SPORE PRINTS

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Spore Prints

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Annual dues **$30**; full-time students **$20**

CALENDAR

Dec. 14	Membership Meeting & Cookie Bash, 7:30 pm, CUH *Spore Prints* deadline (**early**)
Dec. 20	Board Meeting, 7:30 pm, CUH
Jan. 11	Membership Meeting, 7:30 pm, CUH

BOARD NEWS — Denise Banaszewski

The results are in, and the Annual Exhibit was a great success. We had over 2,100 attendees and 134 new members over the weekend. Most of the Board meeting was spent discussing the finances for the exhibit. We are looking at different providers to add greater functionality to our website. We are planning to have retreat for a limited group of people sometime in January to determine the general direction of the club. John Goldman is looking into having a generic (meaning, not specific to an Annual Exhibit) PSMS T-shirt made. In October, we decided to give Dr. Ammirati a $2,000 grant for his lab fund as we have not yet given any grant money away this year. Dr. Ammirati will put part of this toward his lab fund and part toward another area of research.

MEMBERSHIP MEETING

Tuesday, December 14, 2008, at 7:30 pm at the Center for Urban Horticulture, 3501 NE 41th Street, Seattle

It's December again and time for our famous "Cookie Bash." This annual event is hosted by your Board of Trustees and showcases the culinary and creative talents of our club members**. Please bring a dish of hors d'oeuvres, other treats, baked goods, or desserts to share.** Beverages will be provided. Please wear your best fungal-themed jewelry, clothing, and/or hats and be prepared to have a good time. This is a family event, and children are especially welcome.

Enter the art contest! Members of all ages are encouraged to create and bring some form of original art in a fungal theme. Edible entries are preferred, but they are not required. We will select the winners by a popular vote and prizes will be awarded for the best entries.

We will have a reading of fungal-themed poetry for your enjoyment. Also, as with previous years, the projector and microphone will be switched on, so please bring your digital photos (10–12 per person) and share your stories with us from your favorite mushroom hunts, travel adventures, or other activities from this year. Your presentation need not be mushroom-related, but could be whatever you want to share with your fellow members. Please load your photos onto a CD or a USB flash drive and give them to Milton Tam or Marian Maxwell before the meeting. Short video presentations on a DVD format are also welcome. You can also e-mail your presentation to Milton (miltontam@aol.com) until December 13.

FIELD TRIP REPORT, OCT. 23 — Brian Luther

Thanks to Park Manager and Head Ranger Stacy Czebotar, we had the use of the largest shelter at the park for our last fall field trip. It had lots of room for everyone to get out of the rainy weather we encountered, along with plenty of picnic tables and a big fireplace hearth, where I made and kept a roaring fire going all day. Our hosts were Sharon Chappell and Lucia Smith. They were all set up with coffee and a delicious assortment of breakfast munchies by 8:00 am, well ahead of arriving members. Thank you, Lucia and Sharon, for being so organized. And you know your contribution was especially appreciated on that cool drizzly day, judging from the speed at which all your coffee and goodies were consumed.

I was fortunate to have Larry Baxter, Danny Miller, and Jerry Stein helping me with ID all day. After a 10:00 am meeting where I discussed proper collecting techniques and passed out an information sheet and data slips for collecting in WA State Parks, Jerry and Danny volunteered to lead groups of beginners out for a few hours, both within and outside the park.

One-hundred and four members signed in, just a few less than the 107 who came last year.

I was surprised and pleased to see both Ross and Val Othus and Irene and Henry Lingat show up—members we hadn't seen in years. Special thanks also to Val, who provided me with a delicious tuna fish sandwich as sustenance during the time that I was so busy helping members with their collections that I couldn't stop for a break.

Because of the efficiency of my identifiers, we were able to document all the species from the park as they came in, saving a huge burden at the end of the day.

It was obvious that the rains had come early this year, because a large proportion of the fungi brought in were mature or overmature. Even so, nice collections of both yellow and white chanterelles were found, to the delight of many members. Adrian and Larry Lee were really excited because they found their very first matsutake. Others found a few of the same and some nice clumps of Oyster Mushrooms came in too, along with several large Orange Cap Boletes (*Leccinum* sp.).

A full tabulation of the number of species brought in has not yet been done. This will have to wait until I complete the required year end report that's submitted to the WA State Parks and Recreation Commission, allowing us to return in the future.

Potluck was scheduled for 3:00 in the afternoon. However, everybody was anxious for some energy from the huge selection of food brought in, and most members started eating around 1:30 or so.

With the help of several people who stayed to the end, we got everything cleaned up by dark.

I hope you all enjoyed this educational mushroom collecting adventure at Hood Canal. Please keep in mind we're always looking for volunteers willing to host in the future. Thanks to everyone who contributed this year, and stay tuned for the spring 2011 field trips, because I've already got some group camps reserved for our use.

Happy holidays to everyone.

MEANY MUSHROOM WEEKEND

Jerry Stein

n the evening of Friday, October 29, about 40 participants, and a dozen PSMS members and lodge staff, made their way to The Mountaineers' Meany Lodge, located near Stampede Pass and the old railroad townsite of Martin, to learn about wild mushrooms. After a light dinner, Kim Traverse shared some fungus fundamentals and foraging tips with the group, then Larry Baxter and I joined him in leading the group through the Kit Scates keys to identify *Lactarius deliciosus*, *Hygrophorus bakerensis*, and *Tricholoma magnivelare* (to genera). We also fielded many questions about the 50 or so other mushroom species that Larry and I had gathered that afternoon.

The next morning, the folks at the lodge were divided into four groups, each with a PSMS leader. About 30 more participants met at Crystal Springs Campground, where they also set off with four designated group leaders. Everyone returned to the Lodge by about 3:00 pm, bearing many fungi. It was a good year; nearly every participant found some choice edible mushrooms. Matsutake was probably most common, but white chanterelles, *Boletus mirabilis*, red-cap *Leccinum*, and *Hericium* species were also found in decent quantities. A superb cast of identifiers—Larry, Danny Miller, Coleman Leuthy, and others at times—worked steadily to sort the specimens by genera and label them to species. We managed to identify about 150 species, with typically diverse representation by the *Tricholoma*, *Hygrophorus*, and *Russula* genera.

Throughout the weekend, everyone enjoyed the fungal feasts prepared by Patti Polinski and her Meany Lodge kitchen crew. Appetizers were prepared with enoki, *Lactarius*, and morel mushrooms, and Saturday's dinner included green beans with *Lactarius* and a pork dish stuffed with matsutake and dried fruit. After dinner, Langdon Cook, local forager and author of *Fat Of The Land*, conducted a presentation of mushroom photographs, stories, and recipes from his book and website. The presentation was followed by the traditional Meany Mushroom Weekend dessert buffet.

On Sunday, participants had opportunities to tour the lodge grounds, learn about fungal dyes from Cathy Lennebacker, watch John Goldman make a chanterelle cream soup (which we consumed at lunch!), and listen to me lead a "tray tour" of all the genera and species we were able to identify.

Thanks again to all of the PSMS and Mountaineers members who assisted in the planning and execution of another successful Meany Mushroom Weekend, including Coleman Leuthy, Cathy Lennebacker, John Goldman, Marian Maxwell, Danny Miller, Larry Baxter, Kim Traverse, Linda Haba, Karen Behm, Ron Post, Debbie Lehrberger, Francis Roque, Don Lennebacker, Langdon Cook, Patti Polinski, and Emilio Marasco.

THE "POISONOUS" KING BOLETES FROM TASHIGANG

Daniel Winkler

s part of the tour I led to Tibet last summer, we stayed with a Tibetan family in Tashigang and joined them in a mushroom hunt and mushroom cooking.

During the hunt we kept running into one after another Tibetan who was also searching the dense oak forest for matsutake mushrooms. I am not used to meeting a dozen people when looking for mushrooms. The scene kept reminding me of a school play my daughters participated in some years ago. Somehow all the characters of Grimm's fairy tales were swarming the Black Forest for whatever reason and kept running into each other. All I understood was that the director wanted to make sure every school kid got one of the cherished roles—like Snow White, the Bad Witch, Little Red Riding Hood, the Wolf, and so forth. I could image that seeing oddly costumed Westerners swarming their lichen-draped oak forests approached a fairy-tale like encounter for the Tibetans.

Karma, our generous host who had taken us along on her daily matsutake search, explained to the other villagers that these foreigners were also interested in mushrooms. And she assured them that we were not picking mushrooms to sell, unlike all the locals whose daily harvest is sold to middle men to be exported fresh to Japan. The forests above the village were patrolled so intensely for fresh matsutake buds, picked as soon as their small caps peeked through the fallen oak leaves, that we did not see a single mature mushroom. In the end we encountered fewer matsutake buds than mushroom collectors.

cont. on page 4

Poisonous Boletes, *cont. from page 3*

After we had spent the morning picking matsutake with Karma, we took a break on a rock cliff that protruded out of the young oaks and enjoyed the view over the lush valley. The fields and pastures were dotted with farmhouses, surrounded by mountains bedecked in olive-green live oak and dark spruce-fir forests. Beyond the lower mountain ridges loomed snow covered peaks, and once in a while the clouds parted and allowed a glimpse of the majestic 24,000 ft peak of Gyala Pelri. What good fortune!

We split off from Karma and searched the woods for flowers and fungi ourselves. Besides matsutake and orchids, we were most excited to find beautiful king boletes in prime condition. And they really looked just like kings, displaying all the major characteristics—a smooth brownish cap, white pores when young turning yellowish-green with age, stems with a wide base, and clear reticulation. Also they smelled and tasted totally like king boletes. They had that rich nutty flavor I cherish! I had a hard time stopping myself tasting it, since eating raw boletes was a habit I had developed as a kid in the woods whenever I found a nice firm Steinpilz. So maybe it wasn't *Boletus edulis*, it was at least a *Boletus* very closely related in the edulis group. And we kept finding more and more of them, especially along the edges of the oak forest. What a delight!

D. Winkler

Boletus reticulatus
from Tibet

We took them back to the farmhouse and proudly presented them to Karma. Karma looked at them and told us with wide open eyes, "These mushrooms are poisonous" I was completely incredulous and showed Karma the pictures in our Chinese and Japanese mushroom books that were a total match. Then her grandfather chimed in, "In my 90 years no one ever ate these mushrooms here; they are poisonous!"

What to do? Being told these beautiful boletes were poisonous was neither what I expected to hear nor what I wanted to hear. I love king boletes and these were king boletes! Then I recalled that the year before I had encountered the same attitude toward boletes listed in a good Yunnan mushroom book as *Boletus edulis* sensu lato.

I was perplexed then by the local lack of knowledge about this tasty and easy to recognize fungus. So I took a specimen of this supposedly poisonous mushroom with me to the next market town and compared it to the king boletes there. It turned out that the same species was traded commercially! Some of these boletes might even end up on the global market sold as "Italian porcini," since many Italian porcini are now imported from China, especially Yunnan, which includes Tibetan areas and imports lots of mushrooms from other, non-Chinese Tibetan areas. Furthermore, I had eaten Tibetan king boletes many times before in restaurants in Tibet and never had any ill effects.

So now what should we do with our beautiful boletes? Throw them out just like the Himalayan Caesar mushrooms (*Amanita hemibapha*), we had dumped in a similar situation a few days earlier? I had thought then about how a mushroom that is not known to be edible quickly gets labeled as poisonous in traditional classifications. This might be understandable with amanitas, since the stakes are extremely high. There are several deadly and plenty of poisonous ones, so there is no point in eating any *Amanita* without being 100% sure!

D. Winkler

Himalayan Caesar mushroom

Even then many people rightly abstain, since they usually have access to plenty of other good food sources.

But boletes are no amanitas. Most members of the genus *Boletus* are edible. Sure, some easily detectable, very bitter boletes—and a beautiful red-pored bolete that is very common in Tibet—can cause pretty unpleasant digestive problems, but not a fatal liver or kidney failure in healthy people. Anyway, our boletes were clearly edible king boletes.

Nevertheless, I decided there was no point in loftily ignoring the well-meaning advice of our kind hosts and cooking some "poisonous" mushrooms in their in colorfully painted kitchen and then delightfully indulging. So I told Karma, "I have seen these boletes on the markets all over Tibet and I have been eating king boletes all my life, and these boletes from Tashigang look, smell, and taste exactly the same. However, we will heed your grandfather's and your warning. Maybe your local variety has a strange toxic component. We will cook up this batch and eat only a tiny bite for dinner and then wait and see what happens."

That "eat only a tiny bite" part was not easy—they were so delicious fried up in fresh yak butter and deglazed in a Great Wall Cabernet! However, since we were in the family kitchen that doubled as the living room, we stuck to our promise, and Karma and her grandfather seemed relieved. Needless to say that the night in our farmhouse beds was uneventful and what actually woke us up in the wee hours was the benign call of a confused rooster and not a wicked call of nature.

For breakfast Karma had brewed some tea for us and baked some tortilla-like flat breads. We reheated the king boletes and enjoyed them rolled in the fresh, still steaming bread. Interestingly, Karma and Grandpa were still not interested in joining us in the delightful meal. Hopefully, next year Karma will join us in discovering the deliciousness of these awesome mushrooms. And Karma and her family could pick plenty of king boletes without facing the intense competition when collecting matsutake in the oak forests around Tashigang.

More pictures from Tashigang and Mushrooms in Tibet can be found at www.MushRoaming.

D. Winkler

Karma's kitchen

DUES NOTICE

Unless you obtained or renewed your membership at or after the Annual Exhibit in October, it officially ends December 31, 2010.

To renew your membership, send your dues now to

Ann Polin, PSMS Membership Chair
22265 34th Place W
Brier, WA 98036

Annual dues are $30 for single or family memberships or $20 for full-time students.

MUSHROAMING IN TIBET & ECUADOR

Daniel Winkler

In 2011 MushRoaming will be organizing mushroom-focused eco-tours to Tibet and, for the first time, to Ecuador.

Ecuador, February 12–25, 2011

In February, Larry Evans, star of "Know your Mushrooms," and I will be teaming up to offer our first MushRoaming tour in Ecuador. We will be based in a beautiful and clean Canadian-run jungle lodge connected to an organic chocolate farm located in Ecuador's Amazon Rain Forest. From there, we will venture out daily on the rivers by canoe to explore the rain forest, searching for fungi, flora, and fauna and immersing ourselves in the local culture.

***Cordyceps* Expedition to Tibet, June 9–23, 2011**

Collection of the myco-medicinal caterpillar fungus (*Cordyceps sinensis*) is rural Tibet's most important source of income, endowing Tibet with the highest fungal income per capita in the world. During collection season the "whole" country is up on the slopes collecting this elusive and strange fungus. 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 valleys ablaze in spring flowers. In addition to exploring fungi, we will visit Tibet's capital, Lhasa, and Tibet's famous monasteries, sacred sites, and hot springs.

Fungal & Floral Foray to Tibet, July 31 – August 13, 2011

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 endowed not only with an incomparably rich, ancient, spiritual culture but also with a long tradition of collecting, eating, and trading mushrooms. During the summer, mushroom collection and markets are peaking, and we will encounter matsutakes, boletes, Caesar mushrooms, chanterelles, ganodermas, 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, where we will stay with a fungophile Tibetan family. In addition we will experience sacred sites in Lhasa and beyond. Daniel Winkler will lead the tour supported by Tibetan guides.

Detailed itineraries, costs, and photos from previous tours can be found at http://www.MushRoaming.com/.

GEOTAGGING: WHERE DID YOU FIND THAT MUSHROOM?

Margaret Faye

Mycelium, Myco. Soc. of Toronto, October–Dec. 2010

In mushrooming, there are occasions when we would like to pinpoint locations with accuracy, perhaps to return to the spot so rich in morels last spring, perhaps to share that spot with a friend.

There of number of ways to obtain geographical coordinates. GPS devices designed for hiking can save the coordinates of your location. The new smart phones are a more convenient way of documenting mushroom locations. Many, such as the iPhone and the Blackberry, have a built in GPS and camera. You can enable these phones to save the geographical coordinates with the picture. This is known as geotagging. New digital cameras with a built-in GPS to geotag pictures are expected to be on the market soon.

Cell phones have one limitation. They only function when you are in range of a cell phone tower. GPS devices and cameras use satellites and can function in remote locations.

Geographical coordinates can be a bit confusing. They can be expressed as latitude and longitude or Universal Transverse Mercator (UTM) coordinates. Latitude and longitude are expressed in three formats: degrees, minutes, seconds; decimal degrees; and GPS units. You can copy any of these formats into the search bar of Google Maps to place the point precisely. Although all of North America has negative longitudes, your camera or smart phone may show them as positive numbers. Make sure that you add a negative sign to the longitude.

UTM coordinates are used in most topographical maps such as the National Topographical Series. UTM coordinates have three parts. The first part gives the map number; the second part gives the distance in meters east of a reference point; the third part gives the distance north. There are a number of programs online that convert any of the formats into the one required. The easiest program that the editor found is at http://boulter.com/gps/.

The table below shows a conversion between the coordinates for the Toronto Botanical Gardens.

Decimal Degrees	Latitude 43.733872	Longitude –79.359527
Degrees, Minutes, Seconds	Latitude N43 44 01	Longitude W79 21 34
GPS	Latitude N 43 44.032	Longitude W 79 21.572
UTM 17N	Easting 632111	Northing 4843623

FORBIDDEN FRUITING BODIES

Joel Kershner

Boston Mycological Club *Bulletin*, *65*(2), 2010.

One day, after lots of rain, Joe found 10 pounds of oyster mushrooms on a dead tree by a house along the side of a road. He stopped his car, ran across the lawn with his pocket knife, cut down the mushrooms, returned to his car, and sped off with his prize.

Ten minutes later, the state police came after him. He'd been spotted running across the lawn of the State Prison's warden waving a knife.

Certain that he was headed for jail, Joe showed the cops the mushrooms and explained that wasn't an escaped prisoner bent on bloody revenge. They sent him off with no more than a warning.

Two weeks later, Joe happened to be driving along the same road when he spotted 20 pounds of oyster mushrooms on the same tree. This time he knocked and asked the warden for permission.

The warden scratched his head and answered: "Sure, be my guest. Take all the mushrooms you want. And thank you so much for stopping by to ask. You wouldn't believe the nerve of the last guy who found mushrooms on my tree!"

RESUPINATE FUNGUS OF THE MONTH:
The Genus *Botryobasidium* ©Brian Luther

I frequently find species in this genus when collecting resupinate fungi, and would describe them as common and abundant. They're characterized by having simple, very thin, loose, whitish to ocher-yellow, open and nonmembranous fruiting bodies that are not detachable as a layer from the substrate; hyphae with or without clamps; urniform (= urn-shaped) or short clavate basidia with four to eight sterigmata that are sometimes centrally constricted; and smooth spores. They are most frequently found on wood or bark that's facing or in contact with the ground. With experience, the genus can be recognized in the field without magnification.

Botryobasidium vagum, *habitat picture*

The most important characters that identify the species within the genus *Botryobasidium* are (1) the presence or absence of clamp connections on the hyphae, (2) the presence of incrustation or crystalline material, (3) the presence or absence of cystidia, (4) the length of the basidia, (5) the number of sterigmata (= the number of spores), which can vary from four to eight, (6) the size and shape of the spores, and (7) the presence or absence of an anamorph or conidial stage.

Linder (1942) included 31 species in his monograph of the anamorphic genus *Oidium*. Some species are well known for their teleomorphic, or basidal, stage, and others appear not to have an alternate life cycle. Thus, we find both some species of *Botryobasidium* lacking an oidial stage and some species of *Oidium* not associated with a teleomorphic (*Botryobasidium*) stage.

Descriptive Literature

There are several good works to consult for the genus *Botryobasidium*, including those by Christiansen (1960), Eriksson & Ryvarden (1973), and Hansen & Knudsen (1997). Breitenbach & Kranzlin (1986) also discuss several species, with excellent illustrations and descriptions, but their coverage is extremely limited.

By far the best monograph for *Botryobasidium* is by Gitta Langer (1994). Although it is in German, the author has excellent keys, descriptions, and illustrations. It's the most thorough study of the genus so far and a pleasure to use. The author has accepted, and treats, 48 species in the genus, but also has done an admirable job of covering several closely related genera that are easily confused, including *Thanatephorus*, *Uthatobasidium*, and *Tofispora*. A significant change she makes is by synonymizing the genus *Botryohypochnus* under *Botryobasidium*, thus including species with ornamented spores. Previously *Botryobasidium* was characterized by having only smooth spores (Eriksson & Ryvarden, 1973). However, there is considerable disagreement on this point because Hansen & Knudsen (1997) continue to recognize the genus *Botryohypochnus* as distinct from *Botryobasidium*, as does Cortbase, the professional resupinate website at http://andromeda.botany.gu.se/cortbase.html

Cultural studies were also done, and thanks to cytological details elucidated through transmission electron microscopy, such as septum microstructure, we understand the genus much better now (Langer, 1994). I suspect that an extensive re-analysis of the genus concentrating on DNA work in the future would result in a number of species being synonymized and perhaps others being segregated.

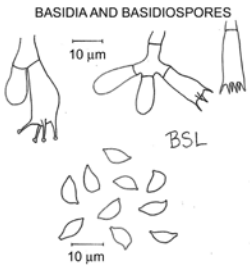
Nomenclatural Hierarchy

Kingdom Mycota (fungi)
Division Basidiomycota
Subdivision Agaricomycotina (Hibbett, 2006)
Class Agaricomyetes
Order Cantharellales
Family Botryobasidiaceae
Genus *Botryobasidium*

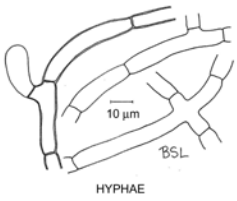
Description of Collection
Botryobasidium vagum (Curt. & Berk.) Rogers

Brian S. Luther coll. #2010-43-1. Almost to the top of Cady Mt. Road, San Juan Island, San Juan Co., WA. On the bark of a small, dead, fallen Douglas Fir (*Pseudotsuga menziesii*) facing the soil. April 3, 2010.

Fruiting body: Resupinate; white to off white; very thin, open, diffuse, and non-pellicular or membranous (= not forming a continuous layer), closely appressed to the substrate; soft when fresh but not removable as an intact layer; surface granular or farinose in appearance under magnification; margin diffuse. See habitat photo.



Microstructures: *Hyphal system* monomitic, hyphae 5–13 µm wide, hyaline, smooth (lacking incrustation), without clamp connections, with simple or opposite branching, mostly thin walled, but basal hyphae slightly thick walled. *Basidia* 15–20 × 8–11µm, short clavate, hyaline, thin-walled, without a basal clamp, mostly four sterigmate, but varying from four to six, sterigmata up to 5 µm long. *Basidiospores* 7–9 × 4–5 µm, navicular (= boat-shaped), thin-walled, hyaline, smooth and many appearing bi-apiculate, inamyloid*. *Cystidia* none. Lacking an anamorphic conidial stage (the genus *Oidium*). Refer to line drawings.



Most of the literature refers to this species as *Botryobasidium botryosum*, but according to Langer (1994) that name is a synonym of *B. vagum*. Ginns & Lefebvre (1993) list 16 species of the genus

*Amyloidity in mycology refers to the color reaction of fungal structures when treated with iodine-based stains such as Melzer's Reagent or IKI (iodine potassium iodide), also known as Lugol's solution. A structure is amyloid if it stains from pale to dark blue to violet or blackish. If dextrinoid, the fungal structure stains a warm or deep reddish brown. Inamyloid means the fungal structure does not react and shows no color change in the presence of iodine-based reagents. The chemical basis for this reaction is the presence of amylose, amylopectin, and short, unbranched starch-like or dextrin like molecules which react with iodine solutions, giving different shades of blue, violet, or reddish-brown based on the molecular structure or mixtures of these compounds present. Amyloidity is of great significance in mycology and, in fact, large taxonomic groupings, as the order Russulales, are partially defined by this.

that have been recorded in the literature for North America. Four of these have been found in Washington State: *B. ansosum*, *B. pruinatum*, *B. subcoronatum*, and *B. vagum* (my feature fungus).

DNA studies have confirmed that this genus belongs in the family Botryobasidiaceae as well as in the Cantharelloid clade and the Cantharellales (Kim & Jung, 2000; Larsson et al., 2004; Larsson, 2007).

References

Breitenbach, J. & F. Kranzlin. 1986. *Fungi of Switzerland*, Vol. 2. *Non Gilled Fungi*. Mycological Soc. of Lucerne. 412 pp.

Christiansen, M. P. 1960. Danish resupinate fungi, Part II. Homobasidiomycetes. *Dansk Botanisk Arkiv 19*(2): 63–388.

Eriksson, John & Leif Ryvarden. 1973. *The Corticiaceae of North Europe*, Vol. 2. *Aleurodiscus—Confertobasidium*. Fungiflora, Oslo. pp. 59–261, plus 24 plates.

Ginns, J. & M. N. L. Lefebvre. 1993. Lignicolous corticioid fungi of North America. *Mycologia Memoir No. 19*. 247 pp.

Hansen, Lise & H. Knudsen (editors). 1997. *Nordic Macromycetes*, Vol. 3. *Heterobasidioid, Aphyllophoroid and Gastromycetoid Basidiomycetes*. Nordsvamp, Copenhagen. 444 pp.

Hibbett, David S. 2006. A phylogenetic overview of the Agaricomycotina. *Mycologia 98*(6): 917–925.

Kim, S. Y. & H. S. Jung. 2000. Phylogenetic relationships of the aphyllophorales inferred from sequence analysis of nuclear small subunit ribosomal DNA. *The Journal of Microbiology 38*(3): 122–131.

Langer, Gitta. 1994. Die Gattung *Botryobasidium* DONK (Corticiaceae, Basidiomycetes). *Bibliotheca Mycologica 158*. 459 pp.

Larsson, Karl-Henrik. 2007. Re-thinking the classification of corticioid fungi. *Mycol. Res. 111*: 1040–1063.

Larsson, Karl-Henrik, E. Larsson & Urmas Koljalg. 2004. High phylogenetic diversity among corticioid homobasidiomycetes. *Mycol. Res. 108*(9): 983–1002

Linder, D. H. 1942. A contribution towards a monograph of the genus *Oidium*. *Lloydia 5*: 165–207.

47TH ANNUAL PSMS WILD MUSHROOM SHOW

Kim Traverse

On October 16 and 17 at The Center for Urban Horticulture, PSMS held it's 47th Annual Wild Mushroom Show to near-capacity crowds. The weather was beautiful, and the mushrooms turned in world class performances for an audience of around 2200 people.

I originally planned to thank everyone who helped by name but even listing the main contribution of everyone I could remember would have run an entire page and most people helped out in several capacities. Plus, I was bound to forget someone. So I just want to thank everyone who did help for doing such a great job making the show so much fun for those attending and for everyone else helping. When you can count on everyone to do so much it truly makes for an all around terrific experience.

Despite earlier expectations that, because of the heavy rains, we would have more types of mushrooms to display than last year, I believe our total was very similar—a little over two hundred species.

And, we picked up 134 new members during the show. Right now we're at around 900 members. Of course we usually lose some during renewal time, but this really is a great sign that more and more people are succumbing to the lure of fungi.

photos by John Goldman & Joyce Budisana

PSMS Annual Exhibit 2010

GRILLED SHIITAKE

Mike Beug

MushRumors, Ore. Myco. Soc., Sept/Oct. 2010

This recipe is for fresh mushrooms. Reconstituted dried mushrooms do not work well.

Remove the stems from fresh shiitake. Soak the mushrooms for a while in lightly salted water in order to fully hydrate them.

Arrange shiitakes on a barbeque grill with the gills up. Place a spoonful or so of sauce in the gills (pretty much filling the inverted cap with sauce) and grill until the sauce is all absorbed—be sure to remove the mushrooms before the caps start to crisp up or char.

There are several variations on the sauce that work well.

- My favorite sauce recipe is roughly equal parts olive oil, lemon juice, and tamari (or soy sauce). For a nice zing try adding some of your favorite hot sauce. I never measure, just "guestimate."
- My favorite hot sauce: Smoke a smoker full of jalapeno peppers (seed the peppers for a mild sauce or leave seeded for a hotter sauce). When smoking is complete (2–4 hours) add about 1/3 to 1/2 as much peeled garlic as smoked peppers (now called chipotle). Simmer garlic and peppers together in white vinegar/water (50:50) until the garlic is softened, adding more vinegar/water so that there is still a small amount of liquid when the garlic is soft. Sieve and it is ready to use or store. If too dry, add extra vinegar while sieving (use straight vinegar, no water at this point). I call this my "chipotle/garlic sauce."
- Another good sauce is to substitute fresh Serrano peppers for the smoked jalapeno peppers. Smoking the Serrano peppers does not work well, so just cook fresh Serrano peppers with garlic and vinegar/water and then sieve.

SEEKING COLLECTOR OF A RARE POLYPORE FROM MOUNT RAINIER

Brian Luther

Some member brought me a large collection of a rare polypore for ID at the Twanoh State Park field trip. She had just found it at Mt. Rainier a day or so earlier. I remember where she told me it was found, but I failed to write down her name. I took extensive fresh notes and photos and preserved the specimen.

It's a very important find, and I need to talk to the collector to obtain further details. Please call or e-mail me if you are that person or know who it was.

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See you next year!

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Remember: *Unless you joined at or after the annual exhibit, your **dues expire Dec. 31**. Please renew your membership as soon as possible.*