

SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
Number 449 February 2009



BEGINNING MUSHROOM ID WORKSHOP

Colin Meyer

- What:** PSMS Beginning Mushroom ID Course
Where: Center For Urban Horticulture, Douglass Classroom
When: Thursday Evenings, 7:00 pm – 9:00 pm,
3/19 – 4/9 (First Session)
4/16 – 5/7 (Second Session)
Cost: \$35, cash or check payable to PSMS
(bring on first day of class)
Book: *Mushrooms Demystified*, by David Arora
Bring: Fresh mushroom specimens
Contact: education@psms.org for questions, or to register

PSMS will offer two sessions of beginning mushroom identification classes this spring on four consecutive Thursdays. The first class session begins on March 19, and the second class session begins on April 16. Classes will be held at the Center for Urban Horticulture, in the Douglas classroom, from 7:00 pm to 9:00 pm.

The sessions will be (subject to possible rearranging):

- Introduction to Mushroom ID
- Identifying Mushrooms with Dichotomous Keys
- Cooking and Collecting
- Mushroom Toxins

The recommended text is *Mushrooms Demystified*, by David Arora. There are several copies available for classroom use from the PSMS library, and the book will be available for sale on the first day of class.



Class cost is \$35 for four sessions. For questions or to register please send e-mail to education@psms.org with your name(s). If you don't have access to e-mail, you may call (206) 354-7789, but e-mail is preferred.

Registration is available for PSMS members only; please print off the membership form from the website (<http://psms.org/>) and send it in if your membership is not current. Please confirm your class registration before coming to class, as classes often fill up.

Please bring specimens of fresh mushrooms to class. Collect the whole fungus, including any root or cup at the base of the stalk. Specimens are best preserved by wrapping them in foil or wax paper and putting them in the fridge, where they will last from several days up to a week, depending on the species. You should make a spore print, if you know how. (If you don't, that's OK. We will learn how on the first day of class.) It is also useful to take a few notes about where the mushroom was collected, and from what sort of habitat (whether on wood or ground, what type of wood, and what type of trees it grows under).



2009 SURVIVOR'S BANQUET

Don Lennebacker

The PSMS Survivor's Banquet & Annual Meeting will be held on Saturday, March 14, 2009, at the Center for Urban Horticulture. The dinner will be a potluck this year. The social hour will begin at 6:30 pm, dinner to follow at 7:30 pm. Please join us and bring your favorite dish to share. It can be an hors d'oeuvre, entree, or dessert. Please list the ingredients and any wild mushrooms included in your dish. We will secure a liquor permit so attendees can bring wine, etc., to enjoy with their food. The theme for this year's Survivor's Banquet will be foraging. We will have our own Jeremy Faber as a speaker, so we may learn some great tips on foraging. We will also announce names of newly elected or appointed trustees and officers and disclose the recipient of the Golden Mushroom Award! Sign up by sending your reservation for yourself and any guests, along with \$5.00 each, checks only please, to



PSMS Banquet
c/o Don Lennebacker
13112 44th Ave W.
Mukilteo, WA 98275

You may also register and pay for the banquet at the February membership meeting. Make checks payable to PSMS. Please reserve your spots early as we have limited seating capacity.



If you have questions, phone me at (425) 678-8350. This is also our annual meeting, and replaces the regular membership meeting in March.

OREGON WINERY OWNERS TRY GROWING TRUFFLES ON A SITE NEAR SALEM

Jeff Parks

Statesman Journal, Jan. 11, 2009

Truffle trees living on Truffle Hill might sound like the title of a Dr. Seuss story, but for Luke McCollum, the trees on the hill represent yet another example of Left Coast Cellars' commitment to sustainable agricultural practices, land-use diversity—and good local wine and food.

One hundred-fifty small hazelnut trees, inoculated with black Perigord truffle spores, were planted here about a year ago along with shrub rose seedlings inoculated with the same spores. Plans are to harvest the black Perigord truffles—and white Italian truffles soon to be grown in a similar way—in a few years “as a welcome complement to our wine production,” McCollum said.

Plans may include the planting of Douglas fir trees in another area of the farm that would be used as host trees for growing native Oregon white truffles—and another color to add to the Left Coast truffle palette, he said.

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PUGET SOUND MYCOLOGICAL SOCIETY

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CALENDAR

- Feb. 10 Membership Meeting, 7:30 p.m., CUH
Feb. 17 Board Meeting, 7:30 p.m., CUH
Feb. 24 *Spore Prints* deadline
Mar. 14 Survivor's Banquet and Annual Meeting

BOARD NEWS

Dennis Oliver

This month's board meeting was pretty low keyed. Things are going well and spring is still a couple of months away. *Spore Prints*, hopefully, will have a new printer with this issue. The election committee has a full slate of candidates, the annual Survivor's Banquet is beginning the planning stage, and the spring mushroom classes have been scheduled. The spring foray is scheduled for the last weekend in May at Cispus Environmental Center. Foray Chair Ron Post is beginning the planning process and more details will be available soon.

TIBETAN MUSHROOM TOURS

Daniel Winkler

The *Cordyceps* Expedition to the Tibetan Plateau is scheduled for May 15 to May 29, 2009. The summer Fungal and Floral Foray is scheduled for July 26 to August. 10. The tours will start in Kunming, Yunnan, from where we fly to Shangrila, aka Gyalthang or Zhondian, in Dechen Tibetan Autonomous Region. More details are to be found on www.mushrooming.com or call Daniel at (425) 822-5080.

MEMBERSHIP MEETING

Tuesday, February 10, 2009, at 7:30 pm at the Center for Urban Horticulture, 3501 NE 41st Street, Seattle.

The speaker for February is PSMS member Daniel Winkler. His new presentation is titled "Flavorful, Fancy & Foul Fungi from Far-Flung Places around the World." Daniel will share his stunning images as well as entertaining and educational stories from his journeys to far-flung and near-by locations searching for mushrooms. You will encounter many famous and familiar mushrooms in exotic places you never expected. The fancy flavorful mushrooms will be accompanied by fascinatingly odd fungal fellows, some of them stinky, slimy, and incredibly beautiful, others eerily strange and more precious than gold. Daniel's mushroom photos are from Austria, Germany, Italy, Switzerland, Tibet, China, Peru, Venezuela, and the United States, including Hawaii, Colorado, California, and Washington.



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 twenty years. As part of his research Daniel has been focusing on medicinal and edible mushrooms in Tibet. Daniel moved to Seattle and joined the Puget Sound Mycological Society in 1996, which enticed him to take his love for mushrooms to a whole new level. He is a credible expert on wild edible mushrooms on three continents and organizes exotic mushroom tours (see: www.mushrooming.com). Daniel keeps venturing into new and old habitats and cultures to feed his curiosity and his family. Along the way he captures images and gathers stories to share. Come see Daniel and prepare to be fascinated as well as educated!

Would members with last names beginning with A-K please bring a plate of refreshments for sharing after the meeting.

FUNGI HELP SEA-TAC DISCOURAGE BIRDS

extracted from an article by Kristen Millares Young
in the *Seattle P.I.*, Jan. 16, 2009

In addition to direct confrontation, such as scaring away ducks and hawks from departing and landing planes with a loud pistol and trapping and relocating them, the Port of Seattle redesigned the wetlands dislocated by Sea-Tac to drive birds away from the airfield and its three runways.

The 113 acres of wetlands near the airport are heavily forested with trees such as cedars and cottonwoods to keep large flocks of birds from feeding and nesting there, and the port sowed 158,000 native plants known to be unattractive to birds, eschewing all varieties that produce fruits, nuts and berries.

The port also developed a grass seed mix containing a fungus that makes it less appetizing to some birds and insects.

The effort appears to have worked.

A search of the FAA database of airplane crashes revealed no crashes related to bird strikes at Seattle-Tacoma International Airport.



FUNGI—COMMON, RARE, AND IN BETWEEN, cont. from Issue 448

Bryce Kendrick

Botanical Electronic News, April 15, 2005

In January, we discussed some factors involved in defining what constitutes a common or rare fungus, two methods of defining common vs. rare in a quantitative manner, and the conclusions Kendrick reached based on work using method 1, an extended linear study. This month we continue with method 2.

Method 2: Concurrent frequency of occurrence

For the past two years I have been involved in several expeditions aimed at compiling a macrofungal inventory of the islands of Gwaii Haanas National Park Reserve in the Queen Charlotte archipelago (Haida Gwaii), British Columbia, Canada. During the expedition of Fall 2004 I undertook to record the numbers of fruit bodies of every taxon we encountered on the various islands.

Over a period of 9 days I recorded well over 4,500 fruit bodies found by our four-person team. We recorded 161 taxa, the numbers of specimens ranging from 1 to well in excess of 100—I simply stopped counting when we exceeded 100 fruit bodies on any given foray. Of the 161 taxa, 53 were represented by a single fruit body, while 14 species considerably exceeded the 100 mark. Between those extremes there were 13 species with 2 fruit bodies each, 8 species with 3 fruit bodies, 10 species with 4, 9 species with 5, 6 species with 6, 19 species with between 10 and 19, 14 species with between 22 and 45, 5 species with between 59 and 66. So there was a concentration of taxa at the lower and upper ends of the scale, with very low numbers in between. If we accept fewer than 10 fruit bodies as indicating a degree of scarcity, this distribution suggests that 109 of the 161 taxa—almost 68 percent—are uncommon. If we accept the discovery of 50 or more fruit bodies as indicating a common species, there were 19 such species, or 12 percent of the total. The other 20 percent lay somewhere between those extremes. It is also apparent that the 14 species (8.7 percent of the total taxa) of which more than 100 specimens were seen (in several cases many more than 100) represent approximately 50 percent of all fruit bodies encountered in the survey. That seems to me to be an incontrovertible measure of commonness.

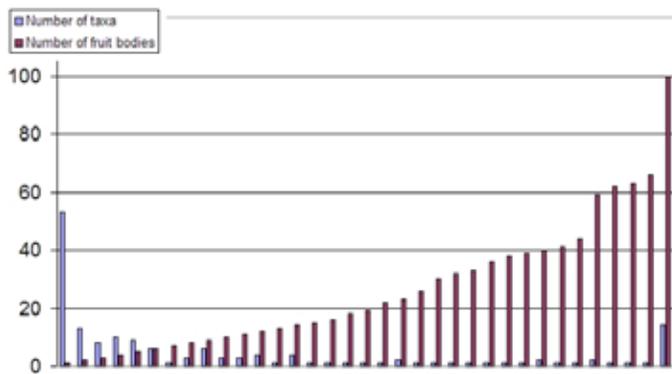


Figure 1. Number of taxa and the number of fruit bodies found over the course of the Gwaii Haanas study.

My suggestions for ranking our data are as follows (see Fig.2):

Abundant: represented by over 100 fruit bodies: just under 9 percent of Gwaii Haanas taxa.

Common: represented by 59–66 specimens: 3 percent of Gwaii Haanas taxa.

Sporadic or scattered: represented by 10–44 fruit bodies: 20 percent of Gwaii Haanas taxa.

Uncommon: represented by 2–9 fruit bodies: 34 percent of Gwaii Haanas taxa.

Rare: represented by a single collection: 33 percent of Gwaii Haanas taxa.

To iterate: in the concurrent Gwaii Haanas study: abundant—9 percent, common—3 percent, sporadic—20 percent, uncommon—34 percent, rare—33 percent.

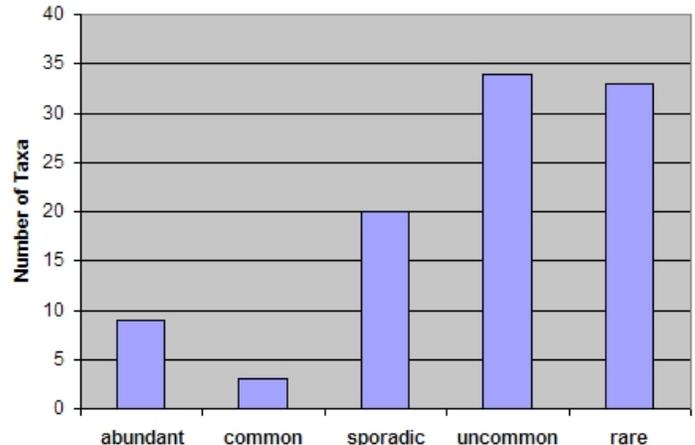


Figure 2. Number of taxa considered abundant, common, sporadic, uncommon, and rare in the Gwaii Haanas study.

Before continuing I must state a number of reservations about our data.

Sometimes 20 (or even 100) specimens would be accumulated gradually, found scattered in many different places. Sometimes the same number would be found together in one narrowly circumscribed area. In this case the numbers are misleading. What is needed is a more fine-grain method of recording the data, and I will apply one on our next survey, perhaps recording fungi as scattered or localized (or solitary or aggregated).

Some method of comparing biomass is called for (*Mycena*, for example, being generally minute and *Russula* comparatively massive), and I will attempt to implement one in our next survey.

I hope that other surveys of this kind will be done, perhaps on a larger scale, perhaps repetitively over a longer period, so that the kind of information we can derive from them will be placed on a sounder statistical basis.

Our study, carried out by boat over a limited period, was perforce more a snapshot than a total seasonal compilation. It would be interesting to examine the results of, for example, a weekly sampling over an entire season, to see how the grouping of taxa might change. This would be impossibly expensive in Gwaii Haanas, but could certainly be done elsewhere.

I realize that it is unwise to read too much into a single survey, but our study does seem to confirm that there is a large number of uncommon species, a larger group of intermediate occurrence, and a much smaller number of common species, which last provide the majority of all fruit bodies. However, I suspect that had the surveys been more intensive or extensive, we might well have found a much larger number of rare or uncommon taxa, making the chart look more like that produced in the mold study below.

cont. on page 4

Common, Rare, and In Between, *cont. from page 3*

These results lead inescapably to a consideration of the manner in which identification keys should be constructed. It seems to me that such keys, especially when dichotomous, and when designed for amateurs, should concentrate on the common species, and should imply that taxa not covered are probably rare and should be left to the experts. This would mean that such selective keys would be shorter and simpler, and therefore have a greater chance of conferring success on the user. Although the species that are common in one geographic location will be different from those seen in another area, keys can be compiled either with a specific area (such as those produced by the Pacific Northwest Key Council) or particular habitats in mind, or, if wider ranging, will still deal with fewer taxa than the usual dichotomous keys encountered in the various manuals. By reducing the number of dichotomies, this simple strategy could prevent much frustration on the part of users, and would make such keys more accessible.

Fungi on indoor substrates

A database (Thiagarajan et al. 2004) of 167 fungal taxa recorded on various indoor substrates during 76,000 examinations of various kinds of samples (bulk, tape, and swab) shows that there are only a few really common fungi in this environment (Fig. 3).

- 3 taxa were found in more than 10 percent of samples
- 6 taxa occurred in between 10 percent and 1 percent of samples
- 34 taxa occurred in between 1 percent and 0.1 percent of samples
- 52 taxa occurred in between 0.1 percent and 0.01 percent of samples
- 72 taxa occurred in between 0.01 percent and 0.001 percent of samples

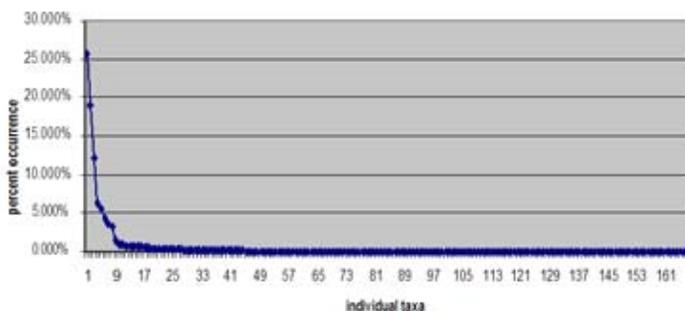


Figure 3. Percent of occurrence vs. number of individual taxa in the indoor substrate study.

It is interesting to note that of the 167 taxa noted here, 124 were hyphomycetes, 20 ascomycetes (including 2 of the top 10), 9 zygomycetes, 4 basidiomycetes, 4 coelomycetes, 3 myxomycetes (protozoans rather than fungi), 2 yeasts, and 1 oomycete (a chromistan fungus).

My arbitrary suggestion, having examined these data, is that we regard the three taxa with more than 10 percent frequency of occurrence as abundant, those between 10 percent and 1 percent as common, those with between 1 percent and 0.1 percent as sporadic, those between 0.1 percent and 0.01 percent as uncommon, and those below 0.01 percent as rare (see Fig. 4).

This arrangement has no persuasive statistical underpinning, but it looks as if, no matter what scheme of partitioning was to be adopted, a similar pattern would emerge, sooner or later. The

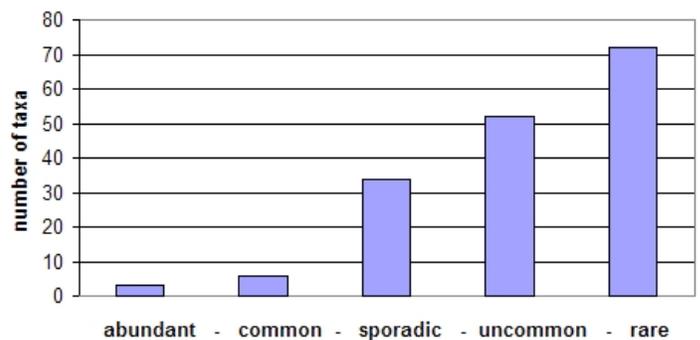


Figure 4. Number of taxa considered abundant, common, sporadic, uncommon, and rare in the indoor substrate study.

more samples one examined, the more collecting trips one took, the more years a study endured, the more likely seems this last kind of bar chart. So this is the generalization that seems to emerge from this analysis. Not a surprise to many of us, but, given the profusion of mushrooms that emerged in Fall of 2004 on the west coast of North America, not something that stared us in the face as we forayed so successfully.

Conclusions

Most fungi are rare (at least in the sporulating condition), and very few can be regarded as common, at least by the criteria used in many kinds of sampling programs. (Of course, I must also mention the contrarian view, which is that there are actually few rare fungi, and that we just don't know how to find them, or that there are so few mycologists in many areas of the world that many fungi will not even be recorded, even when they occur in large numbers.) There is also the real possibility that many fungi exist for long periods, or even permanently, without sporulating. This avenue will undoubtedly be explored in the relatively near future by means of PCR-DNA techniques, but for the present we tend to assume that most fungi sporulate, even if only sporadically, as a requirement for success and dispersal. Certainly molds, which constitute the major part of the spectrum explored in the indoor substrate study documented above, will not have access to newly available substrates unless their spores are in the air.

Keys for identification, if dichotomous, should be designed to arrive at common species first, and at truly rare species last (if at all). Of course, if keys are synoptic, this is not a consideration unless the inclusion of too many taxa introduces too many characters, or too much confusion or "noise," to the identification process.

Rarity is likely to increase as fungal habitats are destroyed by human agency. Red lists will become longer (if it is not too late to compile them—many species will not even get to be in a red list before they disappear). Those wishing to analyze the matter of rarity more deeply can find food for thought in fine papers by Stebbins (1980) and Fiedler and Ahouse (1992), though those essays were written from the botanical point of view.

I would also like to cite a paper by Hawksworth (2004) in which he revisits the matter of the probable numbers of extant fungi as estimated from the number already found and described, and from the relative numbers of higher plants. It would appear that about 100,000 distinct taxa of fungi have been described, from an estimated total of about 1.5 million. It is significant in the context of the present document that we appear to have described only about 7 percent of the fungi in existence. Hawksworth speculates that: (1) many of the missing fungi are in tropical forests; (2) many are in unexplored habitats; and (3) many are hidden in already described

taxa: for example, the mold, *Fusarium graminearum*, formerly thought to be well understood, is now known to comprise a complex of nine species. None of these caveats can disguise the fact that most of the “missing” fungi are almost certainly rare.

In conclusion, I want to share a few delightful lines from page 131 of Stephen Jay Gould’s book *The Flamingo’s Smile* (1985) which might well be applicable to the present discussion. He is analyzing a much earlier paper by Lord Kelvin which purported to establish a (much too young) age for the Earth:

“Thus, although all three arguments had a quantitative patina, none was precise. All depended upon simplifying assumptions that Kelvin could not justify. All therefore yielded vague estimates with large margins of error.”

I would like to thank Adolf Ceska for invaluable input during the gestation of this piece.

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DEADLY WILD MUSHROOMS SEND THREE TO HOSPITAL

Jim Doyle,

San Francisco Chronicle, January 6, 2009

Three members of an East Bay family were hospitalized over the holidays after they ate *Amanita phalloides*, a highly toxic wild fungus known as the Death Cap, one of the world’s most dangerous mushrooms.

Two 11-year-old boys from Albany and their 72-year-old grandmother, who was visiting the family from Ithaca, N.Y., became violently ill after eating the mushrooms, which they had harvested along a trail in Mount Tamalpais State Park. The twins were released from UCSF Medical Center on Monday, after spending eight days in the hospital, including four days in intensive care. Their maternal grandmother, Sarah Elbert, who led the family’s mushroom hunt, sustained liver damage but was released from the hospital over the weekend.



Amanita phalloides

“They are all expected to make a full recovery,” said Kate Schoen, a UCSF spokeswoman.

Mushroom poisonings are fairly rare, but experts say it is easy for those without training to mistake an edible species for a deadly one. Even connoisseurs can be duped by the

way a death cap presents itself. The toadstool with white spores is common in the Bay Area, but the color varies and can be affected by weather and odd growing conditions. Its telltale signs are often buried in soil.

Elbert, a former professor of environmental history, said she was surprised by the effects of the mushrooms she and her family consumed. “I’ve been a mushroom hunter all my life,” she said.

Her family went hiking on December 28 on the Dipsea Trail near Mount Tamalpais. They picked two dozen mushrooms, and she made mushroom soup for dinner.

About 10 hours later, at 4 am, the three victims became violently ill with vomiting, abdominal pain, and diarrhea. The boys’ father, who ate a small portion of soup, had only diarrhea. His wife also had soup but did not become ill.

The twins were diagnosed with inflammation of the pancreas and liver damage. The hospital prepared for the possibility that the boys would need liver transplants.

Doctors initially had difficulty identifying the specific culprit. The boys’ mother returned to the site where the mushrooms were picked. An expert with the Mycological Society of San Francisco—which offers mushroom walks and workshops—helped identify the culprit as *Amanita phalloides*.

“Ithaca does not have amanitas,” Elbert said. “They were scattered under the live oaks with many, many other kinds of mushrooms.”

Dr. Kent Olson, the medical director of the San Francisco division of the California Poison Control System, said the Death Cap is “extremely potent in very small quantities.” He said the State had one death by mushroom poisoning in 2008.

Doctors used an arsenal of several different medications to attack the poison, including penicillin and acetylcysteine—but there is no known antidote for this toxin. Doctors also obtained a waiver from the U.S. Food and Drug Administration for an organic compound, milk-thistle-derived silibinin, which was air-freighted to the hospital from Germany.

“It’s hard to know within the first 24 to 48 hours who is going to make a recovery or who is going to need a transplant—and who may progress to death,” said Dr. Sue Rhee, a pediatric gastroenterologist at UCSF Children’s Hospital.



Amanita phalloides

*Don't eat Amanita —you'll quiver.
You'll fall to your knees, and you'll shiver.
Poison mushrooms, that's why,
And you'll probably die.
If you don't, then you'll need a new liver.*

—Meg Beagle

<http://www.oedilf.com/>

RESULTS OF YEAST STUDY CONFLICT WITH CLASSICAL MODEL OF EVOLUTION

Science Daily, Jan. 16, 2009

New evidence from a study of yeast cells has resulted in the most detailed picture of an organism's evolutionary process to date, says a Texas A&M University chemical engineering professor whose findings provide the first direct evidence of aspects which up until now have remained mostly theory.

Working with populations of yeast cells, which were color-coded by fluorescent markers, Katy Kao, assistant professor in the Artie McFerrin Department of Chemical Engineering, and Stanford University colleague Gavin Sherlock were able to evolve the cells while maintaining a visual analysis of the entire process.

Their research, which appears in the December edition of *Nature Genetics*, shows the evolutionary process to be much more dynamic than initially thought, with multiple beneficial adaptations arising within a population. These adaptations, Kao explained, triggered a competition between these segments, known as "clonal interference."

It's the first direct experimental evidence of this phenomenon in eukaryotic cells (i.e., cells with nuclei), and it contrasts with the widely accepted classical model of evolution, which doesn't account for simultaneously developing beneficial adaptations, she said. Instead, that model adopts a linear approach, theorizing that a population acquires such adaptations successively, one after another. Rather than a competition occurring, the model posits a complete replacement of one generation by another better-adapted generation.

That wasn't the case in Kao's sample.

"In one of our experiments we were able to see five independent population expansions. We had one adaptive mutation that allowed a population to expand, but before it was able to completely take over, another, un-mutated population of the same cells acquired a different mutation that allowed it to succeed and impede the expansion of the first population."

In addition to determining if and when a population acquired an adaptation, Kao also used DNA-based technology to identify the specific adaptations that were acquired. What she found was that as populations rise and fall, some of these beneficial adaptations factor into the continued evolution of the organism; others don't.

"Beneficial mutations that have been lost during the evolution of an organism will not be identified from just the final generation of that organism," Kao explained. "Indeed, we found that several of the mutations were nearly lost in the population by the end of the experiment due to this competition."

In other words, as Mother Nature sorts things out, some adaptations go by the wayside, with the latest generation of an organism sometimes showing no traces of them.

"Think of this as another piece of the evolution puzzle," Kao said. "We're gaining a comprehensive understanding of the way a microorganism adapts to its environment as it fights to survive. We're demonstrating that the evolutionary journey has many more 'twists and turns' than we once thought."

PRESIDENT'S MESSAGE

Patrice Benson



I have just returned today from the SOMA (Sonoma County Mycological Association) foray near Occidental, California. The weather and mushroom talks were great, but the mushrooms were scarce.

I am sitting here watching the inauguration parties and am excited about the changes coming with the energy of our new leaders in this great country. Our own group will benefit from your energy and our new leadership after the coming PSMS elections documented in this issue. I would like to thank the outgoing Secretary Dennis Oliver, who is a victim of our two-term limits, and outgoing board members Doug Ward and Lynn Phillips.

Please vote in our election and offer to participate in our all-volunteer organization! We have a few opportunities for change right here!

Currently two people are needed to sell books at our membership meetings. There are plenty of assistants and a dedicated book-ordering person, but some committed leaders are needed. Please call me at (206) 819-4842 to help with this task. Our current booksellers just had a baby and need to be home evenings for the time being! Approximately 50% of our income is from book sales. Our membership fees remain affordable to many because to the efforts of the book sales force. It is only a few hours a month and makes a big difference!

We will be honoring our first PSMS President, Ben Woo, who passed away a year ago, by dedicating our Spring Foray on May 29-31 to his memory.

Our Survivor's Banquet & Annual Meeting for our nonprofit organization will be held at CUH on March 14. It will be a fun and exciting potluck. Wear fun foray outfits and bring a great and exciting dish to share. Please see more information in this issue. Our regular March meeting will be replaced by the banquet, so you will have a free Tuesday evening in March!

Our Spring classes will begin in March; see article on page 1 for more information and registration directions.

Mushroom Maynia! is May 3 this year, so mark your calendar and volunteer to talk with the community. Sign up at the next meeting or call me at (206) 819-4842.

See you at the meetings, field trips, or Mushroom Maynia!



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 Pacita Roberts, 10516 27th Avenue NE, Seattle, WA 98125. 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 7, 2009, will not be counted.



Vice-President Milton Tam

After earning an advanced degree in microbiology and immunology from the University of Washington, I worked as a research scientist at the Fred Hutchinson Cancer Research Center, Genetic Systems Corporation, and the Program for Appropriate Technology in Health. Recently retired, I am currently serving in the position of PSMS Vice-President and would like to continue in that job.

Denise Banaszewski Secretary

I grew up in Minnesota, the Land of 10,000 Morels, so was introduced to mushroom hunting early on. I joined the club four years ago, and signed up for the beginner's mushroom ID class. My main interest in mushrooms is culinary: mushrooms have long been my favorite food. I have really enjoyed being part of PSMS would like to become more involved.



Trustees

Kim Traverse

I'm the volunteer librarian for the society and I'm fascinated by the huge variety of fungi in the world and the very central role they play in ecology. PSMS is a perfect place to share that enthusiasm.



Brenda Fong

It's been interesting and fun working with a group of enthusiastic, hardworking, and knowledgeable mycophiles who have a broad and fascinating range of interests. I'd like to continue working with the Board to make PSMS, the annual exhibit, and our other activities a big success.



Randy Richardson

I have helped out with the annual exhibit for many years. But, like many of us, I have stood on the sidelines for too long watching the 20% do 80% of the work. I now want to be more involved, to lighten the load of the few. With your vote, I look forward to keeping our club successful, interesting, and lively.



Louise Asif

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



Debra Lehrberger

I've always been enthralled with mushrooms. I joined PSMS in 2007 and immediately signed up for the mushroom ID class and later worked on the photography committee to produce the PSMS calendar. I would love to be on the PSMS Board and become a more involved member of the PSMS community.



Jim Hughes

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



Jennifer Slack

Currently on the PSMS board and the board of the Daniel E. Stuntz Foundation, I am also on the grant committee of Sustainable Path Foundation, a Seattle-based nonprofit organization. I recently became interested in using fungi for dyeing yarn, perfectly combining my two hobbies—mushrooming and knitting.



GNOCCHI WITH MUSHROOMS AND BASIL CREAM

Susan Selasky

Detroit Free Press, Jan. 14, 2009

Serves: 6

Preparation time: 15 minutes

Total time: 35 minutes

1 lb, 9-oz. package frozen gnocchi

6 oz. Oyster mushrooms

6 oz. baby Portobella mushrooms, dark gills scraped off

4 oz. Shiitake mushrooms, stems removed

1 tablespoon olive oil

1 tablespoon butter

2 cloves garlic, peeled and chopped

½ lb frozen pearl onions (or substitute 1 medium sliced sweet onion)

⅓ cup white wine

½ cup fat-free, less-sodium chicken broth

1 cup half-and-half (can use fat-free) mixed with 1 teaspoon cornstarch

Salt and pepper to taste

1 cup frozen peas

½ cup chiffonade of basil

⅓ cup shredded Italian blend cheese or Parmesan cheese

In a large pot of salted boiling water, cook the gnocchi according to package directions, about 3 minutes. They are done when they float to the top. Drain, reserving 1 cup of the cooking water, and transfer to a serving platter. Keep warm.

Lightly rinse mushrooms and slice into ¼-inch-thick pieces. Set aside.

Heat olive oil and butter in a large skillet over medium-high heat. Add garlic and sauté 1 minute; do not brown.



Add pearl onions and continue to sauté until they start to become tender and turn golden in color. Add the mushrooms. Cook until they release their juices and are tender, about 8 minutes.

Remove all the ingredients from the skillet and toss with the gnocchi.

To make the basil cream: Keep the skillet over medium heat and add the white wine. Deglaze by scraping up any browned bits on the bottom.

Stir in the chicken broth and cook 1 minute. Slowly whisk in the half-and-half/cornstarch mixture over medium heat. Don't have the heat too high or it will curdle. Season the sauce with salt and pepper to taste, and stir in the peas; cook 1 minute.

Stir in the basil and cheese and heat through until the cheese melts. Pour the sauce over the gnocchi mixture and serve immediately.

From and tested by Susan Selasky for the *Free Press* Test Kitchen.

347 calories (54 percent from fat), 21 grams fat (8 grams sat. fat), 22 grams carbohydrates, 18 grams protein, 558 mg sodium, 93 mg cholesterol, 361 mg calcium, 3 grams fiber.



YAHOO DISCUSSION GROUP

Want to stay in touch over the winter? The PSMS e-mail discussion group maintained by Yahoo Groups is an easy way to keep in contact with other members, circulate information about PSMS events, and post general mushroom information. To join, follow the directions on the PSMS website (<http://psms.org/members/index.html>) or on page 40 of the PSMS roster.

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