SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
Number 469 February 2011

SURVIVORS' BANQUET Patrice Benson & Milt Tam

Our Survivors' Banquet and Annual Business Meeting will be held on Saturday, March 19, at the Center for Urban Horticulture. Appetizers and beverages start at 6:30 pm and dinner at 7:30 pm, with the the meeting concluding at 9:30 pm. Our new officers, board members, and Golden Mushroom recipient will be presented at that time. Our theme will be "Celebrating Scandinavia!" We are asking people to bring potluck items that feature foods that are typical of Norway, Sweden, and Denmark. We will have several raffle baskets on which you may bid, with the proceeds benefiting the Ben Woo Scholarship Fund. We will also have door prizes, and those who register ahead of time will get an extra ticket for the door prizes! The extra tickets will be given out the evening of the banquet.

PSMS member Sara Nelson, who works at the Fremont Brewing Company, has generously offered to donate a keg of beer from the Brewery for the occasion. Thank you, Sara! And, yes…we will have a banquet permit for the evening so that you can BYO.

The cost will be $5 per person. This will cover incidentals as well as give us an idea of how many people will be attending. We will not turn anyone away at the door, but only those who register ahead of time will be guaranteed to have a seat. Last year it was difficult to find seating for people who decided to come at the last minute.

You can pay at the Membership table at the February meeting *or* you can send your check payable to PSMS to Andrea Rose, 5819 SW Horton, Seattle, WA 98116. If you have questions you can call her at 206-933-0838.

We look forward to seeing you there! Will we have fun? Ya sure, you betcha!

LEARN MORE ABOUT MUSHROOMS

Patrice Benson

An additional Beginning Mushroom Identification Class has been added to our spring mushroom class schedule. The dates are Thursdays, April 7, April 14, April 21, and April 28, 2011, from 7–9 pm in the Douglas classroom of UW Center for Urban Horticulture.

There is still space in our Intermediate Mushroom Identification class, which will be held Thursdays, March 10, March 17, March 24, and March 31 from 7–9 pm.

The beginner series covers basics of mushroom hunting, identification, common mushrooms of the PNW, mushroom toxins and toxic mushrooms, and mushrooms as a hobby (cooking, arts and crafts, etc.). The Intermediate series focuses on identification skills and the commonly found mushrooms in the PNW. The room holds 40, so the classes are limited to that number for each series. Please bring mushrooms if possible to all classes.

The beginner series are repeats of the previous series. Class sizes are limited to 40, so we have multiple offerings of the same series. A series is four classes given on consecutive weeks.

You may register for any series by following the directions below. Please include your name, phone number, and e-mail address with your class registration check. These classes are a benefit of membership, so please join PSMS to participate.

Location: The classes are being held in the Douglas classroom at the Center for Urban Horticulture.

Cost: The cost for each series of four classes is $40, and the classes are available to members only.

To register for a class series: Make checks payable to PSMS for $40 and send to:

Patrice Benson
3818 Cascadia Ave. S
Seattle, WA 98118

To become a PSMS member: Download and fill out the membership form at http://www.psms.org/join.html and send it, along with your check, to the address on the form.

The cost of membership is $30 per year for singles or families; $20 for students. Please do not send membership checks with your class registration.

Questions? e-mail education@psms.org or call Patrice Benson at 206–819–4842.

YARSA GUMBA MURDER TRIAL Joanna Jolly

BBC News, Kathmandu, Jan. 4, 2011

The people of a remote Himalayan village in Nepal are awaiting the verdict of a murder trial over a rare, highly prized fungus, *Cordyceps sinensis*, known locally as yarsa gumba. For the past 500 years, yarsa gumba has been prized as an aphrodisiac by the Chinese and sells for thousands of US dollars per kilo, making it the most valuable commodity in this remote region.

In June 2009, a group of 36 men from the village of Nar are accused of killing seven people who had come from outside the area to collect yarsa gumba.

Because most of the men from the village are in jail, there is no one left behind to work. "Our land is barren now," says the sister of one of the jailed men. "There is no one to plough the fields."

A verdict in the case of the yarsa gumba murders is expected in February.

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

CALENDAR

Feb. 8 Membership Meeting, 7:30 pm, CUH

Feb. 16 Board Meeting, 7:30 pm, CUH **(changed)**

Feb. 22 *Spore Prints* Deadline

Mar. 12 Ballot reception deadline

Mar. 19 Survivors' Banquet and Annual Meeting, 7:30 pm, CUH

BOARD NEWS

Marian Maxwell

We are pleased to announce that we are funding a grant request from our own Josh Birkebak for $1,945 which was requested to enable him to work on Clavariaceae in the Pacific Northwest. Progress is continuing on issues concerning the new website. Carlos Cruz, chair of he new Vouchering Project, summarized the committee's goals and steps that need to be taken to begin the process of scientific vouchering. A deposit has been made to reserve The Mountaineers' facility at Sandpoint for the annual fall mushroom show. It was decided to have a potluck this year for the banquet; a nominal charge of $5 per person was decided upon to encourage an early response to get a head count. We will be printing some T-shirts to have for sale in the coming months. We will establish a business "face" on Facebook for announcements only. We will not enable the comments from the public, since we have this option on the Yahoo group lists. A Golden Mushroom recipient was chosen and will be revealed at the Survivor's Banquet on Saturday, March 19. The Board voted to change the date of the next board meeting from February 14 to February 16.

MEMBERSHIP MEETING

Tuesday, February 8, 2011, at 7:30 pm at the Center for Urban Horticulture, 3501 NE 41st Street, Seattle.

Daniel Winkler

The first speaker for February is our very own PSMS member Daniel Winkler. Although Daniel has previously shared tales of his journeys to far-flung places with us, he will speak this time on a more local subject: "Edible mushrooms of the Pacific Northwest and Their Not-So-Edible Look-Alikes." Come see Daniel and prepare to be entertained, fascinated, and educated!

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 20 years. As part of his research Daniel has focused on medicinal and edible mushrooms in Tibet. Daniel moved to Seattle and joined PSMS in 1996, which took his love for mushrooms to a whole new level. He is an expert on wild edible mushrooms on three continents and organizes exotic mushroom tours, venturing into new and old habitats and cultures to feed his curiosity and his family (see: www.MushRoaming.com). Along the way he captures photographic images and gathers stories to share. He is a popular lecturer at mushroom forays and gatherings.

Kelly Chadwick and Renée Roehl

Sharing the microphone will be Kelly Chadwick, who will read from an anthology of fungal-inspired poetry called *Decomposition*, which he co-edited with Renée Roehl. This text—apparently the first of its kind—explores a broad spectrum of human responses to the kingdom of fungi, from dry-analytic to campy, and promises to be "humorous, authentic, and intelligent." Kelly has studied mushrooms on and off for 20 years during which time they've frequented his dreams and drawn him into the woods. He is a fine-wine manager for a beverage distributor and lives in Spokane with Renée.

Would members with last names beginning with the letters A–K, please bring a plate of refreshments to enjoy after the meeting.

BACTERIA AND FUNGI KEEP SOME ANCIENT AUSTRALIAN ROCK ART COLORS VIVID

Lin Edwards

PhysOrg.com, Jan. 6, 2011

New studies of 80 Bradshaw rock art works in the Kimberley region of Western Australia have shown their colors have not faded because the artworks are coated with a biofilm of bacteria and fungi.

The Bradshaw art works are named after Joseph Bradshaw, a 19th century pastoralist who was the first white settler to discover them. They are known locally as Gwion Gwion. The paintings are estimated to be at least 17,000 years old, and possibly as ancient as 70,000 years old, based on the time of extinction of animals and plants depicted. The paintings are often vivid and have high

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SARCOSCYPHA COCCINEA: A Superb Cup Fungus from Washington State

Brian Luther

Also known as Scarlet Cup, this Discomycete is often associated with Cottonwoods, frequently coinciding with fruitings of *Verpa bohemica*, and is what I describe as a genuine "beauty of the woods."

It's bright scarlet, has a pronounced white excipulum (sterile outside) and stipe, and is usually goblet shaped at maturity. It's usually found in late winter or very early spring at lower elevations, normally growing on little Cottonwood sticks and debris. Snyder (1938) reports finding it in January and February in the lowlands of the Puget Sound region, attesting to our mild, wet winters, thanks to the warm Pacific Ocean fronts that constantly blow in. It can be found progressively later in the season going higher in the mountains. It's also widely distributed in northern temperate regions.


B. Luther

Sarcoscypha coccinea *from eastern WA.*

At the spring foray at Tall Timbers (NE of Lake Wenatchee) in May of 2000, one collection was found. The collection had rather open to flattened cups at maturity with only a slight or indistinct stipe. As a result, we were not sure of its ID. I took careful fresh notes on the collection, photographed it, and dried it, but then I forgot about it. After retiring in 2009 I recently re-discovered my notes, the specimen, and the photograph from 11 years ago.

What's odd about this collection is not only its form, but that it was found in eastern Washington and was not associated with Cottonwoods. Scarlet Cup is more typical for the western coastal region of the Pacific Northwest, normally associated with hardwoods. Tylutki (1979, p. 33) says, "It has not yet been found in Idaho." Because of these differences, the collection appeared to be unusual for the species, but a detailed microscopic examination found all features to be in complete agreement with *S. coccinea*.

Along with my photo of this eastern Washington collection, I have also included the following photo of this species taken in the mid-1970s in typical western Washington Cottonwood habitat (Lyman, WA) for comparison. Notice the long stems and goblet shape of the Western Washington collection and the short stems and more discoid form of the eastern Washington collection.


B. Luther

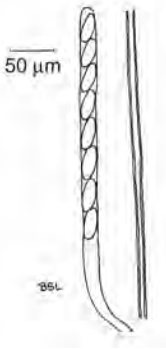
Sarcoscypha coccinea *from western WA.*

Materials & Methods

Small sections of dried specimens were first wetted with 95% ethanol, then rehydrated in distilled water. Excess water was blotted, and squash mounts were made using 3% ammonium hydroxide with phloxine as a protoplasm stain. Thin sections were also made under the dissecting microscope at 30× magnification to view the fine cell structure of the excipulum. Mounts were also made in Melzer's Reagent and IKI to check for amyloidity and to show the distinctive green color reaction of the paraphyses. I also prepared mounts in an alcoholic solution of the biological stain Sudan III, which clearly demonstrated the location of oil-soluble carotenoid pigments in the paraphyses*.

Description of Eastern Washington Collection

Ascocarp: Irregularly cup-shaped to discoid or flat or often spreading open at maturity even occasionally slightly convex in over mature specimens, up to 4 cm in longest dimension; margin even to slightly irregular, often splitting or even inrolled in places with age, slightly stipitate; hymenium smooth, bright red when fresh, close to "Spectrum Red or "Scarlet Red," fading to "Scarlet," then "Nopal Red" with age (Ridgway, 1912, Plate I); dried specimens 1–2 mm thick, losing all of the red color and becoming a pale yellow-orange after years; sterile excipulum bright white at first, fading to a creamier white with age, then margin at first fading to "Cream Buff" or "Naples Yellow" or darker progressively from the margin toward the stipe, soft, the surface slightly to strongly wrinkled, wrinkles irregular or distinctly radial in arrangement in places at the margin; stipe up to 5 mm long, 3–5 mm wide, slight or pronounced, mostly buried in forest litter, rhizomorphs up to 15 mm long on specimens in litter, but very slight when on twigs.



Ascus with ascospores and filiform paraphyses.

Microstructures: **Asci** 300–495 × 12–18 µm, cylindric, hyaline, thin to thick-walled, normally with eight uniseriate ascospores, operculum visible as a small, slightly inward protruding or thickened spot on the inside apex as viewed under 1000× magnification. **Paraphyses** more or less equal to the asci in length, 2–2.5 µm wide, very densely packed, filiform, uniformly terete the entire length, very thin-walled, multi-septate, often basally branched, rounded to slightly pointed at the apex (but not swollen), sometimes with irregular short side branches and sometimes forming a short connection with an adjacent paraphysis; contents appearing uniform when mounted in 3% ammonium hydroxide, but contents irregular and greenish to golden-green when mounted in iodine reagents. **Ascospores** 28–40 × 10–14 µm, ellipsoid or long ellipsoid to somewhat cylindric and sometimes slightly truncated, hyaline, thin walled, smooth, inamyloid, with numerous guttulae. Some spores were seen germinating, with multiple, irregular germ tubes. **Sterile excipulum** (abhymenium) in thin section: outer layer 10–15 µm thick, consisting of very narrow, uniform, parallel hyphae 2.5–5 µm wide, narrowest on

Ascospores

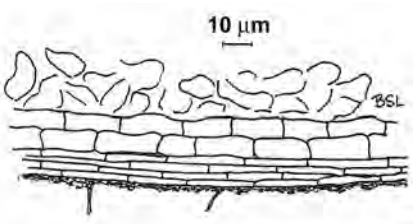
*Most ascocarp colors in Discomycetes are due to pigments found only in lipid bodies located in the paraphyses, which are sterile hymenial elements (refer to my description below and the line drawings of paraphyses). In his PhD thesis Arpin (1969, p. 114) and also Baral (2004) have confirmed that a mixture of only five different carotenoid pigments are what provide the color in normal forms of *S. coccinea*. You also might be interested to know that both an apricot colored and an albino form of this species have been found in Europe. As pointed out by Breitenbach & Kranzlin (1984), the pigment-laden paraphyses in this species turn greenish in iodine solutions such as Melzer's Reagent or IKI.

cont. on page 4

Sarcoscypha coccinea, *cont. from page 3*

the outside, wider within, unbranched with the extreme outer cells covered with lumpy, irregular incrustation; next inner layer up to 70 µm thick, consisting of cells somewhat parallel to begin with, but quickly interwoven slightly inward, cells up to 25 × 10 µm, somewhat rectangular in outline, thin walled, often constricted in the middle and swollen on the ends, the next inner layer the thickest, composed of completely interwoven, larger cells representing the context of the cup.

According to Hansen & Knudsen (2000), the excipular hairs are straight and incrusted, but Harrington (1990) makes no mention of incrustation. I found only rudimentary "hairs," with all outer cells having lumpy incrustation. The thin sections I made of the excipulum match nicely with what Harrington (1990, p. 444) illustrates for this species. She does state that the spores for this species are "not truncate" (p. 445), yet her illustration (Fig. 9, p. 444) clearly shows some truncated spores; also her key lead to this species says "ascospores rarely truncate." Dennis (1968) says the spores have "obtuse ends." I found that most of the spores in this species have rounded ends, but a certain percentage definitely are somewhat to noticeably truncated, sometimes only on one end. See line drawings of microscopic structures.



Thin sectional view of ectal excipulum with rudimentary hairs.

Habit and habitat: On wet forest litter within a few hundred yards of melting snow, associated with *Acer circinatum* (Vine Maple) and *Abies grandis* (Grand Fir), with one ascocarp on a dead twig. Chiwawa River Road, Chelan Co., WA., May 13, 2000. Brian S. Luther coll. # 2000-513-1.

Similar Species

The only other large spring cup fungus that has a comparable color here in Washington State is the rare *Pseudaleuria quinaultiana*, which tends to be more open discoid and not goblet shaped at maturity, lacks a distinctive stipe, has a more orange-red or red-orange hymenium (not as much scarlet), usually occurs later in spring, and is associated with conifers, not Cottonwoods or other hardwoods. Both are operculate Discomycetes with eight-spored asci and ellipsoid spores, but there are significant differences in all microscopic structures, making it easy to distinguish them. *P. quinaultiana* has asci that measure 200–300 × 8–12.5 µm, ascospores that are 15.5–19.5 × 7.5–10.5 µm, with paraphyses that are noticeably swollen above (Lusk, 1987). Castellano et al. (1999, p. S1–97) say the "Abhymenial surface concolorous to somewhat paler" comparing it to the hymenium; yet they clearly show a photograph of a specimen with a mostly white excipular/abhymenial surface, similar to what you would see on the Scarlet Cup. Compare all of this information with my description of *Sarcoscypha coccinea* in previous paragraphs to see the differences between these two species.

We also have several species in different genera of cup fungi that fruit in the spring that may have similar colors, but they're all much smaller, usually 1–5 mm in diameter at most. They also occur on very different substrates, such as wet wood, dung, mosses, or burnt ground, and are not likely to be confused with these much larger, bright red cups.

Harrington (1990) monographed the genus for North America, and (1998) did a DNA analysis of fourteen species of *Sarcoscypha* worldwide. It appears that our Pacific Northwest species is genetically different from typical Atlantic, Mediterranean, and European material. Keys to the four North American species are given by Harrington (1990) and on Michael Kuo's website at www.mushroomexpert.com/sarcoscypha.html.

Classification Hierarchy for the genus *Sarcoscypha*

Kingdom Fungi (Mycota)
Division Ascomycota (Ascomycetes)
Subdivision Pezizomycotina
Class Pezizomycetes
Order Pezizales
Family Sarcoscyphaceae

In summary, the form and habitat may vary considerably for *Sarcoscypha coccinea* depending on whether it is collected in western or eastern Washington, but I found no difference in the diagnostic microscopic features.

This is really a lovely Ascomycete, and I always feel privileged to stumble on it, which is not very often—or should I say, not often enough. I know that if I made a special effort to constantly search different Cottonwood bottom lands from late January through April in western Washington, I would most likely have much better luck finding this "beauty of the woods."

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Australian rock art, *cont. from page 2*

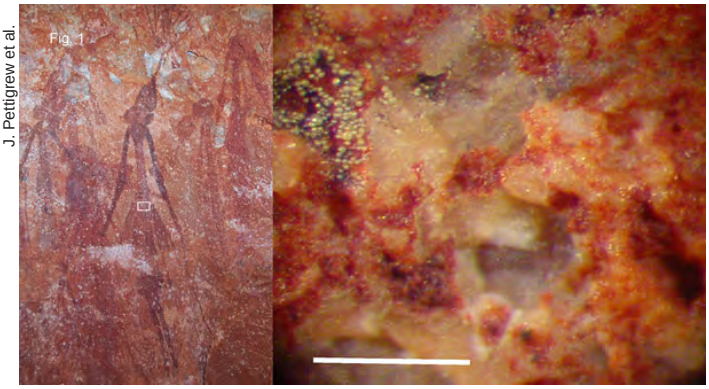
contrast, even though they are often exposed to the elements, and they are not thought to have been repainted. Other rock art in the same region fades over centuries and is often repainted.

Two of the oldest types of Bradshaw rock art are known as Sash and Tassel, and a research team led by Professor Jack Pettigrew of the University of Queensland studied paintings of these types from 16 sites, using equipment such as portable digital microscopes. They chose the Sash and Tassel styles because there is less controversy about their classification and because they are accepted as the oldest examples of Bradshaw art.

The team found in almost all the paintings the original paint pigments had been replaced by pigmented microbes, which the researchers dubbed "living pigments."

Professor Pettigrew said the organisms were still living and successive generations would have lived in the paintings for thousands of years, which explains the fresh appearance of the paintings.

One of the many organisms colonizing the works is a black fungus, which is thought to belong to the Chaetothyriales group. These fungi survive by cannibalizing their predecessors in situ. If the original paint contained fungus spores the current organisms could be directly descended from these spores. The researchers found that in 98 percent of cases the fungi remained within the boundaries of the painting, but there were a few examples where the fungi had destroyed most of the art work.



J. Pettigrew et al.

Rectangle at left shows approximate location of digital micrograph illustrated at right. High magnification view of biofilm in the centre of a Bradshaw painting. (Scale bar = 1 mm.)

Another organism found is an as-yet unidentified red bacterium, which may be a species of *Cyanobacteria*. The red microbes were often found with the black fungus. The combination of the two produces colors including red, black, mulberry, and cherry.

Professor Pettigrew and colleagues also speculate the paint used may have contained nutrients that "kick-started" a symbiotic relationship between the black fungi and red bacteria, with the bacteria providing carbohydrates to the fungi via photosynthesis, and the fungi providing water to the bacteria.

The presence of living organisms on the paintings could explain why results of attempts to date the paintings have been inconsistent. Professor Pettigrew said a possible way to date the paintings may be to determine the DNA sequence evolution, and work on this has already begun.

A truly good book is something as wildly natural and primitive, mysterious and marvelous, ambrosial and fertile, as a fungus or a lichen. —Henry David Thoreau

NEVER UNDERESTIMATE THE APHRODISIAC POWER OF TRUFFLES

Rose Prince

The Telegraph, Jan. 17, 2011

Mid truffle season, and travelling with the precious fungi through airport security presents all sorts of problems as the heady smell rises from hand luggage. This week Italian chef Giorgio Locatelli almost had thousands of pounds worth of white Alba truffles destroyed by suspicious customs officials in the Maldives, where he was due to prepare a truffle feast for some holidaying billionaires. How naive of Locatelli to think you can walk around with these things without attracting attention.

Truffles contain pheromones—a chemical cocktail of seductive scents—which encourage other species to find them. This aroma also translates to a delicious taste. We all fancy truffles. If you have one on your person, it works better than Chanel No 5—though at £2,400 a kilo, it had better. As I was walking through Gatwick Airport after a foraging trip in Périgord, a pungent black *Melanosporum* truffle in my bag, bystanders were friendly and, I noticed, stood a wee bit too close.

It's not just me—scientists once carried out a survey in an Italian railway station, rubbing white truffles on a seat in the waiting room. They reported that everyone walking into the room gravitated toward that particular seat. The only problem is that dogs and pigs love them too—with a truffle, you are just as likely to be accosted in the street by a spaniel as you are a passing George Clooney lookalike. Georgio Locatelli was lucky—no, not to lose his truffles, but that he did not end up out on a date with a customs officer.

JET LAG UNCOVERED IN MOLD

Ida Gudjonsson

http://www.physorg.com/, Jan. 4, 2011

Researchers at the Centre for Organelle Research (CORE) at the University of Stavanger, Norway, are studying red bread mold (*Neurospora crassa*) to learn how our own internal clock works.

"It is a fascinating fact that many of the diurnal principles are shared by humans and fungi," says Ingunn W. Jolma, who is doing her PhD on regulation of biochemical oscillators at CORE. "The fungus may give us a clue about how higher-ranking organisms such as humans respond to changes in circadian rhythms."

The mold is governed by a 24-hour circadian rhythm controlled by its genes. This circadian rhythm will proceed, even if the fungus is kept in constant darkness. Lacking light as a time giver, the fungus adjusts its period length to approximately 22 hours.

The researchers have carried out experiments in which they have altered the duration of the fungus' exposure to light and darkness. The mold has adapted to the new patterns, although it may need some time to adjust. It is, in fact, suffering from jet lag.

"If the fungus is transferred to a different time zone, it will adapt to its new environment and the new time. As with humans, this process will take some time, and the fungus may become a little stressed. The great thing about the internal clock is that the fungus will adapt its crucial cellular processes to its new environment," says Jolma.

VOUCHER PROJECT GROWS AT PSMS

Carlos Cruz

Early spring not only brings the *Verpa* out but this year also brings a new project for PSMS. Currently in the planning stages is an inspiring proposal being designed and implemented under the auspices of PSMS members, the Board, and the guidance of Dr. Joseph Ammirati of the University of Washington and affiliated Herbarium Archives.

Past efforts have shown us the way to developing our science and technology so as to enhance the contributions of this society. We know the crucial role of fungi in our environment and the importance of preserving the fungal biodiversity as far as possible for the benefit of our ecosystems. The Voucher Project proposal described here is meant to take optimal advantage of our many talents, tools, and techniques to share our understanding of the fungi world as we discover it ourselves.

Leveraging this potential is a challenging task, and consequently we have formed a committee to divide the labors of love among the many who will be called. Our intent, as we envision it so far, is to refine our collection methodologies of genus specimens to yield comprehensive photographs and data which will then to be archived for the benefit of both now and future generations.

The University of Washington's Herbarium will receive our prepared specimens and catalog them along with the contributed data into a DNA sequenced repository. There they will be linked through a numbered voucher system to photographic archives for research. In addition, educational classes will be offered in mushroom photography, collection protocols, GPS positioning, and DNA sequencing. Education will also include guided forays to teach skillful, in depth knowledge of habitat and genus/species ecosystems, as our society's mission supports.

Your personal involvement will resound down the corridors of biological history as we make our contributions to this wonderful opportunity from science and nature. Please take time out to ask about and become involved in this process. We recognize how much the members of PSMS are a sharing and learned group of citizens. We offer each other opportunities to expand our minds and knowledge of the world around us as we move into a new realm of possibilities for our membership.

To gain further information about the Voucher Project please feel free to contact the current committee members, listed below, or your Board of Trustees, and share as you know how!

Carlos Cruz, *Voucher Project Committee Chair*
Joseph F Ammirati, cort@u.washington.edu
Patrice Benson, patrice.benson@comcast.net
John Goldman, john.goldman@comcast.net
Marian Maxwell, marianmaxwell@hotmail.com
Colin Meyer, cmeyer@helvella.org
Danny Miller, dannymi@alpental.com
Dennis Oliver, oliverdm@msn.com
University of Washington Herbarium
Dick Sieger, sieger@att.net
Kim Traverse, traverse.kim@gmail.com

PRESIDENT'S MESSAGE

Marian Maxwell

The election ballots are included in this edition of *Spore Prints*. Please note that the ballots must be received by March 12 in order to be counted. The Nominating Committee is confident that any of the people on the current slate of candidates will serve you well.

The January meeting was fun! We celebrated Charter Member Russ Kurtz's 90th birthday. Thank you, Russ, for all you have done and continue to do for our Society. Thank you to Michael Blackwell for creating the desserts for the occasion! His chocolate morsels and fruit cobblers were fabulous! Denis Benjamin's presentation was informative and entertaining as well. Most people stayed till the end even though it was snowing!

J. Goldman

Charter member Russ Kurtz blowing out birthday candles.

Former members Ron and Patricia Pyeatt attended our meeting, and Ron informed us that he is now the new president of the Yakima Valley Mushroom Society. We have already added their contact information to our webpage.

Joanne Young reminded us to keep May 15 open for Mushroom Maynia! at the Burke Museum. If you would like to help with this fun event, contact Joanne at mushroommaynia@psms.org.

Kim Traverse announced a change of venue for our annual mushroom show. We will have the 2011 show on October 15 and 16 at The Mountaineers' facility at Magnuson Park. He is seeking people who are willing to help with planning on a committee that will meet soon. You may contact Kim by e-mail at traverse.kim@gmail.com or by phone at 206–380–3222.

For beginning or intermediate identification classes, please contact Patrice Benson at education@psms.org. Our beginning classes continue to fill up, and we have had to add several extra sessions recently.

I would urge you to step out this year—volunteer to help on a committee! There is now a list of committees and their chairs along with contact information on the member's page of the website.

Ants are so much like human beings as to be an embarrassment. They farm fungi, raise aphids as livestock, launch armies into war, use chemical sprays to alarm and confuse enemies, capture slaves, engage in child labor, exchange information ceaselessly. They do everything but watch television. —Lewis Thomas

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Election **Election** **Election**

This year we are voting for a Vice-President, a Secretary, and five Trustees. Please read the following profiles carefully and mark your choice on the enclosed ballot. Return your ballot to "PSMS Election Committee, c/o Marian Maxwell, 14269 145th Place SE, Renton, WA 98059. 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 12, 2011, will not

Milton Tam ***Vice-President***

As the current Vice-President and Program Chair I ask that you re-elect me so that I can continue to recruit and bring you interesting and knowledgeable professional and amateur mycologists to speak at our monthly meetings; to arrange educational excursions to expand our appreciation for and understanding of mycology; and to assist and give input to our Board of Trustees.

Secretary **Denise Banaszewski**

I joined PSMS 6 years ago and have been Secretary for the last two years. I would like to continue to serve in that role. Being on the Board has given me the opportunity to be more involved in PSMS, which I have really enjoyed. My main interest in mushrooms has always been culinary, but I actually enjoy the hunt just as much now.

Trustees

Randy Richardson

I ran for the board the first time because I felt it was time to join the 20% who do 80% of the work. I was surprised and humbled to find that here, 30% do 90%. I would like to put in another term, trying to help ease the load for that hard-working 30%. We owe them a lot of thanks. I welcome thoughts from members at large, and I thank you for your vote.

Linda Haba

I have a degree in Wildlife Sciences and have worked throughout the state surveying threatened and endangered species and writing habitat management plans. I have been a member of PSMS for a while and have helped with the Exhibit, Mushroom Maynia, the Arboretum Bioblitz, the Meany weekend, and volunteering at Hamilton Middle School.

Lisa Page Ramey

I am a relative newcomer to the Kingdom of Fungi, but from the very beginning I've been totally hooked. I hope for the opportunity to use my skills as a graphic designer in creating signage, posters, buttons, and T-shirt art for the group and in increasing the presence of PSMS both in the NW and beyond.

Teddy Basladynski

I joined PSMS only a year and a half ago, but know I'll be a member for a long time. PSMS is the best group I've had the pleasure to be a part of and I want to see its continued success! If elected I will lend my expertise in web design and development as we move forward with a new website and help improve it as technology changes

Reba S. Tam

A long-time Seattle resident, I have always enjoyed cooking, eating, and hunting for mushrooms. I enjoy PSMS and am learning more about mushroom taxonomy and identification. If elected to the Board of Trustees I will try to use my experiences, ideas, and perspectives to assist the club in its many activities.

Debra Lehrberger

I have so enjoyed my past two years on the board of PSMS. It is a pleasure and an honor to serve, and I wish to continue to be a part of this group. I have served as field trip host, am committee chair for the summer picnic (to be), and am a member of the planning committee for the 2011 Fall Mushroom Show.

Andrea Rose

After a friend took me mushroom hunting in 1995, it became my favorite hobby. A PSMS member since 1998, I have volunteered to host field trips, assisted at the annual Mushroom Show, and often help with book sales. I would be thrilled to serve as a trustee with the board of this great group.

RUDOLPH GETS BLITZEN ON MUSHROOMS

Rhodri Phillips

http://www.thesun.co.uk, Dec. 22, 2011

Santa's reindeer will be flying higher than ever at Christmas—after munching magic mushrooms.

Scientists have found that the animals regularly eat the mind-bending Fly Agaric [*Amanita muscaria*] fungi in the wild. And Rudolph, Donner, Blitzen, and pals are often seen staggering around, making odd noises afterwards. Scientist Andrew Haynes believes reindeer deliberately seek out the mushrooms to escape the monotony of dreary long winters.

Writing in the respected *Pharmaceutical Journal*, Mr Haynes said: "They have a desire to experience altered states of consciousness.

"For humans a common side-effect of [hallucinogenic] mushrooms is the feeling of flying, so it's interesting the legend about Santa's reindeer is they can fly."

He also said herdsmen drink the reindeer's urine to get high themselves.

ONE MUSHROOM OR TWO?

Jeff Barnet

Las Cruces Sun News, Jan. 11, 2011

What do you take in your coffee—cream, sugar, or mushrooms? If you said mushrooms, then you might like "healthy coffee," a relative newcomer to the morning beverage scene.

According to Ellen Schwartz, 52, owner of PiYoga, a fitness and alternative healing center, healthy coffee is an instant coffee with a dose of *Ganoderma lucidum* extract. More commonly known as reishi, *Ganoderma lucidum* is a hard, bitter mushroom used to promote health and longevity in traditional Chinese medicine.

At PiYoga, she sells a healthy coffee by the brand name OrGano Gold, which she said contains dried extract of *Ganoderma lucidum*. "The *Ganoderma* is said to give you an energy boost, but without the crash that can come after drinking regular coffee," she said. Healthy coffee does contain caffeine, she said, but not enough to cause the jitters sometimes associated with regular coffee. Some of her customers drink healthy coffee as a transition out of drinking any kind of caffeinated beverage, she said.

Local coffee roaster Beck Rosnick, 31, said she had no doubt that mushrooms have healing and medicinal properties. However, in defense of regular coffee, she said that coffee is rather healthy already. "Regular coffee is full of antioxidants," she said. "With each cup that you drink, you keep getting more of them."

Because coffee is a gourmet drink similar to wine, the taste of coffee is one of the best things about it, she said. "I'm not sure adding mushrooms would make coffee taste better," she said. "I don't think it would."

To put the matter to rest, we conducted an independent taste test of the OrGano Gold coffee. As much as we tried to discern the individual notes and flavors in it, it seemed to us to taste pretty much like ordinary instant coffee.

The effects were pleasant, a sustained two hours of energy and clarity similar to a mild coffee buzz but without any jitters. Nevertheless, once within sight of brewed coffee, the desire for a real, fresh cup of coffee was fierce.

So, the mug is in your court. But before you get too wound up about healthy coffee, there is the fact that it is more expensive than regular instant coffee. There may be such a thing as healthy coffee. But there is still no free lunch.

Note the new PSMS *username* and *password* given in the block on page 2. They will be changed shortly. If the old ones don't work, try the new ones. Remember, they are case sensitive.

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