickness varies. Sometimes the stalk develops brownish to reddish stains, and may have a fine net-like pattern near the top. The spore deposit is dark olive-brown. Its shape is similar to the Porcini/King Bolete (*Boletus edulis*) and may be confused with other varieties: *Butyriboletus (Boletus) regius*, and *Boletus regineus*. Photos by M. Beug

Bracken Fern and Butter Bolete Quiche

This shredded cheese, wild fern, and wild mushroom quiche is great for that special brunch or anytime you want a dish filled with the wild foods you collected.

1 C Butter Bolete previously sautéed in butter, or you could use any edible bolete, chanterelle, etc. (*See Prep)

1 C chopped onions (if available use Walla Walla Sweets) or yellow onions

1 C chopped bracken fern that have been parboiled previously (*see Prep) or you could use spinach, wild nettles, or broccoli, etc.

5 eggs

1/3 C Best Foods Real Mayonnaise

1/3 C organic half/half (lactose-free, if possible)

1 C organic shredded sharp cheddar cheese

½ tsp Sriracha chili sauce or increase amount according to your taste

1 frozen deep-dish organic pie crust (9 inch), if possible; can use gluten-free

½ tsp salt

¼ tsp black pepper

1. Preheat oven to 375 degrees F.
2. Coarsely chop the bracken fern, wild mushrooms, and onions separately.
3. Cook the onions in a skillet with butter on medium heat for about 10 minutes or until crisp-tender, stirring occasionally.
4. Stir in the previous parboiled bracken fern and sautéed mushrooms for another 5 minutes, blending the mixture.
5. After cooking put the vegetable mixture and mushrooms in the food processor and coarsely to finely chop. Put aside.
6. Beat the eggs, mayo, and half/half in a medium bowl until well blended. Stir in vegetable mixture, cheese, Sriracha chili sauce, and the salt and pepper.
7. Pour into a frozen pie crust; then place on a cooking sheet in the oven.
8. Bake 45-60 minutes or until the center is set and the top is golden brown.
9. Let stand about 10 minutes before cutting and serving. Yum!

Servings: 1 pie can serve about 8 people unless everyone is really hungry. Serve warm.

*Prep – if using frozen bracken fern and frozen mushrooms it is best to thaw them in the refrigerator the day before using them, or place the bags in hot water to thaw. The bracken fern should have been parboiled before freezing and the mushrooms should have been sautéed in butter before freezing. Vacuum packing will ensure freshness. When thawed and ready to use place in your food processor and coarsely to finely chop, especially the bracken fern, or it can be stringy.