SPORE PRINTS

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Number 459 February 2010

AN EXTRAORDINARY FIND—THE REDISCOVERY OF A RARE POLYPORE IN CHINA THAT WAS PREVIOUSLY KNOWN ONLY FROM WASHINGTON STATE

Brian Luther

In 1945 a single collection of a polypore was found by A. S. Rhoads in the Wind River Experimental Station Forest in Skamania County, Washington. It was named *Scutiger skamanius* by Murrill (1946) but was transferred to the genus *Albatrellus* in 1972 by Pouzar (1972). *Albatrellus skamanius* is so rare that it was previously known only from the type collection until Ginns (1997) reported on three other collections. One was actually found in 1915, but was misidentified as *Polyporus confluens* in an herbarium, and the other two were collected in 1994 and in 1996. So only four collections of this fungus from Washington State have been reported in the literature. It has been intensively searched for subsequently, and Ginns (1997) states "*Albatrellus skamanius* is one of the rarest polypores in North America." It's on the Priority 1 Macrofungi list of the Washington Natural Heritage Program's Working List of Rare Macrofungi.

The unbelievable news is that this species was rediscovered in the year 2000 quite accidentally in the Nanhua Wild Mushroom Market in Yunnan Province, China (Zheng et al., 2004; Zheng & Lui, 2008). Imagine this—it could have been purchased and served for dinner by one of hundreds of people in the public market that day, but it was noticed by a mycologist instead. That's probably just about the closest thing to finding the proverbial needle in a haystack.

This is a remarkable discovery, and although nobody to my knowledge has had any luck finding it again in our state since Ginns' (1997) reports, it's amazing that it showed up so far away. Looking through Zheng & Liu's second paper (2008), I discovered there are actually several species of *Albatrellus* that are found both here in Washington State and in China, including *A. confluens*, *A. flettii*, *A. ellisii*, *A. pescaprae*, *A. dispansus, A. caeruleoporus*, and *A. ovinus*. The authors also provide a very useful key to all of the known species of *Albatrellus* in China (pp. 158–159). Since China has massive, higher-elevation conifer forests, it is expected that we'll see many more similarities to our fungal floras, especially in the future with exploration and collecting in remote areas of that country.

Albatrellus skamanius is unique because of its smooth to slightly fibrillose pileus, clamped hyphae, and large broadly ellipsoid spores (Gilbertson & Ryvarden, 1986). *A. ellisii* and *A. pescaprae* are similar, but both have very scaly caps and spores that are shaped differently.

The moral to this story? If you can't find the mushroom here, go to China (I read it in my fortune cookie).

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JOY MARGARET SPURR
1919–2009

We are sad to report that PSMS charter member Joy Spurr died Dec. 16, 2009, at Overlake Hospital in Bellevue.

She was born Dec. 21, 1919, in Albert Lea, Minn., to Edward H. Flindt and Anna T. Hartwig. She attended Albert Lea High School and later attended business college in Minneapolis. Joy married Roger Spurr in Seattle in July 1948. She moved to Seattle in 1940 and later to Issaquah in 1988.

In addition to being a charter member of PSMS, she was a member of the Woodland Park Zoological Society, the Arboretum Foundation, the Evergreen Rock Club, and the Issaquah Rock Center.

Her hobbies and interests included photography, hiking, snow skiing, rock-hounding, mushroom collecting, wildlife, plant and animal identification, gardening, and reading. A self-employed professional photographer, her adventures included worldwide traveling to exotic and sometimes dangerous places. With these experiences she became an author and lecturer and considered herself a lifelong learner.

She is remembered as being friendly, outgoing, loving, loyal, and a philanthropist.

Joy is survived by her children: Donna Avery, Scott Avery, Lisa Nelson, Cindy Rich, and Diane Sievers.

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CALENDAR

Feb. 9	Membership Meeting, 7:30 p.m., CUH
Feb. 16	*Spore Prints* deadline
Feb. 22	Board Meeting, 7:30 p.m., at CUH
Mar. 13	Annual Meeting and Survivor's Banquet, 6:30 p.m., CUH

PUPPETS ANYONE?

Ron Post

The royal family, King Boletus and Queen Boletus, have a singular vision. They send Professor Pulcherrimus out into the world to find evidence that the Boletes are an entire Kingdom, not just a family. However, things work out differently when the Professor and his students (Slippery Jack and the others) enter the forest, where they return Baby Morel to her own kind and get to know some really colorful fungi (The Blewits, Captain Sparassis, and Miss Poly Ozellus among others.) The Spore Fairy puts in an appearance during their journey, which leads over Fern Hill, through the Mossy Bog and finally into the Land of the Lodgepole….

Needed: About 10 people who can work a half day or more roughly once a week between July and September. Purpose: To make and dress puppets, build a stage, and design sets, then rehearse the half-hour play based on the scenario above—all in time for the annual wild mushroom show and our drama's world premiere. Contact me by March 31 at 206–370–4471 if you are willing to help. Strong voices especially needed.

(We could enlist the aid of a director and put on the play in costumes ourselves. But that might require more space than we have at the show. The whole idea, originally, was to have more activities for children who attend the exhibit. Anyway, the show must go on!)

MEMBERSHIP MEETING

Tuesday, February 9, 2010, at 7:30 p.m. at the Center for Urban Horticulture, 3501 NE 41st Street, Seattle.

This month's speaker is again our very own member and far-flung traveler Daniel Winkler. This year his magic carpet will take us to the little-known mountain kingdom of Bhutan, in his presentation titled "Bhutan's Buddha Mushroom and Other Fungi in the Land of the Thunder Dragon." Bhutan, a small country the size of Switzerland, is located in the Eastern Himalayas sandwiched between India and Tibet. Geographically, Bhutan's tropical lowlands and towering peaks make it extremely biodiverse. There are also lots of fungi found there. Bhutan maintains close political ties with India, but its culture is strongly influenced by centuries of integration with Tibet's cultural sphere. The mighty Himalayas are the backdrop to Bhutan's rich and diverse culture.

Daniel will share more stunning images from the region as well as relate new, entertaining, and educational stories from this journey. Besides mushrooms, Daniel's presentation will share Bhutan's rich culture as he takes you to Bhutan's most spectacular monastery, Taktsang, the Tiger's Nest, as well as many other cultural sites.

Daniel grew up in Munich, Germany, and started hunting mushrooms as soon as he could keep up with his family in the forests. He has studied geography, botany, and ecology in order to work on environmental issues in the Himalayas and Tibet, where he has researched and consulted for over 20 years, focusing on medicinal and edible mushrooms in Tibet. Daniel moved to Seattle and joined PSMS in 1996, which enticed him to take his love for mushrooms to the next level. He is a expert on wild edible mushrooms on three continents and organizes exotic mushroom tours (see www.MushRoaming.com). Daniel keeps venturing into new and old habitats and cultures, and along the way he captures images and gathers stories to share. Come see Daniel and prepare to be fascinated as well as educated!

Will persons with last names names beginning with the letters L–Z please bring some goodies to share after the meeting.

TWANOH STATE PARK RANGER GETS A PROMOTION

Brian Luther

When I first met Stacy Ruland in 2005 she was a newly hired WA State Park Ranger, moving all the way out here from the east coast to take this job. Working under Larry Otto, the former manager of Twanoh State Park, she's been our main contact at Twanoh. Larry recently retired. Stacy applied for his position, and I am pleased to inform you that she got the job. Congratulations on your promotion, Stacy. Stacy got married a couple of years ago and is now Stacy Czebotar. I must tell you that she is a delight to work with and is enthusiastic and always supportive of PSMS activities and other interesting public educational opportunities that relate to Twanoh State Park. She's also a WA State law enforcement officer having gone through the police academy—a requirement of rangers.

In the spring of 2008 I organized a half day wild mushroom and native plant walk at Twanoh for the public, including hot coffee, juices, and a big spread of breakfast goodies. Thirty or forty people came and I received lots of positive feedback on the program. You can read the report for this event in the June 2008 issue of *Spore*

Prints (no. 443). As a result, I received a letter of appreciation from the WA State Parks and Recreation Commission and a State Park Volunteer pin.

With Stacy's backing this coming spring (2010) I'm planning a public clam dig and oyster pick during a low tide at Twanoh State Park. I'll personally demonstrate how to shuck oysters and will lead a marine beach-life walk and probably have a cooking demonstration as well. Stay tuned for details.

Last October (2009) we had a very successful field trip to Twanoh State Park with the largest group I've ever seen there. We're lucky to have the use of this beautiful park and the continued support from Stacy.

EUROPEAN BATS RESISTANT TO DEADLY FUNGUS

David DeFranza

http://www.treehugger.com, Jan. 14, 2010

Since 2006, bat populations in the northeastern United States have been devastated by a mysterious condition known as "white-nose syndrome." Caused by a fungus, *Geomyces destructans*, the syndrome occurs after hibernating bats develop the powdery-white fungal coating around their nose and on their wings. Victims wake and fly from the cave, burning precious fat stores and eventually starving to death.

The syndrome has lead to 90 percent or greater reductions in hibernating populations in some caves, and for many species researchers have resigned themselves to predictions of extinction. New reports from Europe, however, indicate that bats across the Atlantic have found a way to live with the fungus without developing the deadly syndrome.

Marvin Moriarty/USFWS

Apparently healthy bat with white-nose syndrome.

Currently, reports from eight countries in Europe have described bats with white mold on their wings and muzzles and four countries—Hungary, Germany, Switzerland, and France—have identified the mold as *Geomyces destructans*. Despite the presence of the fungus, however, bats in these countries remain healthy.

Complicating matters further is a 1983 report that includes a photograph of a bat in Germany with a "powdery white substance around its muzzle." It goes on to say that several such bats were observed in caves during surveys. If the substance is, in fact, *Geomyces destructans*, it means that European bats had been contending with the fungus for at least 23 years before it made its first appearance in the United States.

If European bats have developed immunity to white-nose syndrome, it could help researchers find a way to save bats in North America. One solution would be a vaccine, though this could be too difficult to administer to individual animals.

Other researchers have investigated the use of a spray that could be applied to caves before or during hibernation periods. There is fear, however, that such an application could kill other essential fungi present in caves.

One other approach would involve introducing engineered bacteria that could live on bats and protect them from the fungus.

Whatever method proves finally proves viable, it will have to be refined quickly if it is to have an impact. Every year, more bats are lost and the area affected grows. With some species producing just a single offspring every breeding period, the opportunity for populations to rebound is small.

Indeed, the fight to save northeastern bats is a race against the clock and, even in light of this optimistic news from Europe, time has nearly run out.

PRESIDENT'S MESSAGE

Patrice Benson

It is time for change! February is election month for PSMS. Each family membership gets two votes; single memberships cast a single vote. So vote early! Pease return the completed ballots found in this issue of *Spore Prints* to the ballot box at the membership meeting on February 9 to save a stamp. The ballot box will be located on the membership table.

The election results will be revealed and the new board will be announced during the Survivor's Banquet at our annual meeting on March 13. The banquet will be a potluck at CUH and begins at 6:30 p.m. Helpers are needed for set up and clean up; e-mail Patrice Benson at president@PSMS.org to volunteer. The theme of this year's banquet will be "The Joy of Mushrooms" in honor of the recipient of the first Golden Mushroom Award, Joy Spurr, who passed away in December. Joy was a charter member of PSMS and a professional nature photographer. She was a generous and prolific photographer; most of us have learned mushroom ID from her images used in classes. So in keeping with the theme, be joyful at the banquet! Bring a dish to share. There will be door prizes, and stand-up comedy!

Since Joy was the photographer I have lots of photos from her collection of everyone, except her! Anyone with photos of Joy PLEASE send them to me by e-mail if possible. If you need to have them scanned, I can do that! Call me at 206–722–0691.

Our beginning mushroom ID classes are again bulging at the seams, with 46 students enrolled in this winter's session. Intermediate class dates and times are under construction for later spring. We will post more info on the website as soon as possible.

We are in the process of creating a member's only e-mail list for conveying member information and reminders. Stay tuned! Also coming to PSMS—PayPal for online payments for new and renewal memberships, for classes, forays, and other events, and for donating to our scholarship fund.

Mushroom Maynia! will take place at the Burke Museum on Sunday, May 2. Please mark your calendars and be prepared to volunteer to help with this really fun and worthy event.

Please check the website for dates for the workshops on needle felting and dyeing with mushroom. Instructors are in the process of procuring locations and times for these arts and crafts events.

CUSTOM AGENTS STOP FUNGUS AT MEXICO–US BORDER

Ed Joyce

KPBS, Dec. 31, 2009

During the last two months of 2009, U.S. Customs and Border Protection (CBP) agents made 31 interceptions of black leaf spot, a fungal disease, preventing it from entering Southern California.

In every instance, the pest was found on basil, an aromatic and tender low-growing herb that belongs to the mint family. It is grown locally and is also imported fresh into the U.S. year-round from Mexico.

OFFBEAT FUNGAL FRAGRANCES Daniel Winkler

December's *Spore Prints* article by Brian Luther regarding fungal odors was highly informative and very interesting. I am happy to see that after retirement Brian can dedicate even more time to fungal research and that he is sharing his insights with us. Personally, I always smell mushrooms, whether to help identification, try to label an odor, or just to experience an interesting aroma.

However, in his long listing of smells Brian omitted one of the most common and evocative odors, the spermatic smell, which is quite common among fungi. Check the "spermatic" box in MatchMaker—a free software tool for keying out PNW mushrooms which is especially helpful when searching for a fungal identity by using smells—and 75 mushroom species will pop up. The list is very diverse and includes species of the following genera: *Cortinarius, Cystoderma*, *Galerina*, *Hygrophorus*, *Hypholoma*, *Inocephalus*, *Inocybe* (42 species!), *Lepista*, *Leptonia*, *Leucopaxillus*, *Lyophyllum*, *Melanoleuca*, *Mycena*, *Myxomphalia*, *Pholiota*, and *Russula*. Note that, so far, MatchMaker's odor search function only works for gilled mushrooms, and there might be nongilled mushrooms oozing this smell as well. (Brian's list of garlic- and onion-scented fungi included only a fraction of gilled mushrooms; most alliaceous smelling fungi were actually truffles.) Furthermore, double checking on MatchMaker's list reveals that not all mushrooms listed as having a spermatic odor contain this trait. For example, the *Hygrophorus* species are just described as smelling of green corn.

Talking about odors, it is important to remember that our olfactory sense is by far not as well developed as our sense of sight and it is sadly feeble compared to that of many animals. Even if we can smell certain odors it does not mean we could label them. Furthermore, some people cannot detect certain smells and often are not aware of such a lack of olfactory capacity, since we do not conceptualize smells like many other environmental stimuli. Mushrooms, however, use chemicals to communicate, although what we might be smelling (or tasting) might not be messenger chemicals, since our olfactory sense is not very sensitive and tiny amounts seem sufficient for communication between fungi. Less subtle are the communication efforts of truffles to help animals sniff them out underground so that they will spread their spores.

Interestingly, the aroma of a mature culinary truffle ready to be eaten and spread is α-androstenol, a sex pheromone that attracts sows, since it is usually in the saliva of rutting boars. This illustrates that the scent of fungi changes throughout their life cycle, just as the multitude of scents produced by humans varies throughout their stages of life or with their activities.

Besides mushrooms I also came across several shrubs and trees which produce this odor profusely when in flower. Most often I detect it from Rowans or Mountain Ashes (*Sorbus sitchensis, S. aucuparia,* etc.) I have encountered in the mountains of North America, Europe, and High Asia. These white-flowering small trees of the rose family (Rosaceae) have a circumpolar distribution, growing commonly in subalpine habitats. Another white-flowering, spermatic smelling Rosaceae is Ocean Spray (*Holodiscus discolor*), which is a common shrub in coastal PNW forests. Susan Goldhor, after reading the manuscript, pointed out to me that Ginkgo (*Ginkgo biloba*) also shares this scent as does the edible European chestnut (*Castanea sativa*) in the beech family (Fagaceae) when it is in flower. Interestingly Joe Ammirati describes the odor of several *Inocybe* Fiber Caps as "reminiscent of catkins of chestnut," which others label as spermatic.

However, I think I am onto something much bigger here, and yes, size matters. In short I suspect some mycologists are still unnecessarily inhibited about facing our human, or maybe more general, our animal nature. In several mushroom guides, even recent ones, mushrooms with a spermatic smell are simply described as smelling disgusting or even putrid, two smells not found in MatchMaker's odor listing. I do not want to be too judgmental, and I realize that many of us may be struggling with absurd Victorian ideas of decency. One can argue about smells just like about taste; somebody's favorite food triggers drooling in one person and a gagging reflex in another person. However, science is not helped by expecting mushroom guide users to recognize the spermatic odor in terms as general as disgusting or disagreeable. It might as well be described by terms as very natural, earthy, or intense. Such evasive classification just reeks of repressed sexuality or maybe even a sad love life, when the smell of the male reproductive essence is associated with negative memories and not with blissful experiences.

It is no coincidence that this odor is present in the context of reproduction in humans, plants, and fungi alike (the mushroom being the spore producing organ of the fungus). When it comes to the odor of human sperm—I was not able to find a study on this odor in mushrooms—four amino acids seem to be major players: spermidine, spermine, putrescine, and cadaverine. This does not sound like an assortment of truly fragrant substances. However, they also represent a line of decay and probably spermidine and spermine smell much less offensive than what I fantasize to be the odor of putrescine and cadaverine. Also some people argue that this smell should be rather referred to as "semenatic" and not spermatic, but that is just semantics. Whatever we want to call it, in fungi this odor is at least an odor I can clearly identify and thus helps me to identify a mushroom when I have the right keys.

All this points me to the conclusion that the chemicals responsible for the spermatic smell must have been around for a long, long time, since this smell is to be found in reproductive processes in such divergent organisms as animals, plants, fungi, and also bacteria. And it turns out that spermidine and spermine have important functions in metabolic processes. Spermidine reduces aging in immune cells of yeasts, insects, and humans and spermine seems to protect nucleic acids. I would not be surprised if there are other life forms that also carry that smell in reproductive processes, but do not expect me to start smelling out insects, algae, slime molds, and bacteria. For me it is sufficient to call a spade a spade, and use whatever characteristics there are to recognize all things alive.

NEW US POSTAL SERVICE SHEET SHOWS A MUSHROOM Brian Luther

I've been collecting, studying, and researching international postage stamps illustrated with fungi for forty years. I thought you might like to know that the US Postal Service is issuing a new sheet entitled Hawaiian Rain Forest, which is part 12 of the Nature of America series. This beautiful sheet contains ten 44-cent stamps as part of a panorama view of the Hawaiian rain forest. One small mushroom is illustrated on the forest floor in the lower middle area of the sheet, toward the bottom. It's just outside of a stamp but is clearly visible in the tropical scenery. I couldn't tell what it is because it's so small, so I wrote to Dennis Desjardin at San Francisco State University to see if he could identify it. Dennis is the junior author of the gorgeous book *Mushrooms of Hawaii* (2002) along with Don E. Hemmes (Ten Speed Press, 212 pp.,

$39.95). He thinks it could be *Hygrocybe noelokelani*, a species he described from Hawaii; the bright pink color and habitat seem to match.

I last gave a complete update on United States stamps and sheets with fungi on them in the September 2005 *Spore Prints* pp. 4–5. You can access the *Spore Prints* on-line at psms.org and then select the issue you want to read or print.

MUSHROOMING TOURS TO TIBET, 2010

Daniel Winkler

www.MushRoming.com

*Alpine pasture habitat of Yartsa gunbu (*Cordyceps sinensis*) under the towering glaciated peaks of Nyenchen Tangla (7250 m / 23786 ft)*

***Cordyceps* Expedition to East Tibet - May 24 to June 6, 2010**

Tibet is endowed with not only an incomparably rich, ancient spiritual culture but also a long tradition of collecting and trading mushrooms. Today, with unprecedented demand for caterpillar fungus (*Cordyceps sinensis*), matsutake, and morels, Tibet has the highest fungal income per capita in the world. Our goal is to track the elusive caterpillar fungus endemic to the Tibetan Plateau, explore its grassland habitat, meet collectors, and visit fungus markets. We'll also search for morels in the valleys ablaze in spring flowers. In addition to exploring fungi, we will visit Tibet's famous monasteries, sacred sites, and hot springs. Daniel Winkler leads the tour supported by Tibetan guides.

Fungal & Floral Foray in Tibet - July 14 to 27, 2010

"MushRoaming" tours to Tibet are once in a lifetime fungal, botanical, and cultural experiences in some of the most stunning landscapes on the planet. Tibet is not only endowed with an incomparably rich, ancient spiritual culture but also has a long tradition in collecting, eating, and trading mushrooms. During the summer, mushroom collection and markets are peaking. We will encounter matsutake, boletes, Caesars, chanterelles, *Ganoderma*, gypsies, and many other exotic species throughout the tour. We will explore the forests, meadows, and mountains of Kongpo, Tibet's extremely biodiverse southeastern region. In addition we will experience sacred sites in Lhasa and beyond. Daniel Winkler leads the tour supported by Tibetan guides.

For a detailed itinerary, costs, and registration details go to www.MushRoaming.com.

A FIELD GUIDE TO GROCERY MUSHROOMS

Tammy Sutherland

http://homemakers.com/Food&Nutrition/cookscorner/

April 20, 2009

Can't tell a button from a beech? Oh shiitake! Keep the curses at bay by learning about the assortment of mushrooms at your grocers' and you, too, can master the magic of mushrooms.

Perhaps mushrooms win you over with their health benefits including selenium, which helps protect against cancer; riboflavin, which keeps your skin and your eyes healthy; and niacin, for well-oiled digestive and nervous systems.

Andrew Carmellini, one of the chefs behind *Urban Italian: Simple Recipes and True Stories from a Life in Food* (Bloomsbury USA, 2008) thinks the popularity of mushrooms has more to do with taste. "Mushrooms add earthiness, body and depth to a meal," he says.

Read on for an intro to just a few of the mushrooms you might find at your local grocery store and get great tips on how to add them to your meal tonight.

1. White/button mushrooms

A young specimen of *Agaricus bisporus* with a closed cap and either pale white or light brown flesh. Choose firm, whole mushrooms and avoid any that are slimy or look wrinkled or spotted. Before using, remove the base of the stem and clean them with a cloth or a vegetable brush.

Flavor and use: Given their mild, woodsy flavor, you can use versatile white mushrooms in most any dish—hot or cold. But note that when heated, the flavor of button mushrooms intensifies.

2. Crimini mushrooms

When the flesh of the immature button mushroom darkens, the mushroom is known as crimini. While similar to white mushrooms, crimini mushrooms are firmer and range in color from light to dark brown.

Flavor and use: If you like white mushrooms but prefer something a little meatier with an earthier taste, use crimini mushrooms. They make perfect substitutes, both cooked and raw.

3. Portabella mushrooms (also called Portobello)

These mushrooms have similar coloring to criminis because they're actually the same species, only mature. Portabellas have much larger caps which can measure up to six inches in diameter.

Flavor and use: If you've got the grill going, grab some portabellas, brush them with olive oil, and fire them up. Because of the size of these mushrooms, they have less moisture than smaller varieties and therefore a more substantial texture. That, along with their earthy taste, makes portabellas popular in vegetarian dishes. "They have a similar feel to a roasted piece of meat," says Carmellini.

4. Shiitake mushrooms

With umbrella-like caps that can grow to be two to four inches in diameter, shiitake mushrooms (*Lentinula edodes*) have a soft, spongy texture and range in color from tan to dark brown. The stems may have a curve and should be removed before cooking.

Flavor and use: You'll often find these mushrooms in Asian dishes such as stir-frys, and they're believed to have healing properties. Shiitake mushrooms add woodsy hints to pasta dishes. Carmellini says he doesn't often use shiitake mushrooms in his Italian dishes, but rules are made to be broken: "I do have a fettuccine with fresh corn, bacon, and shiitake in my book, which is delicious."

cont. on page 6

A Field Guide to Grocery Mushrooms, *cont. from page 5*

5. Oyster mushrooms

The funnel-shaped cap is only one of the reasons this mushroom (*Pleurotus ostreatus*) stands apart from the others. A velvety texture and unique coloring, sometimes even a pale yellow or blue, also give it a distinct appearance. Oyster mushrooms don't last long in the fridge, so buy them fresh and use them right away.

Flavor and use: To make the most of their mild flavor, sauté oyster mushrooms in butter or oil before adding them to soups or casseroles. "They crisp up nicely in a pan," says Carmellini. "It can add some good texture to a dish."

6. Enoki mushrooms

Not your average looking mushrooms, enoki mushrooms have tiny caps on long, skinny stems. Cultivars of *Flammulina velutipes,* enoki mushrooms grow in clusters and should be white and firm when you buy them. Skip any bunches with brownish spots. Cut off the roots and separate the stems before use.

Flavor and use: With a slight crunchy texture and a mild flavor, these mushrooms work well raw in sandwiches and salads or as an added vegetable in soups and stir frys. But Carmellini suggests skipping them if you're cooking an Italian dish: "They're a little delicate for Italian cooking." If you are using them in a hot dish, wait and add them near the end of the cooking time, to retain more of their flavor.

7. Maitake mushrooms

Maitake is an edible mushroom of the species *Grifola frondosa*. This particular mushroom has many nicknames, including Hen of the Woods, Sheepshead mushroom, Ramshead mushroom, and "dancing mushroom," because the rippled cap resembles dancing butterflies.

Flavor and use: Looking to amp up the mushroom aspect of a dish? This is Carmellini's favorite choice. "They have a deep, earthy flavor and can get a great roasted texture." Simply sauté in butter and serve these as a side dish.

8. Beech mushrooms

Beech mushrooms (*Hypsizygus tessellatus*), come in brown and white strains. They're so small that you can skip the chopping part and just cook them whole.

Flavor and use: Cooking these mushrooms will bring out their sweet, nutty flavor, but since they also have a firm, crunchy texture, add beech mushrooms near the end of cooking time to make the most of their crunch.

THE OLDEST SURVIVING MUSHROOM RECIPES

Editors Note: The following article is from a discussion about old mushroom recipes on the BAMS [Bay Area Mycological Society] *blog site. Larry Stickney contributes the following comments. Maybe you can find some suggestions of interest for your next mushroom dish.*

(From the *Zeitschrift für Mykologie*, Mai, 2003, by permission.) Translated from the original German by Monika Lutz.

Thought to be the most ancient extant record of recipes in the Western world, *De re coquinaria* (*The Art of Cooking*) by Apicius Caelius also contains some interesting mushroom recipes. The cookbook, found in the Vatican Library, contains detailed description of about 500 recipes from the time of Diocletian, a Roman Emperor from the 4th century. Little is known of Apicius, although legend has it that he was a wealthy Roman who, after losing his wealth, poisoned himself after hosting an enormous banquet. Its first appearance in print occurred in the last decades of the 15th century, and by that time the work had acquired many additions. Its ten chapters cover topics from sauces and spices to wine making techniques, and provide a detailed view of Roman cuisine. Noted physician Martin Lister's annotated version of Apicius's text was first issued in London in 1705 in an edition subscribed to by Isaac Newton and Christopher Wren, among other notables. The frontispiece shows a Roman kitchen from an 18th-century viewpoint. What the Ash tree mushrooms are in the recipes is anyone's guess.

If you are a friend of old Roman cuisine, here are Roman mushroom serving suggestions from Apicius Caelius:

(a) Boiled, whole warm Ash tree mushrooms can be mixed with fish stock and plenty of ground pepper.

(b) Ash tree mushrooms can be marinated with pepper, sweet reduced wine, and oil.

(c) Steamed mushrooms can be served with salt, oil, undiluted wine, and chopped fresh cilantro.

(d) You can create a meal with boletes by cooking them with sweet reduced wine and fresh cilantro which gets removed from the cooking broth before serving.

(e) The stems of the boletes can be served drizzled with fish sauce (fish stock) or sprinkled with salt.

(f) Put sliced stems of boletes together with eggs in a shallow bowl, drizzle with lovage, honey, broth, and a little oil.) Dried morels are served with a marinade of simple wine broth.

(h) Boiled morels can be served with a dressing of salt, oil, fresh wine, chopped cilantro, and pepper.

(i) Boiled morels can be served with the following sauce: celery seeds, garden rue, honey, pepper, a little sweet berry wine, fish stock and oil, thickened with starch; add pepper and serve.

cont. on page 8

Election **Election** **Election**

This year we are voting for a President, a Treasurer, and five Trustees. Please read the following profiles carefully and mark your choice on the enclosed ballot. Return your ballot to "PSMS Election Committee, 7501 21st Ave. NE, Seattle, WA 98115. A ballot box will also be available at the February meeting. Each family membership is entitled to two votes, and each individual membership to one vote. Ballots received after March 6, 2010, will not be counted.

Marian Maxwell ***President***

I am very passionate about our Society and its mission "to foster the understanding and appreciation of mycology as a hobby and a science." We have a great Board and I would welcome the chance to work together with them toward that mission. My past experiences of serving on the PSMS Board, chairing a PSMS Show Committee for 27 years, and being a co-president of PTSA will help me serve in that capacity.

John Goldman ***Treasurer***

I'm dedicated to PSMS and want to continue serving as Treasurer. I feel I offer a level of business professionalism as well as book keeping skills. I am co-chair of Book Sales too, so I have a close handle on this important aspect of our finances. Beyond the Treasurer duties, I contribute input in most Board discussions. I look forward to serving this wonderful organization for another two years.

Trustees

Pacita Roberts

As a longtime mushroom aficionado, I joined PSMS in 1983, and had the opportunity to serve on the board in the past. This organization has allowed me to enjoy the wonders of nature and the fungal kingdom and I hope to serve again so that we may carry out our mission of education.

Ruth Buttler-Rehse

I grew up hunting for mushrooms in my native Germany. I joined PSMS sometime in the early '90s after I noticed a PSMS poster for the annual exhibit. Since then I have enjoyed many outings, learned a lot, and made friends along the way. I would love to get more involved with this great organization and would be honored to serve on its board.

Tony Tschanz

This is my 8th year with PSMS and having served two terms as trustee in the past, I would be honored to help with another term. I grew up in Switzerland and hunted mushrooms with my dad as a boy. Here I have met many friends and experts while hosting field trips or participating at many PSMS activities.

Jim Hughes

I love chanterelles, lobster mushrooms, and boletes Other interests include hiking, hunting, snowshoeing, and downhill skiing; amateur chemistry; ancient literature; gardening; and archery I have been a PSMS member since 1998. Now that my kids are grown and I have more time, I want to give more time and energy to the club.

Ed Sakai

A retired free-lance photographer, I have been a member of PSMS since 2000. I have been becoming more active in PSMS activities, and am enjoying the people and learning more about mushroom ID. I would like to be on the board because I feel that I could contribute ideas to make a great club maybe even better.

Sharon Chappell

Shortly after moving to Washington in 2006, I heard that this area was great for mushroom hunting. I signed up for a mushroom identification class and I was hooked. I've learned so much but have so much more to learn. I would love to get more involved with the club by being on the PSMS Board.

Louise Asif

Mushrooms have been part of my life off and on since going out with my father in Germany at age 6. In 1995 I joined PSMS because its focus on ecological and educational programs coincided with what was important to me. I am currently employed full time by a nonprofit, the Group Health Foundation.

Roman Cuisine, *cont. from page 6*

(j) Recipe for morels: mix caraway, garden rue, broth, a little sweet wine, oil, fresh cilantro, and leek, and serve this as sauce.

(k) Drain the boiled morels, add them to a pot with oil, spiced fish stock and salt; add wine from dried berries for color and thicken with starch. Chop small morels and discard the fibers, mix into boiled barley and eggs, add fish stock and pepper; add nuts and pepper and fill into casings, fry in a pan, add wine broth and serve instead of meatloaf.

SHOULD YOU WASH MUSHROOMS?

Felicity Cloake
theguardian.co.uk, Jan. 18, 2010

There's a battle raging in my kitchen, and I'm caught in the crossfire clutching a paper bag full of fungi. In the red corner, we have the traditionalists—Delia Smith, Gordon Ramsay, *Larousse Gastronomique*—warning me to keep my precious cargo away from the sink at all costs.

Beckoning me from the blue side are the hip young guns for whom rules are as old hat as Gordon himself—among them, the scientifically minded food writer Harold McGee and his disciple Heston Blumenthal, who dismiss this ancient prohibition as "nonsense." Go on, they urge, give them a good old rinse.

I'm torn—the mushrooms are definitely grubby, and I'm reluctant to sully my precious pastry brush with what is presumably manure or some derivative thereof, but on the other hand, I don't defy Larousse lightly.

There was only one way to settle this, even if it would create twice as much washing up. I divided the bag in two, thoroughly rinsed one half, and spent considerably longer whisking about the other with a brush, trying not to look too closely in case I spotted anything lurking in the gills. Pans on, a meticulously equal tablespoon of oil into each, then mushrooms in.

The moment of truth approached. The damp lot certainly looked less promising to begin with, gently steaming away while the others sizzled, but the dry mushrooms soon absorbed all their oil and began to catch, whereas, when I eventually lifted both lots out, there was still some oil left in the other pan. I took the two plates over to my boyfriend for an objective verdict. "They taste exactly the same," he said, adding suspiciously, "Is this a trick question?"

For my part, I thought the washed batch was slightly juicier, but in the interests of fairness, I must admit that the elation of never having to spend money on a twee mushroom-shaped brush may well have influenced my verdict. What's for sure is that, in the future, I'll be washing my mushrooms. Sorry, Delia.

MUSHROOM MISSIONARIES

Patrice Benson and Alissa Allen traveled to Kitsap Peninsula Mycological Society on November 19 to lecture about mushroom dyeing and share items and samples made with mushroom dyes.

LEHIGH COUNTY OATMEAL COOKIES **Eve Keller**

3 TBs melted butter
½ cup sugar
¼ tsp salt
1½ cups Quaker oats
½ tsp baking powder
1 egg, well beaten
½ tsp almond extract

Mix dry ingredients, add egg, melted butter, and almond extract. Bake at 350ºF until golden brown around edges. If not cooked quite enough, the undersides of the cookies are sticky. Cookies peel off easily from parchment paper when they are baked enough. Enjoy! *Served at the December cookie bash*

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