SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
Number 417 December 2005

Happy

Holidays

Spore Prints

is published monthly, September through June by the

PUGET SOUND MYCOLOGICAL SOCIETY

Center for Urban Horticulture, Box 354115
University of Washington, Seattle, Washington 98195
(206) 522-6031 http://www.psms.org
User name: morel *Password:* spring

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Dennis Oliver, Secretary

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ALTERNATES: Steve Bigelow

SCI. ADVISOR: Dr. Joseph F. Ammirati

EDITOR: Agnes A. Sieger, 271 Harmony Lane, Port Angeles, WA 98362
sieger@att.net

Annual dues $25; full-time students $15

CALENDAR

Dec. 13 Membership Meeting and Annual "Cookie Bash," 7:30 PM, CUH

Dec. 13 *Spore Prints* deadline (early)

Dec. 19 Board Meeting, 7:30 PM, CUH

Jan. 10 Membership Meeting, 7:30 PM, CUH

BOARD NEWS

Dennis Oliver

Still basking in the afterglow of a successful mushroom show, the board had a light agenda for this month's meeting. The treasurer reported that the show cleared $2,635 on receipts of $12,448. The board discussed next year's show and authorized the president to explore moving the venue back to CUH. The dates for the winter lichen class have been set (see article on page 5). Last year's survivor's banquet was so successful, with over 120 people attending, that the board has decided to make this year's survivor's banquet a potluck. The board reluctantly accepted the resignation of trustee Lynne Elwell, who has purchased a house near Port Orchard (and who will be receiving visitors once she has moved in). This leaves two current vacancies on the board.

Epitaph on a tombstone in North Scotland

Come bide a wee,
And sit with me
Upon my tombstone long.
The key die lee,
Though it may be
I did but read it wrong.

MEMBERSHIP MEETING

Tuesday, December 13, at 7:30 PM at the Center for Urban Horticulture, 3501 NE 40th Street, Seattle

The December membership meeting will feature the creative work of PSMS members in the form of art, both edible and otherwise. Please bring a dish of finger food to share at what has come to be known as the "Cookie Bash." Not only cookies, but a plethora of other delightful hors d'oeuvre and treats will surely appear. Beverages will be provided.

There will be the traditional art contest. Please bring some form of fungal art to be judged by popular vote. There will be prizes for the best of several categories. All ages are encouraged to create an entry. It may be edible, but this is not a requirement.

If you would like, bring 5–10 slides to share—or even better put them on a CD or USB Flash Drive—and give them to Tony Tschanz 15 minutes or more before the meeting or e–mail them to Tony at psmspics@lat.mailshell.com. The pictures need not be mushroom related; they can be about anything that you think that others would like to see.

Please wear any fungal attire or jewelry that you may have and be prepared to have a good time.

DECEPTION PASS FIELD TRIP

Brian Luther

When I arrived at the Cranberry Lake shelter on November 5, John and Ruth Haines, our hosts for the day, had everything completely organized, with hot coffee, hot water on the camp stove, goodies out, and a large fire going. Ruth had a great big pot of delicious homemade soup, which was very welcome. If it hadn't been for John's roaring fire and Ruth's wonderful soup, we'd all have starved and been shivering for most of the day. A great big thank-you, Ruth and John, for a job super well done!

Of course, it started raining just as soon as we got the sign boards set up out on the picnic tables, so we had to take them right back down again and set them by the fireplace to dry. This is basically how the rest of the day went—rain, with more rain added to that. Twenty-six members signed in. Special thanks to Larry Baxter, Josh Birkebak, and Margaret Dilly for helping with identification.

Eighty-two species were collected and displayed, as well as several others I'm still working on. Several people found chanterelles (*Cantharellus* sp.), and one person found two Matsutake (*Tricholoma magnivelare*). A few nice Woods Blewits (*Tricholoma nudum/Lepista nuda*) came in, but nothing was in abundance and some of the edible collections were well "over the hill." Interesting collections that came in during the day included the very robust *Cortinarius crassus*, an overpoweringly sweetly fragrant *Hebeloma sacchariolens*, *Hygrocybe singeri*, *Neolentinus kauffmanii*, *Agaricus semotus*, the beautiful and extremely slimy *Cortinarius vanduzerensis*, a gorgeous collection of a *Boletus* of the *B. pinophilus* or *B. mottiae* group (yet to be determined), and the rare *Hygrophorus pratensis* var. *pallidus*.

We were pleased to have Mira Lutz, the Interpretive Specialist (= park naturalist), for the park hanging out with us for most of the day. She enjoyed learning a few more mushrooms and found out just how hospitable all of us are at PSMS.

No potluck was planned, so people took off for home where it was warm and dry. It was dark by the time we got the shelter all cleaned up and headed out a little after 5:00 PM.

TWANOH STATE PARK FIELD TRIP Brian Luther

Friday night it rained hard, but we lucked out and Saturday, October 28, was dry all day. My mom and I got down to the park about 6:30 AM, when it was still dark, to reserve the shelter for the day. We swept the tables and shelter and got a fire going to reserve it for PSMS. About 7:30 AM, Park Manager Larry Otto came and turned on the lights and power in the shelter and gave us a big garbage can with some extra liners.

Our host for the day was Tony Tschanz, who arrived around 8:00 o'clock. In usual form he had big containers of hot coffee and all kinds of goodies for the membership. Thanks, Tony. The field trip wouldn't have been the same without you!

The stream was running strong, but we were too early for the return of spawning Chum (Dog Salmon). There were no fish arrivals at all yet, but a week or two later the streams off Hood Canal will be clogged with these large salmon.

Twenty-nine people signed in, and I was kept more than busy all day helping people with their collections. Several new members enjoyed their first field trip, and many found at least some chanterelles, both yellow and white, right in the park, as I had told them they would. Several nice collections of robust *Leccinum aurantiacum* buttons showed up, and Deer Mushrooms (*Pluteus cervinus*) were abundant and brought in by most all members.

The awards for the prettiest mushrooms found would have to go to *Mycena adonis* (brilliant coral pink-red), *Laccaria amethysteo-occidentalis* (deep, rich violaceous-purple overall), *Russula rhodopoda* (a gorgeous rosy-red cap and stem and pure white gills), the delightful *Baeospora myriodophylla* (narrow, crowded gills of the most exquisite purple color), and a nice collection of one of the green-wood discomycetes, this one being *Chlorociboria aeruginascens* (strikingly turquoise apothecia).

Unusual or interesting finds included the polypore *Oligoporus fragilis*, which gave an instantaneous dark blue reaction with tincture of gum guaiac (I demonstrated this for the membership); two fruiting bodies of *Pleurotus elongatipes*, *Panellus mitis*, and the beautiful *Panus conchatus* (= *P. torulosus*). One hundred and thirty-four different species were displayed, along with several others that I still needed to work on for identification. During the course of the day, I'd occasionally do some macrochemical spot testing on specimens that give dramatic color results, and the crowd seemed to appreciate the "chemistry" I did for them.

A happy group of twelve people stayed for potluck, and clearly the tastiest dish was made by long time PSMS members Ted and Gwen Heib. It was a chanterelle and chicken dish, and we all wished there had been about three times as much of it—yum!

Everybody who stayed for potluck pitched in to help me document the species found and return the specimens to the woods, clean up the campsite and shelter, and put out the fire. We were all working in the dark at the last. Special thanks to all of you who stayed to help Tony and me get everything cleaned up.

Special Note: *This was the very first PSMS field trip where mushroom collecting in a state park required an approved collecting permit*, based on the new regulations that went into effect on September 15, 2005. Among other things, the permit requires submitting a report documenting all species collected, their relative abundance, and any other pertinent info. The renewal of my permit on behalf of PSMS is not automatic, but rather is contingent upon me (us) satisfying the stipulations of the permit. Without this permit, PSMS cannot legally collect mushroom specimens in the state parks for educational and scientific purposes—which is one of the primary goals of PSMS.

I would be very pleased to have some volunteers who are willing to assist me in documenting the species that come in, especially those of you who also have some experience in mycological microscopy. **I repeat, PSMS mushroom collecting in Washington State parks depends on this info**.

PRESIDENT'S MESSAGE Ron Post

After a nice summer and an extended warm period this October, we put on our 42nd annual exhibit: another successful event, and many who attended described the displays as fascinating. One sad note: one of our banners was again stolen from its position on a fence outside Sand Point Park a week or so before the exhibit.

At our November board meeting, we spent some time discussing the ins and outs of moving the exhibit back to the Center for Urban Horticulture (but not because our banner was stolen). One weekend is available there next October. I will keep you informed of any progress on that front.

A great many thanks to all of you who collected mushrooms and helped out. My apologies to the newer members who could not get into the fall beginner's class. See the schedule elsewhere in this newsletter for the upcoming lichen class.

We're already gearing up for our Christmas party, the "Cookie Bash," to be held December 13. Again this year, we'll have an art display with voting by members and awards for the most popular pieces. So get out your easels and clay, or whatever medium you work in! And be ready to sing!

Our library (in the office) is open from 5:30 to 7 PM before each membership meeting (with the exception of the Cookie Bash, since this is a social event), so I hope to see more of there you starting in January.

IMPORTANT REMINDER: You may receive a notice next month that says if you have not renewed your membership by the end of January, you won't receive a February *Spore Prints*. So please renew now! Just use the form provided.

Ask anyone in the club about the finest mushroom event of the New Year, and they'll tell you they always look forward to our Survivor's Banquet. It's March 11, 2006, at the Center for Urban Horticulture. It will have a "Mushroom Humor" theme and once again be a potluck affair. New trustees and officers will be announced at that time. I look forward to another good year of mushrooming and many fun PSMS activities.

WANTED: *BAEOSPORA MYOSURA*

I have a request for fresh specimens of *Baeospora myosura*. If you find some, make a spore print on aluminum foil and keep a voucher specimen. Keep the spore print as sterile as possible. A photo of the fungus on the cone would be nice. Send to

Joe Ammirati
Professor, Department of Biology,
355325 406 Hitchcock Hall
University of Washington Seattle, WA 98195
Phone - (206) 543-1986
FAX - (206) 685-1728

PIX FROM THE 42ND ANNUAL PSMS WILD MUSHROOM EXHIBIT
OCTOBER 22–23, 2005

LICHEN CLASS — Dennis Oliver

For the fungiphilic individual, winter is the cruelest season. The mushrooms of fall are now just a distant memory. The morels of spring are just a hopeful future. The next appearance of boletes, matsutake, and chanterelles seems like a lifetime away. Sigh. What to do?

In a word: lichens.

PSMS is pleased to announce that Dr. Katie Glew will be offering a four-session evening class on lichens this winter. The class will begin on Wednesday, January 18, and run for the next three Wednesdays at Hitchcock Hall on the University of Washington campus. A field trip is planned for Saturday, January 21, to get specimens for class and to view lichens in their natural habitat. Cost of the class will be $35.00 for the complete series. Space constraints limit enrollment to 15 people, so if you're interested please e-mail education@psms.org (preferably) or leave a phone message at (206) 722-0691 if you do not have e-mail. Dr. Katie Glew received her Ph.D. in Botany from the University of Washington specializing in Alpine lichens and their ecology. She also directs the Seattle Lichen Guild. The suggested book for the class is McCune and Geiser's *Macrolichens of the Pacific Northwest.*

INTERNATIONAL MEDICINAL MUSHROOM CONFERENCE III (IMMC3) — Patrice Benson

Scientists and mycologists both professional and amateur gathered at Ft. Worden in Port Townsend on October 12–17, 2005, to exchange information about the potential and actual medicinal qualities of fungi. Twenty-two countries were represented by approx. 250 attendees, who gathered to present papers and exchange information about the latest findings from medicinal mushroom research. The conference was sponsored by Paul Stamets and Fungi Perfecti and was more than 2 years in the planning. Dick Sieger led a field trip at the opening of the conference and Patrice Benson led one at the conclusion. Our digital projector was used to display a few of the presentations. Particularly popular was an interesting talk by Reinhold Poder, the mycologist from Austria who identified the Ice Man's fungus. The Ice Man is a 5000-year-old mummified frozen human who was discovered a few years ago in the Italian Alps. Dr. Poder showed some unpublished photos of both the Ice Man and his fungus. Speculation abounds as to whether the fungus found with the Ice Man was medicinal, magical, or practical.

The keynote speaker was Dr. Andrew Weil, who coincidently was on the cover of *Time* magazine that week. I heard lots of great scientific reports and interesting ideas and look forward to the next conference in 2007 in Slovenia.

BREITENBUSH 2005 — Patrice Benson

The 2005 Breitenbush mushroom conference was a great success with lots of collecting, dyeing, cooking, and excellent lectures. Next year's conference will be October 26–29, 2006. For access to the Fungizette and photos from the conference, see **http://www.fungi-zette.com/breitenbush_2005_pictures.htm.**

We are sad to report the death of charter member Jennie Rafanelli, 88, on November 9, 2005. Our condolences to her family.

12TH INTERNATIONAL FUNGUS AND FIBRE SYMPOSIUM — Patrice Benson

My daughter Katie and I traveled to Haslev, Denmark, on August 23–28 to attend a gathering of the world's most avid mushroom dyers, including the Grand Dame of mushroom dyeing, Miriam Rice. Nine countries were represented by about 115 attendees. During the 5–6 days of the conference 63 dye baths resulted in a rainbow of colors which produced lovely wool samples.

Various fiber arts were introduced to novices like me in the form of workshops. I learned how to do tapestry weaving, card weaving, paper making, and felt making. We also looked for fungi in the forests around Mon Clint (limestone cliffs) and saw a few other Danish sites and architectural wonders (things are older in Denmark than they are here!). There were evening lectures on the chemistry of dyeing and other subjects such as fluorescent mushrooms. We were treated to entertainment in the form of folk dancing (we had to do the dancing). Danish food is wholesome and delicious, especially the Danish cheeses!

This year is the 100th anniversary of the Danish Mycological Society. The DMS sponsored an exhibit at the conference. Mushrooms of the area were collected and displayed with Latin names attached along with information about each mushroom or its family. The exhibit was accompanied by a large exhibit of fiber-based art and garments all using material dyed with fungi. On the way out of the country we stayed in Copenhagen and saw the incredible Christensborg palace tapestries by Bjorn Norgaard. These were not dyed with mushrooms but are famous nonetheless. We will present a few slides of fantastic fibers dyed with fungus and other fun fungus facts at the December meeting. For details, see http://kongehuset.dk/artikel.php?dogtag=k_en_col_tap.

FUNGUS IS NEW TOOL FOR "SUSTAINABLE AGRICULTURE" — Wagdy Sawahel

The Sporeprint, L.A. Myco. Soc., October 2005

Infecting crops with a fungus could be an alternative to genetically modifying them to boost yields, say scientists.

In research published in the *Proceedings of the National Academy of Sciences*, they showed that barley infected with a fungus called *Piriformospora indica* had three key advantages over uninfected plants. (1) It was able to grow in salty conditions, (2) it yielded up to 11 percent more grain, mainly because each plant had more seed heads than uninfected barley, and (3) the plants were also better at resisting infection by two disease-causing fungi (*Fusarium culmorum and Cochliobolus sativus*) that cause considerable economic losses worldwide.

Frank Waller of the University of Giessen in Germany, who led the laboratory-based study, told SciDev.Net that its findings challenge the notion that inducing crop resistance to disease or conditions such as salinity carries the cost of lower yields.

Explaining that barley is used as a model crop for research on other cereals such as rice and wheat, he said the research was important because soil salinity and plant diseases are major global causes of crop loss.

Piriformospora indica, which was recently discovered in India, naturally infects the roots of plants growing in the same environment. Waller said the fungus could be used to improve the stress and pathogen resistance of other plants that are difficult to genetically modify. It can easily be grown on large scale and could become a new tool for sustainable agriculture, he said.

– (23 September 2005, SciDev.net)

FUNGI THAT ARE NECESSARY FOR A MERRY CHRISTMAS

Tom Volk

Mycolog, Humboldt Bay Myco. Soc., December 2003

Christmas Trees: The primary, although indirect, benefit of fungi to people is mycorrhizae, which are associations between fungi and the roots of plants. Approximately 90% of plant species in nature have a mycorrhizal association with a fungus! Of course the primary Christmas thing that is the direct result of this association is the Christmas tree. Without the fungi the trees would not grow very well at all—at most two or three feet tall in ten years! Most of the Christmas trees from the north (pines, firs, Douglas fir, spruces) are ectomycorrhizal—they form an association with Basidiomycota (and a few Ascomycota), which form fruiting bodies (mushrooms) that are very familiar to most of us. Some other evergreen trees (juniper, cypress) form endomycorrhizae with members of the Zygomycota (order Glomales, related to the "bread molds"), so there are never mushrooms under those kinds of trees. The fungi receive sugars from the plants' photosynthesis and, in return, the fungi provide the plants with increased absorption of water and mineral nutrients. Both the plants and the fungi benefit from this association…and while we're at it, don't forget about that partridge—where would it sit without that endomycorrhizal pear tree?

Paper products: The necessary and beneficial effects of mycorrhizal fungi for all trees (and almost all plants) have been noted above. Without trees there would be virtually no paper—and no wrapping for those Christmas presents. Another fungus with potential use in the paper-making process is *Phanerochaete chrysosporium*, a very efficient white-rot fungus. It is being investigated as a possible biobleaching and biopulping agent to replace the harsh chemicals that are being used in conventional paper bleaching. This fungus is able to digest the brown lignin in the wood and leave the white cellulose behind for use in making paper. *Phanerochaete chrysosporium* is also being investigated as a possible agent of bioremediation—the lignin-degrading enzyme it produces may someday be used at toxic waste sites.

Nuts and Chocolate: Without nuts, we would have no need for the Nutcracker Ballet! All nut trees have a mycorrhizal association with a fungus that helps them survive and prosper**.** Cocoa beans are processed by a "fermentation" (sensu food scientists) of *Candida krusei* and *Geotrichum*. Sounds yummy!

Bread and Cookies: Since the world's oldest profession, after all, is baking, the fungus *Saccharomyces cerevisiae* (bakers' yeast) has played an important role in thousands of years of human history. It is the organism that causes dough to rise by producing carbon dioxide. The alcohol that is produced generally evaporates. In addition, Vitamin B (riboflavin) in enriched flour is produced by the ascomycete *Ashbya gossypii.*

Cheese: Many good cheeses, such as blue cheese, Camembert, and Brie, are ripened through the action of fungi. Blue cheese is ripened *by Penicillium roquefortii*—the blue color is caused by sporulation of the fungus. And the white crust on the outside of Brie and Camembert is the mycelium of *Penicillium camembertii.*

Spirits of Christmas: *Saccharomyces cerevisiae,* the brewers' yeast, is necessary for wine, Champagne, beer, eggnog, and other holiday spirits. They undergo anaerobic fermentation, producing ethyl alcohol and carbon dioxide, both of which are important in Champagne and beer-making. Of course, the alcohol is the major product in wine and the other spirits.

Edible mushrooms: You can't have Christmas dinner without mushrooms! If you're lucky you might have some chanterelles in the freezer—you haven't lived until you've had chanterelle stuffing in your turkey—or maybe some dried morels or honey mushrooms. You might even be able to find or buy fresh truffles or matsutake! Even if you have to settle for *Agaricus bisporus,* the white button mushroom, you're still doing pretty good—but it's worth it to try some of the new cultivated varieties found in the grocery store, such as shiitake, oyster mushrooms, portobella, crimini, and enoki.

Citric Acid: If we believe all the commercials on television, we could not imagine having a holiday (or any day, for that matter) without a soft drink. The citric acid in cola drinks is produced by large-scale vat fermentation of *Aspergillus niger.*

Stone Washed Jeans: Maybe someone bought you some soft stone-washed jeans for Christmas. Now, you didn't really think they make those variable-color, sort-of-faded-out jeans by hiring little old ladies with babushkas to take them out to the rocks on the stream and beating them? No! The jeans are placed in a large vat containing a fungus, *Trichoderma,* which produces enzymes (cellulases) that partially digest the cotton fibers of the jeans, for that stone-washed look and softness.

Reindeer Lichens: Of course Santa's reindeer have to eat something, and for a large portion of the year, reindeer in the tundra feed off of reindeer lichens, *Cladonia rangiferina,* also (incorrectly) known as reindeer moss. They are very abundant in the Arctic and literally cover the tundra. Of course fungi can't take all the credit here—a lichen is a dual organism, the result of a mutualistic (symbiotic) relationship between a fungus and either an alga or a cyanobacterium.

Death of a tree

The saw screamed through the timber,
Inside my head the tree groaned
—it is not heard.

How many hours they toiled
To move those heavy boughs
—just to be burnt.

Those limbs, a roost for owl and sparrow hawk,
Now lie defenceless on the ground
—their use is gone.

And soon the fungi will appear on fallen branch,
The woodlouse chews a way through rotting wood
—and life goes on.

—Mel Robinson

MUSHROOM POISONINGS

Marilyn Maxwell

Amanita muscaria

Josh Birkebak and his mom, Tambra, got to the hospital about 5 minutes ahead of me. The people in ER were amazed at Josh's proficiency at his age! The patient had cooked and eaten three *Amanita muscaria* the night before and then cooked and ate two more in the morning. She was very nauseous. (No wonder!) Luckily she had saved a beautiful specimen of what she had picked, and it was definitely *Amanita muscaria*. The next question was whether the ones she ate all looked like that.

I called the doctor back later and recommended that she strongly advise the woman to get help identifying mushrooms before she eats them again, since other members of the *Amanita* genus aren't as forgiving. I also advised that the ER department purchase a copy of Dr. Denis Benjamin's *Poisons and Panaceas*, which gives a detailed treatment for mushroom poisonings.

Psilocybe semilanceata

About two weeks ago, I was called by the Kent Department of Corrections. Some inmates had been picking mushrooms in a cemetery they were working in that used to be pasture land. The caller needed to know if the mushrooms were "what they thought they might be." They were growing in grass, had long stipes, and conical caps.

When I saw them, they had been crushed, mangled, and smashed flat in the little plastic baggie and were exhibiting quite a bit of blueing. (This is from the psilocin, but the more they bruise the less potent they become since this an indicator of psilocin decomposing.) The transparent pellicle could be pulled away from the little bits of the caps that I could find. They were definitely psilocybes, most likely Liberty Caps, *Psilocybe semilanceata*. Needless to say the guys on the work release program weren't supposed to be picking these.

The officers were also concerned about the possibility of the inmates gathering something in the vicinity that might be more harmful. I informed them of the possibility of gathering in haste, which is what they would be doing, and that some species that people wouldn't want to ingest can be in the same vicinity, actually growing right next to each other.

All in all, it made for a couple of interesting "out of the ordinary" days. Probably for the people doing the picking, too, in these cases.

There are mushrooms that can kill you.
Some will nauseate or chill you.
And there's others that will fill you
with delight.

Some are simply unhygienic.
And a few hallucinogenic
Which will land you in a clinic
in a fright.

So the thing to do is fry them.
Get the wife and kids to try them.
Then It's easy to identify them.
Right?

—Ralph Nolan

MUSHROOM HATS

Dick Sieger

No, not those cloches from Nordstrom's. These hats are made from mushrooms by artisans in Bohemia, Rumania, and Hungary. They look like doeskin—yellow brown and soft with a short visor and odd embossed appliqués. I bought mine, along with a place mat, in the magnificent public market in Budapest in 1999. The hat cost about $25. I've been trying ever since to find out how mushroom hats are made.

Paul Kroeger found references to mushroom products of Eastern Europe in three books from his library.

From *The Romance of the Fungus World*, 1925, we learn that "…while amadou (*Fomes fomentarius*) finds in various parts of the Continent, particularly in Bohemia, a variety of employment in addition to the usual one [tinder]. Thus, not only are caps, aprons and various articles of dress made from it, but also chest protectors, picture frames, ornaments and other articles."

The Dictionary of Economic Plants, 1966, tells us about "*Fomes fomentarium*," writing that "Recently it has been used for manufacture of buttons, bedroom slippers, flower pots, smoking caps, etc. Used by dentists for absorption and compressing," This suggests two forms—hard hollowed out conks and soft fabric-like material.

Therapeutics Materia Medica and Pharmacy, 1926, says that. "AGARICUS CHIRURGORUM, Surgeons' Agaric (Unofficial),—is the interior portion of the fungus *Fomes fomentarius*, which grows on the trunks of beeches, birches, and oaks in Europe. It is prepared for use by boiling in weak lye and beating with mallets, and then occurs in light, thin, yellowish-brown pieces, soft and pliable, without odor and taste…. It was formerly used as a mechanical hemostatic, and for the purpose of moxa [material burned on the skin as a counterirritant]."

Storm, a fellow who studies primitive technologies, showed me a piece of fabric that was similar to my place mat. It had been made by pounding the interior tube layers of *Fomes fomentarius* into a felt.

Adolph Ceska, who studied in Prague, wrote, "I have no idea about the hats. I saw only one that was in the Charles University collections and when we were young students, we had lots of laughs when our assistant professor put it on his head."

Patrice Benson solved the mystery. She attended the 12th International Fungus and Fiber Conference in Haslev, Denmark. There, she bought four mushroom hats and a purse from Ann-Christine Berencsy whose father made them in Hungary. He uses large *Fomes* conks. These are hard to come by so he can make only 20 a year. He starts by stripping off the active pore layer and cutting off the woody top layer. This leaves him with the fibrous interior. The interior is soaked for 3 days in a weak lye solution he makes with birch ashes and water. The result is mashed into a flattish mass and then molded and dried. The material can be glued on forms and pieced together, but he tries to get large conks for the outside of the hats.

Patrice fielded some questions about her hat when she wore it at the exhibit.

"What happens when it rains?" (She doesn't know.)
"How do they make them?" (Now we all know.)
"Are they edible?" (Patrice won't eat her hat.)

CREAM OF CHANTERELLE SOUP **Charles Robb**

3 pounds fresh chanterelles
3 medium carrots
1 large leek
4 ribs of celery
1 bay leaf
2½ quarts mushroom broth
or vegetable stock
or fat-free chicken stock
1 cup of heavy cream
1 stick plus one TBs butter
¼ cup all purpose flour
3 TBs fresh minced flat leaf parsley
Onion powder, garlic powder, salt, white pepper, and Madeira, to taste

This is a killer cream soup that has a very intense mushroom flavor and a rich texture. It's a great way to use all those chanterelles from yesterday's foray! The key to the intense flavor is the mushroom stock made in the first three steps, which becomes the base of the soup.

1. Take two pounds of the best mushrooms and slice the stems off to within an inch or two of the cap. Set the caps aside. Combine the remaining pound of mushrooms with the stems and chop very finely with a knife or food processor.

2. Roughly chop the carrots, celery and leek. Add vegetables, bay leaf, and finely chopped mushrooms and stems to a large pot, then add the mushroom broth, vegetable stock or chicken stock. Bring to a boil, then reduce heat and simmer for about 45 minutes, stirring occasionally.

3. Strain the stock through a fine metal strainer to another container to remove all the bits. Use a firm spoon to press the chopped mushrooms against the sides of the strainer to squeeze out all the liquid possible (push hard!). Discard the boiled-up veggies and mushrooms, put the resulting stock in your big soup pot, and set aside.

4. Slice or roughly chop the remaining two pounds of prime chanterelle caps.

5. In a large sauté pan, melt a stick of butter over medium high heat. When it starts to sizzle, add two tablespoons all purpose flour and stir continuously until the flour is saturated with butter, a couple of seconds. Continue adding flour one tablespoon at a time, stirring continuously, until the mixture will not absorb any more flour and the mixture forms a ball—a quarter cup or so of flour total. Using a ladle, add one cup of the stock to the mixture (roux) in the sauté pan, and stir continuously. As the liquid is absorbed, keep adding more liquid, up to three or four cups worth, and stir continuously until you have a smooth, lump-free gravy. Add this mixture to the soup pot that has the stock, and keep on medium heat.

6. Dry sauté the sliced mushrooms until they are reduced in volume by about half. Add one tablespoon butter to the mushrooms, sauté for another 2 minutes, and then add to the stockpot.

7. Add the cream to the stockpot, still over medium heat, and mix well. Lower the heat and simmer the soup for an hour, or until the desired thickness is reached. If it is too thin, make another roux with one tablespoon flour and one tablespoon butter as in step 5, and add the resulting gravy back to the soup pot. If it is too thick, add additional stock or milk to reach desired consistency.

8. Take about 1/3 of the soup from the pot, mushrooms and all, and puree it in a blender until smooth. Add back to the soup, mix well.

9. Adjust salt level, and add black or white pepper, if desired, and a dash of onion powder, garlic powder, and Madeira to taste. Toss in the finely chopped fresh parsley, and serve with a fresh, crusty baguette and some Oregon pinot noir.

Note: All memberships (except those of people joining at or after the PSMS annual exhibit in October) are officially up as of the end of the year. **Please use the enclosed form to renew your membership now!**

Puget Sound Mycological Society
Center for Urban Horticulture
Box 354115, University of Washington
Seattle, Washington 98195

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