

Speaker for March 15 MSSF Meeting



Dr. Else C. Vellinga

The Ins and Outs of Parasols

Parasol Mushrooms are among the most beautiful and elegant mushrooms. Some are good edibles but one species causes more poisonings in the U.S. than any other mushroom. Despite their appeal we know surprisingly little about them. We will explore their characters, present new insights into their place in the family tree of all mushrooms (with some new names), and look at common Californian species. We will explain how to avoid becoming another poisoning statistic and how to tell a *Chlorophyllum* from a *Lepiota*.

Continued on page 2

CONTENTS

Speaker for March 15.....	1
Mycodigest: Mulch Makes Room.....	1
PhotoSlide Shows.....	2
Foragers' Report.....	3
AFFCForay Success.....	5
Inoculating a New Substrate	6
Cultivation Corner.....	7
Calendar	8

Mycena News

The Mycological Society of San Francisco March, 2005, vol 56:03

Mulch Makes Room for Mushrooms

Peter G. Werner

When we think of habitats where one can find lots of mushrooms and a great diversity of species, the first thing that comes to mind is some kind of woodland. In particular, woodlands dominated by ectomycorrhizal host trees, such as oaks, pines, spruces, and Douglas-fir. These are the places we turn to when we wish (to at least attempt) to stuff our baskets full of porcini, chanterelles, matsis, velosi, and so on. However, a unique and diverse mycota can also be found in a decidedly more mundane and often overlooked habitat – urban and suburban woodchip beds.

Over the last several decades, the practice of woodchip mulching has become very common throughout the world. Deep mulching around established plants is a very effective means of controlling weeds without the use of herbicides and woodchips produced as a byproduct of arboriculture are an extremely inexpensive and readily available source for this mulch.

Anybody who has looked for mushrooms in urban parks will note that such woodchip beds support an abundance and variety of macrofungi. Formal mycological investigation of what kind of mushrooms are found in this habitat has not been carried out until very recently, however. Peter Shaw has published several articles since 2001 based upon close observation and survey of the fungi of woodchip beds around Surrey, UK for the better part of the last decade.

Looking over Shaw's species lists, I was immediately struck by how similar the British woodchip mycota was to that of the SF Bay Area. *Psilocybe cyanescens* and *Stropharia aurantiaca* (= *Hypholoma aurantiaca*) are reported to be the most widespread species; these are, of course, also common species here in the SF Bay Area, with *S. aurantiaca* being perhaps our single most common and abundant woodchip species.

Other species that turn up on Shaw's lists read like a 'who's who' of local woodchip species – *Agrocybe praecox*, *Volvariella gloiocephala*, *Macrocystidia cucumis*, and *Hygrophoropsis aurantiaca*. *Stropharia percevalli*, a less commonly encountered woodchip species in the UK, looks an awful lot like the 'freeway stropharia' that has become so abundant here in the last couple of years. (The 'freeway stropharia' usually is called '*Stropharia riparia*', though it is distinctly larger and otherwise different from the true *Stropharia riparia* of montane and Northwest forest habitats.) *Clathrus archeri*, the octopus stinkhorn, sometimes fruits in abundance in woodchip areas around introduced bamboo in Kew Gardens, much the same way we see occasional large fruitings of this species in similar habitats in Santa Cruz.

Continued on page 4

Mycodigest is a section of the Mycena News dedicated to the scientific review of recent Mycological Information.

March and April Photo Slide Shows

Tom Sasaki

NAMA mushroom photo slides will continue to be shown in the auditorium preceding the General Meeting during the next two months due to popular response. The shows will start at 6:45 pm and run for about an hour. The focus during the next two months will be on the classification and identification of gilled mushrooms. The program, "The Gilled Fungi: the Friesian Method of Classification" will show in March. Continuing this discussion, the April show will feature, "The Gilled Fungi: The Friesian Genera."

Both of the programs, 'The Friesian Method of Classification' and 'The Friesian Genera' were prepared by Dr. David Hosford and Kit Scates-Barnhart who had been long associated with organizing the knowledge about keys to gilled mushrooms.

The March program will explain and illustrate with diagrams the terminology and stature type of the Friesian System. This system has been in use for 150 years. It features identification without using a microscope.

The April show will demonstrate which genera of each spore color occur in each stature type and will explain how to tell them apart.

The slide programs are part of NAMA's continuing effort in assisting member clubs in teaching about mushrooms and enriching its meetings. The programs are geared toward beginners but all persons are welcome. If you are interested in finding out more about NAMA or the slide programs, contact Tom Sasaki, 415-776-0791 or email, sasakitom@aol.com.

Society Officers

President: Mark Lockaby	(510) 412-9964
Vice Pres: David Campbell	(415) 457-7662
Secretary: Mark Thomsen	(510) 540-1288
Treasurer: Shawn Johnson	(925) 377-7727

Select Committees

Forays: Tom Sasaki	(415) 776-0791
Book Sales: Norm Andresen	(510) 278-8998

Speaker for March 15

Continued from page 1

Else lived, studied and worked in the Netherlands, before she came to the US in December 1998. Her principal interests are in fungal taxonomy and biodiversity. She is an editor and contributor to the Dutch mushroom flora project, Flora Agaricina Neerlandica, and has worked on a mushroom distribution atlas for the Netherlands. She got her PhD from the University of Leiden, the Netherlands, and is a post doc in Tom Bruns' lab at UC-Berkeley investigating *Lepiotas* from around the world. Tom and she introduced a new undergraduate class in Berkeley on "Mushrooms of California" and have taught it twice. She marvels at the richness of the Californian *Lepiota* flora, especially among the redwoods and cypresses; her spare time is spent knitting mushrooms.

Mycena News is the newsletter of the Mycological Society of San Francisco and is published monthly from September through May. Please email newsletter submissions to: mycenanews@mssf.org.

Editor: William Karpowicz

Layout: Ruth Erznosnik

Printing/Mailing: Mother Lode Printing, Jackson, CA

MSSF Discussion Group on Yahoo Groups

The MSSF email discussion group facilitated through Yahoo Groups is a great way to keep in contact with other members and is one of the primary ways in which members keep up on news about the Society. The list features often-intriguing discussion of fungal-related topics, tips about current fungal activity, and up-to-the-minute news about MSSF functions.

The list is available in both individual-message and digest formats. Additionally, you can also subscribe to the group in "Special Notices" mode. That means that if you wish to receive only official announcements from the society and not email traffic from other members, you can subscribe using this method. (Subscribers to the list in regular and digest formats also, of course, receive official announcements in addition to posts from other members.)

To sign up, go to:

<http://groups.yahoo.com/group/mssf/>

Follow the link that says "Join This Group". (You will need to sign up for a free Yahoo Groups membership if you do not have one already.)

The Foragers' Report

March 2005

Patrick Hamilton

These are the blasé days of late February/early March and some of us, unless we are engrossed in a good black chanterelle season, begin to think about upcoming morels.

I don't hear much about any folks picking many blacks so I do believe that our minds are free to formulate just what forest fires might produce when. (Dirty little secret of chefs is lots of butter and good amounts of salt, dirty big secret of MSSF members is that we have somewhat peculiarly wicked interests in forest fires.) So?

They bring reforestation—new stuff to the world. Yea. Woodland fires allow a clearing of the dense understory and can make for a healthier forest. We like them. Sort of. A forest fire is God's *methode de flambé* that brings us (his chosen ones) morels.

The season for these lasts from March in the old apple orchards of Sonoma county until July at high elevations in the Sierra. Every year I get a call from a friend who asks me to come I.D. these blondes that grow in grass under his apple trees in Sebastopol. I charge him a percentage of the morels for my time and admonish him that unless you are knowledgeable no one should be eating mushrooms until an "expert" comes and sees them. Each year.

Whoa—"Honey, grab my galoshes—it's raining again," I'm thinking, looking out the window. It's been doing this for 6 days or so and maybe the blacks up at SPSP will get the idea and do some fruiting for us.

I have heard about velosas in the East Bay but are they really much fun to hunt for? "Oh look, around yet another grassy, flat, easily accessible area under those live oaks, aren't these cute?" They are a fine pick for folks who don't enjoy the ups and downs of blacks hunting but I still appreciate climbing in and out of the canyons at SPSP—it is part of the hunt. And all that splendid (read "no rain") weather we had in Jan/Feb didn't make for my idea of the horizontal blowing, freezing rain, that should be part of a cornucopioides pick.

Friend left a message yesterday (Feb 17) saying that on a mountain bike ride down on the Peninsula she saw quite a few blacks along the trail. But it was a park where picking is illegal so she did what was proper.

If you do get that wild hair that makes you want to get out looking already for morels try checking out last year's fire above Sonoma's Alexander Valley. It was up along Pine Flat road, near The Geysers. Lots of private property there but still some places to look are possible. And, if you don't find what you're looking for, change you mind and go Cabernet tasting and get some fine eats at the Jimtown Store.

Some things simply stuffed seem good right now so herein are presented two easy mushroom recipes calling for *A. bisporus* (one of my favorites).

Portobellos and Eggs

Serves 4 as a breakfast entrée

4 Portobellos, about 4" in diameter, stem removed, cap carefully hollowed a bit
 4 Tbsp unsalted butter
 4 eggs, large
 4 Tbsp Gruyere, Jarlsberg, or Swiss, shredded
 Gray sea salt and freshly ground pepper

After hollowing the caps, sauté them in the butter until lightly browned on one side, turn and do the same. Set aside in the pan and keep warm. Poach the eggs until the whites are firm and the yolks warm and runny. Remove and drain briefly on a clean dish towel (while still in a slotted spoon). Lift and place them into the mushroom caps. Season, baste with some of the butter and mushroom juice left in the sauté pan, top with cheese and broil until bubbly. Serve with sourdough toast points spread with sherried cream cheese topped with a bit of chutney. A little Worcestershire Sauce, Tiger Sauce, or other flavoring condiment can always be sprinkled on. For brunch a Gloria Ferrar sparkler with these sounds good to me (local Roderer seems not as good as it once was).

Buttons and Oysters

Serves 4 as an appetizer

24 button caps, large (about 1 ½")
 ¼ cup unsalted butter
 6 scallions, chopped fine
 24 oysters, removed from shells (Kumamoto or Hog Island Sweets, "smalls," would be perfect)
 Melted butter, gray sea salt and freshly ground pepper

Sauté the mushrooms until lightly browned and place on a buttered sheet pan, caps upside down, season. Sauté the scallions in the same pan in the remaining butter and place about ¼ teaspoon in each cap. Dip the oysters in the melted butter and place one in each of the caps, season. Broil until the edges of the shellfish begin to curl a bit. Serve at once. Try a good Muscadet, Sancerre, or local Savignon blanc with these.

Both of the above recipes are adapted from a Sunset Magazine appetizer book published in 1965.

That's all for now folks!

Mycodigest**Continued from page 1**

There are a couple of notable traits shared by many species of woodchip mushrooms. The first is that many are observed very little, if at all, in non-anthropogenic (“natural”) environments and their geographic origins are often unclear. *Psilocybe cyanescens* is occasionally found growing on rotting wood and small branches within woodlands, but this is very unusual. As far as I know, *Stropharia aurantiaca* has never been reported from undisturbed woodlands at all. *Psilocybe cyanescens* is thought to have originated in the Pacific Northwest, where it is most abundant. However, it was first collected in Kew Botanical Gardens in 1910, over 30 years before the first Northwest collection was made in Seattle.

The geographic origin of *Stropharia aurantiaca* are even more unclear, having first been collected in Kew Gardens in 1887, but turning up in Australia very soon after. Interestingly, both the 1979 edition of *Mushrooms Demystified* and the 1983 edition of *Mushrooms and Other Fungi of Great Britain and Europe* describe *S. aurantiaca* as “rare”. Twenty-odd years later, it is the single most common mushroom to be found growing on woodchips, both in California and in Europe. This is a good example of another phenomena we see with many woodchip fungi -- rare species becoming more common over time.

Other examples include the above-mentioned ‘freeway stropharia’ that seems to be on the increase in both European and California parklands, and *Psilocybe azurea*, a species first collected in the Northwest in 1979, and that was reported for the first time in Europe in 2000 and recently is turning up in California as well. (Of course, hallucinogenic *Psilocybe* species can spread particularly fast, as they are able to encourage human symbionts to disperse them.) The *Psilocybe subaeruginascens* group are found in woodchip beds in Asia (particularly Japan), but in the last year a mushroom belonging to this group has been collected in Golden Gate Park.

These patterns of the emergence and spread of “new” species and the fact that many of them are rarely seen outside of woodchip beds suggest that woodchip beds represent a unique and emerging niche that is actively being colonized. Wood-rotting fungi are extremely common in woodlands, yet the common woodland wood-rotters tend not to be common woodchip fungi and vice-versa. Shaw suggests several reasons why woodchips are a unique habitat: 1) the depth, extent, and abundance of surface area are far greater than those of logs and coarse woody debris, which means nutrients are far more available; 2) woodchip beds often undergo regular disturbance and replenishment with fresh chips (woodchip beds that aren’t replenished will dramatically decrease in mushroom abundance and diversity, but species diversity actually increases in established woodchip beds that are regularly replenished); and 3) woodchips often come from many different sources, typically being a

mixture of wood from several species of trees and shrubs, and often chips coming from a number of different locations.

All of this creates selective pressures that are very different from those found in ‘natural’ wood environments, where lack of nutrients and resulting environmental stress are more important and competition pressure from other species is somewhat less. Species common in woodchips might have been very rare and restricted to marginal niches in such an environment. In rich environments, this situation is reversed, and these ‘weedy’ species that are able to rapidly colonize, reproduce, and compete with other species are favored.

Species lists for northern California fungi come from our larger forays, particularly the ones we have for the Fungus Fair. These forays are typically in wildlands – west Marin, Salt Point, the East Bay Hills, etc. These are the areas that need to be emphasized, but sometimes urban environments are overlooked. (The last Fungus Fair received exactly **one** collection from San Francisco!) There are clearly some interesting fungal dynamics afoot in our cities, suburbs, and parklands and we should definitely be paying attention to them.

Further Reading

Shaw PJA. 2005. Woodchip fungi [online]. Available from: <http://www.chezshaw.demon.co.uk/work/research/woodchips/woodchips.html>. Accessed 2005 Feb 18.

Shaw PJA, Butlin J, Kibby G. 2004. Fungi of ornamental woodchips in Surrey. *The Mycologist* 18:12-15.

Shaw PJA, Kibby G. 2001. Aliens in the flowerbeds: The fungal biodiversity of ornamental woodchips. *Field Mycology* 2:6-11.

First-Ever All California Club Foray a Tremendous Success!

David Rust and Debbie Viess

The first All California Club Foray (ACCF), held at the Albion Field Station on February 4-6, 2005, was a tremendous success. More than sixty five people from seven clubs—from Humboldt Bay to San Diego—participated in the event. Dr. Terry Henkel, who spoke at the MSSF Fungus Fair two years ago, proved to be an excellent resource for the event. He brought two graduate students, immersed himself in mushroom identification and gave a terrific presentation on his work in the tropical rainforests of Guyana.

A cadre of knowledgeable mushroom identifiers reveled in the task of putting names on 139 species. At the same time, Dr. Henkel shared mycological wonders of the microscope to the delight of all.

The indomitable Taylor Lockwood, who lives in nearby Mendocino, led forays on both Friday and Saturday to his treasured hot spots. Most of the groups forayed into nearby Jackson State Forest, while others followed the FFSC's Mark Gillespie, who had obtained access to previously unexplored private timber company land.

The event was catered by Good Thyme Catering's impeccable Debra Dawson, who provided all five meals, capped by Saturday night's Cornish game hens stuffed with rice and black chanterelles in a rich reduction sauce, with wild and wehani rices in a nutty pilaf, vegetables and huckleberry spice cake with candycap crème.

Since ACCF 2005 was so much fun, we plan to do it again next year. Be sure to sign up early!



Humboldt Bay Mycological Society members left to right: Dr. Terry Henkel, Lance Woolley, Jennifer Callan, Katz Hasebe, Don Bryant, Rich Gillespie



Smiling faces at the end of the weekend: Don Bryant, David Rust, Fred Stevens, Debbie Viess, Darvin DeShazer, Peter Werner



Taylor Lockwood and Dr. Terry Henkel

Innoculating a New Substrate

Ken Litchfield

It's been a bit of work and time to get it all set up and I know that there are a number of cultivation folks in the society who have been missing our Presidio classes. We are embarking on a whole new level of educational and experimental possibilities.

This is the registration announcement for the Mushroom Cultivation Class with the Merritt Landscape Horticulture Department. Merritt College is a member of the Peralta group of Community Colleges, located off Redwood Road near Skyline above the start of Hwy 13 off 580 near the Fruitvale neighborhood of Oakland. We have had a mushroom cultivation relationship with their permaculture classes for several semesters and we have now spun off into our own course. This is where we will have our lab equipment and main mushroom garden as well as a large territory of organic and permaculture gardens for experimentation. In addition, the area right around the gardens has wild territory with several species of mycorrhizal fungi growing on the trees, useful for observation and experimentation. It is convenient to the diverse habitat in the East Bay and cultivation related businesses and institutions in the Bay Area.

Yes, this is a mushroom cultivation class. It will also include a range of fungal topics, and will dovetail into many course subjects as it grows. This is a prime opportunity for the MSSF's educational mission to develop with an established community college program that is affordable.

The class will be Friday afternoons from April 1 to May 27 and several Saturdays during that time. Included will be information on intentional cultivation of saprobic, mycorrhizal, and parasitic fungi. It will include both laboratory and garden cultivation. We will be putting in a mushroom/vegetable garden at Merritt to inoculate with huitlacoche which may be fruiting with other fungi come the fall rains. We will have hands-on cultural details on the fungal life cycle, reproduction, and propagation, on the fungal role in soil building, composting, remediation, enhancing the permaculture landscape for fungal diversity and robustness, and lots of lore about mushrooms for food, medicine, and other interesting purposes.

This is the kickoff class for what we hope and plan to expand into a multi-tiered approach to learning about fungi with beginning, advanced, portfolio, and experimental project classes and outreach programs in mushroom cultivation and related topics. So please join us for the groundbreaking.

To register go to the Merritt College Landscape Horticulture portion of the Peralta Spring Class Schedule for the class description information:

<http://www.peralta.cc.ca.us/classhd/052/MLANHT.HTM>

For returning or ongoing Merritt or Peralta students:

You will need your *Class Code*: 1372 and *Course Number*: 48OL and an ADD Form that you get from the Merritt Landscape Horticulture Department. It needs the instructor's signature (mine) or the head of the department's signature, which will be more easily available to you. Then take that form to the Merritt Admissions and Records office to register for the class.

For new or outside students:

You will need to fill out a Peralta Community Colleges Admissions Application and you need the class code on your application at the bottom of "Page 1":1372. You go directly to Merritt Admissions and Records Office, where they have those applications, to register for the class.

Any questions about registration are best addressed to the online website, Spring 05 Catalog, the Landscape Horticulture Department, or the Admissions and Records Office. Please address your questions about course content info with me rather than the folks in the offices. When you have completed registration please email me with that fact and I'll put you on the class list for instructor info about the course. Please take this opportunity to join us to help grow this program.

Calendar

Continued from page 8

Sunday, March 20: 10:00 am. Briones Park, Bear Creek Rd entrance, south parking lot. No picking but we will talk about mushrooms. Photographers welcome. Bring lunch, water and a snack to share. Expect a 5 mile walk with beautiful vistas and mud. For more information, contact Norm Andresen at n.andresen@comcast.net

San Francisco Flower and Garden Show



Ken Litchfield

We need to make some modifications to last month's topic and incorporate it into this month's MSSF big event, the San Francisco Flower and Garden Show. For the last several years, the Cultivation Committee has created a "Mushrooms in Your Garden" vignette in the lower level east wing of the Cow Palace at the Garden Show. This year for the first time we will have a "Beneficial Mushrooms in Your Garden" exhibit in the main floor arena with the professional garden designers' exhibits. Whereas the vignette was a 128 sq. ft. area, this year's exhibit will be over three times bigger. The MSSF volunteers will be educating the general gardening public, somewhere around 40-60,000 strong, about fungi, to which their typical response is "Fungi? Fungicide!"

Over the years, we have built up a regular and increasing clientele of folks who expect to see us there. With the larger main floor venue, we have the opportunity to present to practitioners of the country's most popular hobby, information about how to incorporate a whole kingdom of organisms into their gardens for food, aesthetics, medicine, soil enhancement and plant benefit. And just shoot the breeze about mushrooms in general.

There are three primary components to this year's exhibit: a shady garden in the back left corner, a raised bed vegetable/mushroom garden in the back right corner, and a lawn with a mushroom fairy ring in the front left center. In the front right will be the seating area for our volunteer staffers to speak to the public about the exhibit, the society, and mushrooms.

The shady garden demonstrates how fungi, lichens, ferns and mosses can enhance a garden without enough sunlight for most garden plants. There will be mossy, licheny, polyporous, and turkeytail logs arranged in an aesthetically pleasing manner to support whatever wild mushrooms may be available at show time. The shading trees above will be oak and pine so wild mycorrhizal mushrooms available for display will have appropriate hosts. There will be kit mushrooms set in appropriate niches among the woodland logs and rocks. At the front, framing the woodland section, will be two stumps each supporting a gnarled reishi log. In general, the look is intended to be a natural woodland effect with a Zen garden touch. The idea here is that if you have an area in your garden that is too shady for most plants you can bring in humus, wood chips and an arrangement of cool looking logs, rocks and woodland

plants. Then either let nature take its course or intentionally inoculate the area with mushrooms.

The raised bed/vegetable garden demonstrates how a vegetable or flower garden could be enhanced by mushrooms in the mulch of the bed and the stockade style logs that raise it. In the bed will be colorful coles and chards and other leafy ornamental edibles that provide the overstory to humidify the fruiting mushrooms. The bed will be "L" shaped running along the back and the leg coming forward to the rear of the seating area. In the corner of the "L" will be a compost pile for arranging Buttons and Shaggy's around the base. Kits and appropriate wild edibles will be arranged in the mulch and on the logs to show that mushrooms can increase the productivity of an edible garden without increasing the square footage.

The mushroom fairy ring in the lawn is to demonstrate that this is not a disease of the grass but an indication of a healthy organic thatch with a different lawn maintenance style than spraying pesticides for no reason. Mushrooms could be just one of many things growing in a more diversified lawn.

We will want wild mushrooms to be brought from the March 12 and 13 weekend for installation in the constructed exhibit on Monday. We have volunteer staffing shifts for the show Wednesday, March 16 thru Sunday, the 20th. There are certain things that will help with setting up and taking down the exhibit. If you would like to help with any of these things please contact me at klitchfield@randallmuseum.org or 415-863-7618.



A plate of *Hygrocybe punicea*

Mycological Society of San Francisco
c/o The Randall Museum
199 Museum Way
San Francisco, CA 94114

First Class Mail
U.S. Postage
PAID
Jackson, CA
Permit No 29



March, 2005, vol 56:03

MSSF Calendar, March, 2005

Monday, March 7: Culinary Group's Monthly Dinner,

7:00 pm. Meeting and dinner at the Library of the Hall of Flowers in Golden Gate Park in San Francisco. For information, contact Phil Brown at 510-526-4325 or at towltek2000@msn.com. Future culinary group dinners: April 4, May 2 and June 6.

Saturday, March 12, Day-trip Foray to Mendocino Coast:

Meeting time at 11:30 am at the beach parking lot of Van Damme State Park, on the west side of Highway 1. We will carpool to a foray site to be determined. Contact Peter Werner (pgwerner@sfsu.edu or phone 415-289-0168) for further information.

Tuesday, March 15: NAMA's Mushroom Photo Slide

Program, 6:45 pm. 'The Gilled Fungi: The Firesian Method of Classification' will show in the Randall Museum auditorium preceding the General Meeting and will run about an hour. For description of the program, see article in the news section.

Tuesday, March 15: MSSF General Meeting. Randall

Museum, doors open at 7:00 pm. Else C. Vellinga will speak about parasol mushrooms.

Wednesday March 16 - Sunday March 20: San Francisco

Flower and Garden Show- "Beneficial Mushrooms in Your Garden." For more info see article and to volunteer contact Ken Litchfield at klitchfield@randallmuseum.org or 415-863-7618.

Continued on page 6

Note: Deadline for the April 2005 issue of Mycena News is March 18.
Please send your articles, calendar items and other information to:
mycenanews@mssf.org