

Mycena News



The Mycological Society of San Francisco December 2007, vol. 58:09

Send submissions to
Mycena News!



Mycena News is seeking content pertaining to any of the following topics. Please consider submitting an article to: mycenanews@mssf.org.

- Photos of this season's most beautiful mushrooms
- Foray reports and experiences in the field
- Your favorite recipes
- Mushroom related poems and artwork

Inside This Issue...

Mycodigest.....	1
President's Post.....	2
Announcements.....	2
What's Bookin?.....	3
Holiday Dinner Menu.....	3
Houby Hunting.....	4
Membership Renewal Form.....	7
December MSSF Calendar.....	8

Mycodigest: Are Mushrooms Genetic Individuals or Genetic Mosaics?

Brian Perry

Although most of us may not give it much thought as we stoop to liberate yet another *Boletus edulis* from its terrestrial confines (assuming, that is, you were at the Mendocino Woodlands Foray last month!), the mushroom we are picking represents the union of two mating type compatible strains of the species—a fungal “Mom and Dad,” in essence. In the life cycle of a typical mushroom, these strains are present in the soil or other substrates in the form of long, filamentous cells termed hyphae (and mycelium collectively), which arise from germinating spores produced by mushrooms of previous generation(s). It is the mycelium that represent the business end of the fungus, absorbing nutrients and water from the substrate, forming associations with plants, etc. The mushrooms that we so diligently hunt for are simply the reproductive structures of these organisms. It is within specialized sexual cells of the mushroom, called basidia, that mushroom sex finally takes place and from which spores are produced. Like other organisms that reproduce sexually, the sterile (i.e., somatic) cells in mushrooms and the mycelium that give rise to them, are genetically identical, each containing a contribution from both the parent strains. Or are they? Recent studies indicate that this condition may not be true for all mushrooms, and that divergence from this common pattern may have profound effects regarding the ecology and longevity of these fungi.



Armillaria mellea is thought to be among the largest and longest-living species on Earth. Photo courtesy of MykoWeb and Mike Wood

Within the typical mushroom life cycle, spores and the primary mycelium they give rise to, are haploid in their genetic makeup, meaning that the nucleus present in each cell contains only a single copy of each chromosome (think sperm and

Continued on page 6

Mycodigest is a section of *Mycena News* dedicated to the scientific review of mycological information.

PRESIDENT'S POST

As you read this, the Fungus Fair will have come and gone, and judging by virtually all of our prior 37 Fairs, it was a great success—that is, lots of people exposed to the kingdom Fungi for the first time; plenty of curious minds filled with new ideas of how to appreciate mushrooms; a bunch of myco-neophytes and myco-veterans inspired to join MSSF; a healthy batch of T-shirts, books, and bowls of soup purchased; and a good time had by all. Couldn't have been done without the cadre of outstanding volunteers we have in the Society. You know who you are and we extend our heartfelt thanks for your good work.

It occurs to me that there are basically two levels of volunteering for the organization: the regulars and the occasional volunteers. The regulars are those that are highly active, usually as members of the Council, including officers, councilors and committee chairs, or just being at every event helping out wherever they can. The occasional volunteers are those of you that lend us a hand once or twice a year at the Fungus Fair and other events. Both kinds of volunteers are valuable to us. Of course, we need the two or three dozen people who are willing to take on significant duties in the Society, yet too many more than that would be unwieldy and bureaucratic. And when we put out the call for help at certain events we are very grateful to the hundred or so of you who routinely raise your hand and show up for a few hours out of your busy schedules.

I'd like to see a third level of volunteers step up for us—tweeners if you will. There are several committees that can use some help on a regular basis that wouldn't require the type of commitment the chair persons have chosen to take on. For example, our Hospitality Committee, competently chaired by Liana Hain, could use some more folks to be greeters at our General Meetings or to bring goodies to eat and drink. Our Education Committee is co-chaired by Alice Sunshine and Paul Koski, a pair of excellent educators with great ideas. They'd love to have a few others of you join them with even more great ideas. Take a look at our list of committees in the roster and consider joining one, not as the leader and organizer, but as a committee member, there to support and enrich these vital parts of our organization. If you're not sure where you might fit in, let me know and I'll direct you to where we could use a few good tweeners.

Hope to see you at the Holiday Dinner!

-J.R. Blair

ANNOUNCEMENTS

MEMBERSHIP RENEWALS

Do you need to renew your membership? Check your *Mycena News* mailing label to see. If your membership is paid only through 2007, you'll need to renew for 2008 to continue receiving membership services.

We really want members to renew now, before the end of the year! **Fill out the required information on page 7**, and mail a check for the appropriate amount (made out to "MSSF Membership") to MSSF-Membership c/o the Randall Museum, 199 Museum Way, San Francisco, CA 94114. **An envelope is provided inside this newsletter!**

You can also renew online by using the PayPal option on the MSSF website. If you do, please send an e-mail (to membership@mssf.org) or telephone (1-866-807-7148) with the information requested on the membership form on page 7. Paypal provides only the name, mailing address, and e-mail of those who enroll or renew. It does not give secondary member names, telephone numbers, an alternate e-mail address, or interests, so please contact Membership with these details.

The regular, adult/family membership fee is \$25. Seniors over 65 and full-time students pay \$20. E-members pay \$15 to download the *Mycena News* and other publications from the website. Check our website for reduced rates for multiple-year memberships.

The MSSF treats membership information as private, but it does VERY occasionally release its membership list for mailings by mycological businesses. If you do not want your name included in such a mailing list, either contact the membership chair or indicate on your renewal that you do not want to receive commercial mailings.

LIBRARY NEWS

Received recently were around 10 books from Mrs. Alfred Cherry. The most remarkable were a set of four pamphlets dated from 1897, entitled *Student Handbook: Mushrooms of America Edible and Poisonous* by Thomas Taylor M.D., Washington D.C. Among the 10 books were six cookbooks as Al Cherry loved to cook, a welcome addition to our library.

Donations are welcome for our Library—contact moniquecarment@yahoo.com or Denise Gregory at fungilover@hotmail.com.

What's Bookin'?

Curt Haney

This month's new book is *The Totally Mushroom Cookbook* by Helene Siegel and Karen Gillingham, illustrated by Ani Rucki. Published by Celestial Arts, Berkeley, CA, 1994.



This is a really cute little 95-page cookbook crammed full of great mushroom recipes. It is small in size and easily fits in your purse, backpack, car or as a stocking stuffer for the Holidays. The five chapters are:

- Mushrooms in Salads, Starters, and Broths
- Mushrooms and Their Friend, the Egg
- Partially Wild Accompaniments
- Mushrooms in the Mainstream
- Mushroom Standards

One of my favorite recipes in the book is for Porcini Risotto.

This book will be available at the December General Meeting and at the Fungus Fair at the Oakland Museum. The cost is \$5.95 minus 10% for MSSF members plus tax.

Holiday Dinner Menu

A Mushroom Lover's Culinary Extravaganza

Always featuring the choicest mushrooms available, the Holiday Dinner this year will be especially rich in fungi. The venerable Michael Giacomini, our favorite chef, will command the kitchen with his dedicated band of volunteers. Check page 8 for reservation information. The menu is a work in progress:

Holiday Punch
Grand Array of Appetizers
Garden Salad
Chef's Wild Mushroom Soup
Roast Tenderloin of Beef with Mushroom Sauce
Vegetarian Entrée
Potatoes with Mushrooms
Cook's Choice of Vegetable
Candy Cap Gelato and Coffee



December 2007, vol. 58:09

Contributors:

Lisa Bacon, J.R. Blair, Monique Carment, Alvaro Carvajal, Pat George, Curt Haney, Brian Perry

Editing and Layout:

Cordelia Chadwick, Jeffrey Fisher

Mycena News is the member's newsletter of the Mycological Society of San Francisco, and is published monthly from September through May.

Please e-mail photos, comments, corrections, and correspondence to mycenanews@mssf.org.

To subscribe, renew, or make address changes, please contact Alvaro Carvajal: alvaro.carvajal@sbcglobal.net or (415) 695-0466.

Past issues of *Mycena News* can be read on-line at www.mssf.org.

MSSF Officers 2007-2008

President: J.R. Blair
(650) 728-9405
jrblair@mssf.org

Vice President: Dan Long
(925) 945-6477
danlong@astound.net

Secretary: Phil Brown
(510) 526-4325
towltek2000@msn.com

Treasurer: Lisa Bacon
(707) 765-9085
lisa.bacon@comcast.net

Houby Hunting (A Neophyte Mycophile Finds Fungi in Iowa)

Lisa Bacon

Being of Czech or Slovak descent is a big thing in Iowa. I was raised in the small town of Toledo, 60 miles west of Cedar Rapids. In this region, the majority of locals claim some Czech heritage and proudly refer to ourselves as “bohemies.” Homemade sauerkraut and kolaches (sweet dough pastries with various fillings in a well on the top) are a few of the dishes we cherish from our heritage. Anton Dvorjak reportedly wrote the New World Symphony while visiting relatives in a small town outside Cedar Rapids. On October 21, 1995, the National Czech and Slovak Museum’s (www.ncsml.org) current building was formally dedicated, with Presidents Bill Clinton of the United States, Václav Havel of the Czech Republic, and Michal Kováč of the Slovak Republic presiding over the dedication. I visited this impressive, world class museum for the first time in September. You can find anything Czech in the Czech Village neighborhood of Cedar Rapids, including exquisite hand-blown glass mushrooms at the Czech Cottage (www.czechcottage.com).

Houba (pronounced how-ba) is the Czechoslovakian name for mushroom. The plural is houby (technically pronounced how-bee). As often happens in assimilating cultures and languages, many Midwesterners use a bastardized pronunciation (who-bee). Since Bohemies are foodies in our own right, it comes as no surprise that all over the Midwest we commemorate the bountiful spring mushrooms with a variety of festivals. In Cedar Rapids, Houby Days occurs in mid-May. As one might expect, it consists of a parade, folk music, folk dancing, beer, food, and more food. All of this adoration centers around the ONLY spring mushroom most people are interested in, the glorious morel (specifically *Morchella angusticeps* and *Morchella esculenta*).

My sister-in-law Anne went on a foray near Ames this past spring where there were so many morels they left hundreds on the ground. Imagine!

Unlike many parts of California, in Iowa you can find fungi virtually everywhere. Elevations range from 480–1670 feet, with the best areas at around 850 feet. The rich black soils are mostly loess and loam, with scattered areas of sand and clay. As one might expect, the land is predominantly devoted

to agriculture (corn, soybeans, and grazing pastures) with only 10% being forest lands. These forests (locally known as “timbers”) are mostly concentrated in the mid-central to eastern part of the state. According to the Iowa Department of Forestry, oak and oak/hickory forests make up about 46% of Iowa’s woodlands. The oaks fall into two categories: White Oaks (white, bur, swamp white, chinkapin, overcup) and Red Oaks (red, black, northern pin, shingle). Other species of trees found in these woods are ironwood, ashes, hard maples, walnuts, dwindling numbers of elms and black cherry, and woody shrubs. The forests are threaded with rivers, cricks (creeks), lakes, and ponds. Additional moisture comes in the form of magnificent thunderstorms and substantial snowfall. Edible fungi can be found in spring, summer and fall. Most of us prefer spring and fall foraging, because the summer brings swarms of bloodthirsty mosquitoes accompanied by frequently

unbearable heat and humidity. The white tail deer population is epidemic in proportion, as are the deer ticks that go with them. These bambis make their California kin look like large dogs. They pose an enormous threat as you drive to your favorite foray spots, as they spring out of cornfields and up from ditches. Once in the timber, I personally worry more about getting chased by an angry Black Angus bull as one forages, a flashback to getting hung up on barbed wire while making a hurried and graceless exit from a pasture in my reckless youth.

One of my favorite childhood mushroom memories is waking up one sunny spring morning to find our front yard carpeted with what seemed like several hundred black morels. Five siblings poured out onto the lawn, each chortling that they could pick more than the others, but all conspiring to pick quickly so that none of the

neighbors could share in our fortune. Iowa Bohemies are not as overt as the Illinois branch. They actually have a Bohemian Creed (www.csagsi.org/creed.htm). Two items acutely outline their stealth tactics:

“12. Prior to removing car from garage, scan skies for possible inclement weather; if forecast is acceptable, prepare for “houby” hunt

13. Camouflage all houby hunting equipment from neighbors,



Fall foray finds. Photo by Lisa Bacon

proceed to secret place for houby with caution (i.e. drive through alleys, around the block several times, down wide streets) to insure you are not being followed by neighbors who discover place for your houby picking”

Hmm...I think MSSFers are a little more subtle and less paranoid in keeping their “spots” secret.

At the end of my recent extended visit to Iowa, I was able to exercise and hone my mycological skills. My niece Madie found what she believed to be a false morel. Since it was fall, I doubted that was true. My budding knowledge of mycology led me to ascertain that it was a stinkhorn (*Phallus impudicus*). My brother Brian introduced me to a delightful couple, Bill and Nancy Carlson, who invited me out to foray on their farm.

On an overcast Saturday morning late in September, Bill and I set out in the “beast,” an aged four wheel drive dump truck to visit his favorite spots on 80+ acres of rolling hills covered with pastures and substantial oak forests bordering the Iowa River. Bill has carefully cleared out much of the underbrush, making it a forager’s dream. An avid hunter, he has deer blinds all over his property. Personally, I think they could double as mushroom spotting towers. Bill assured me the Black Angus herd was “friendly” and we romped around foraging for several hours. I introduced Bill to the term “LBM.” He shared wonderful tales of hunting and foraging. We came back to Nancy’s hot coffee and delicious pickled salmon (made from fish caught in Wisconsin of all places). In true Bohemie fashion, Bill and Nancy sent me back to town with all kinds of mushrooms as well as loads of beautiful squash from their garden). I sautéed most of the edibles in butter for brunch with my ailing father the next morning.

I tried to document the fungi in the wild, but my camera was uncooperative. Special thanks to Roger Heidt, of the Prairie State Mushroom Club (www.geocities.com/iowafungi/), for kindly helping me identify some of the less obvious fungi. I also obtained a fabulous laminated field guide, *Mushrooms in Your Pocket – A Guide to the Mushrooms of Iowa*, for \$9.99 (ISBN 87745-887-1). Hint: would be useful for California IDs, as well. I am intrigued by the colloquial names for mushrooms in different geographic areas and have listed them using their local Bohemie names. In the photo on page four, the specimens (clockwise from lower left) are:

Button mushrooms (*Armillariella mellea*)—aka honey mushrooms. The main group shown was collected past their prime, with the exception of a few on top of the largest puffball. There were hundreds of them on and around stumps. They are best taken when in the button stage.

Small puffballs (*Lycoperdon pyriformis* or *Morganella pyriformis*)—unexpectedly flavorful.

Goat’s beard (*Grifola frondosa*)—aka hen of the woods. My family had been raving about this mushroom prior to my forage. I was unable to gather what they were referring to, since my brother Kenny, normally a tremendously articulate individual, said they had “webby things” underneath. Absolutely delicious! Bill’s favorite way to eat them is to cook them with a beef roast and throw away the roast.

Giant puffballs (*Calvatia gigantea*)—having never seen one before, seeing these in their natural habitat was one of the highlights of the foray. The larger one in the photo is the size of a soccer ball. Didn’t get a chance to cook, but I am told they are similar to tofu in texture and taste.

Sulfur mushrooms (*Omphalotus illudens*)—aka Jack-o’-lanterns—again specimens were old and they are poisonous, but added color to the collection.

Smaller specimens collected, but not cooked if edible, were: lawyer’s wig (*Coprinus comatus*), wood ear (*Auricularia aricula*), red tree brain? (*Peniophora rufa*), and an unidentifiable inky cap.

When I returned to California, I sent Bill and Nancy a copy of Aurora’s *Mushrooms Demystified*. They surprised me with an open invitation to bring friends to camp and forage on their farm. Anyone

up for a houby hunting trip to Iowa in May? ☘



Bill Carlson holding an *Omphalotus illudens*. Photo by Lisa Bacon

Do you have a vacation story about mushrooms? Have you forayed in far-away lands? Send your stories to mycenanews@mssf.org

MycoDigest continued

eggs here, folks). Depending on their genetic compatibility, when hyphae of the same species encounter one another in the environment, they will fuse and give rise to a new secondary mycelium. The hyphal cells of this secondary mycelium each contain two un-fused, haploid nuclei—one from each strain (again, think eggs and sperm). This condition of two haploid nuclei per cell is termed “dikaryotic.” Mushrooms and other higher fungi are unique in that this dikaryotic phase is believed to persist for an extended portion of the life cycle. In most other organisms, compatible haploid nuclei (usually in the form of gametes) fuse soon after they encounter each other.

When environmental conditions are suitable, the secondary mycelium will form primordia that soon develop into mushrooms. As mentioned above, it is within the basidia that reproduction finally occurs. In these sexual cells, fusion of the two haploid nuclei occurs, creating a diploid nucleus that has a full complement of chromosomes (one copy from each strain). Shortly after this fusion, meiosis occurs, returning the resulting four daughter nuclei to the haploid condition. These resulting nuclei eventually migrate into the developing spores, which are soon dispersed to start the life cycle over again. During meiosis, recombination of DNA may occur between sister chromosomes, shuffling together new combinations of genes and resulting in novel genetic variation differing from that found in the nuclei of the parent strains. It is this resulting variation that is the evolutionary advantage of sexual reproduction, for it is these new combinations of genes that natural selection may act upon. Although the majority of genetic variation resulting from sexual reproduction undoubtedly has little or no effect, it will on occasion be beneficial in some form; this thereby confers a selective advantage upon the mutated population. As you can imagine, this novel variation is paramount in helping a species adapt over time to the challenges of an ever-changing environment.

Interestingly, the life cycle of *Armillaria* species are quite different from the typical cycle described above. In *Armillaria* the haploid nuclei present in newly produced secondary mycelium quickly fuse, forming diploid nuclei. Unlike other mushroom species, in which the individual cells are typically thought to be dikaryotic (i.e. contain two genetically distinct haploid nuclei) throughout most stages of the life cycle, the somatic cells of *Armillaria* appear to each contain a single diploid nucleus. The mycelium of *Armillaria*, and presumably the mushrooms it produces, therefore lack the extended dikaryotic stage believed to be characteristic of most higher fungi. This, however, is by no means the end of the story. Recent work done by several teams of investigators (see sources below) indicates that in at least two species of *Armillaria*, *A. gallica* and *A. tabescens*, the individual nuclei within the cells of both the mycelia and non-basidia portions of the mushrooms are in the haploid condition, rather than diploid as they have long been assumed to be.

Using various methods of nuclear staining and fluorescence microspectrophotometric measurements, investigators were able to determine the quantity of DNA within the nuclei of cells constituting the various stages of the life cycle. As would be expected, haploid cells had on average half of the DNA present in diploid cells, or cells caught in the act of replicating their DNA in preparation for mitotic or meiotic division. Knowing that mushrooms are developed from secondary mycelium (i.e. two compatible strains that have fused), the implications of the above findings are that prior to mushroom formation, there must have been an event similar to what occurs in the basidia during a typical mushroom life cycle. The two haploid nuclei initially present in the secondary mycelium must fuse to form diploid nuclei (diploidization), and then go through meiosis to produce haploid daughter nuclei (haploidization). In essence, what these investigators propose is the occurrence of one or more extra-basidial diploidization-haploidization events prior to mushroom formation. This haploid, secondary mycelium eventually produces mushrooms, the somatic cells of which also contain a single, haploid nucleus.

Considering what we know about meiosis and recombination, it is apparent that the extra round(s) of diploidization-haploidization have the potential to generate additional genetic variation beyond what we see in the typical mushroom life cycle. In fact, as researchers have demonstrated, the genetic variation generated by these extra events can become incorporated into a single mushroom, such that the individual cells making up the tissues of this structure contain nuclei that harbor different combinations of genes. Unlike the typical mushroom life cycle in which the cells of the secondary mycelium and mushrooms are genetically identical, the cells of these tissues in *A. gallica* and *A. tabescens* likely represent a mosaic of genetically distinct nuclei. As this genetic mosaic of nuclei are incorporated into basidia (where they experience another diploidization-haploidization event), there is the potential to generate even more genetic variation.

As discussed above, the generation of genetic variation is beneficial to a species as a whole, as it may provide the means over generations to adapt to a changing environment. However, in the case of these *Armillaria* species, the production of genetic variation may even be beneficial at the individual level. As most of us are aware, *Armillaria* species are believed to represent some of the largest and longest-living organisms on Earth, the so-called “humongous fungus” of Michigan and more recently Oregon. In these fungi, individuals are estimated to span an area of 15 to 900 hectares, and range in age up to 8,500 years, persisting in the environment in the form of mycelium and rhizomorphs (i.e. thick mycelial cords). Is it possible that the longevity and capacity for growth these fungi display could be linked to the genetic mosaicism present in their cells? To address this question, researchers have tested the ability of genetically

distinct cell lines, isolated from a single individual, to grow under diverse environmental conditions, including water availability, temperature, and substrate pH. Not surprisingly, these genetically distinct cell lines display variation in their growth ability under variable conditions.

Such results support the idea that genetic mosaicism may even be beneficial at the level of the individual, and may indeed play a role in the longevity and growth rates these fungi display. It is easy to imagine the magnitude of environmental challenges and stresses that a fungus would have to overcome during a life that may span hundreds of years. The ability of various regions of these large somatic structures to differentially react to a variable environment, due to differences in their genetic makeup, would undoubtedly be selectively advantageous at some level. The question remains, however, how widespread is genetic mosaicism within the fungi? So far the presence of an extra-basidial diploidization-haploidization event has only been documented in two species of *Armillaria*. Additionally, what I have presented here is a very simplified explanation of a very complex process. As you can imagine, there is much about genetic mosaics that is yet to be understood, and even those who research this process do not agree on all the mechanisms by which it occurs. Genetic mosaicism is undoubtedly a very important process that has played a large role in the evolution of at least some species of fungi, and shows great promise for exciting research in the years to come. ☼

Sources and additional information:

- Grillo, R., Korhonen, K., Hantula, J. and Hietala, A.M. 2000. Genetic evidence for somatic haploidization in developing fruit bodies of *Armillaria tabescens*. *Fungal Genetics and Biology* 30: 135-145.
- Peabody, D.C and Peabody, R.P. 1985. Widespread haploidy in monokaryotic cells of mature basidiocarps of *Armillaria bulbosa*, a member of the *Armillaria* complex. *Experimental Mycology* 9: 212-220.
- Peabody, D.C., Peabody, R.B., Tyrrell, M.G. and Towle, M.J. 2003. Phenotypic plasticity and evolutionary potential in somatic cells of *Armillaria gallica*. *Mycological Research* 107: 408-412.
- Peabody, R.B. and Peabody, D.C. 1987. Haploid monokaryotic basidiocarp tissues in species of *Armillaria*. *Canadian Journal of Botany* 65: 69-71.
- Peabody, R.B., Peabody, D.C. and Sicard, K.M. 2000. A genetic mosaic in the fruiting stage of *Armillaria gallica*. *Fungal Genetics and Biology* 29: 72-80.
- Peabody, R.B., Peabody, D.C., Tyrrell, M.G., Edenburn-MacQueen, E., Howdy, R.P. and Semelrath, K.M. 2005. Haploid vegetative mycelia of *Armillaria gallica* show among-cell-line variation for growth and phenotypic plasticity. *Mycologia* 97: 777-787.

Peabody Lab Webpage: http://faculty.stonehill.edu/dpeabody/research_short.htm

MYCOLOGICAL SOCIETY OF SAN FRANCISCO - Membership and Membership Renewal Application

New Members please fill out as much information as you can. Members who are renewing need to fill out only the blanks for which information has changed within the last year. Please check the current Roster to see if any of your address, phone, and e-mail need updating!

Name 1: _____ Home Phone: _____
 Name 2: _____ Business Phone: _____
 Street/Apt#/PO: _____ Cell Phone: _____
 City: _____ E-mail 1: _____
 State: _____ E-mail 2: _____
 Zip Code: _____ Interests: _____
 New Membership? _____ Renewal? _____
 Membership type: _____ Adult/Family (\$25) _____ Senior/Students (\$20) _____ Electronic (\$15)
 If sending a check, please make it out to "MSSF membership" and mail it, with this form to: MSSF Membership, c/o The Randall Junior Museum, 199 Museum Way, San Francisco, CA 94114
 If paying by Credit Card, please provide the following information:
 Circle Type of Credit Card: MasterCard, Visa, Discover, or American Express
 Credit Card Number: _____ Expiration Date: _____

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

First Class Mail
U.S. Postage
PAID
Oakland, CA
Permit No. 1451



December 2007, vol. 58:09

MSSF Calendar, December 2007

December 10, 2007, 7pm. MSSF Holiday Dinner. Hall of Flowers, Golden Gate Park, SF. Reservations required by December 6. Please contact Lisa Bacon at lisa.bacon@comcast.net

December 29, 2007, Point Reyes National Seashore Mycoblitz 5. Please plan to attend this year's Mycoblitz at the beautiful Point Reyes National Seashore. We've found 438 species so far and need your help to find more. Dr. Tom Bruns is foray mycologist. Meet at the Bear Valley Visitor Center between 9–10 am. For more information, contact David Rust: incredulis@yahoo.com / (510) 468-5014.

Monday, January 7, 2008, (please note the date!), 7 pm. Culinary Group Dinner. As usual, we will meet at the Hall of Flowers, Golden Gate Park, 9th and Lincoln, SF. The dinner cost is \$14. We will feature goat roasted in our caja china. Contact Pat George at (510) 204-9130 or plgeorge33@yahoo.com no later than Friday, January 4, to make your required reservations. Don't forget to bring your own tableware as the Hall does not provide it, your beverage, and an appetizer to share. Our next dinner/meeting will be on February 4.

January 19–21, 2008, 11th Annual SOMA Wild Mushroom Camp, Occidental, CA. Tom Volk, Else Vellinga, Taylor Lockwood, and others will present. Join us for a weekend of forays, classes, presentations, and mushroom cuisine. Fees: \$275 for full weekend, \$215 with off-site lodging, \$125 for Sunday only. Info: (707)-773-1011, or SOMAcampinfo@SOMAmushrooms.org. Early-bird specials available until TODAY; don't wait! Register online at www.SOMAmushrooms.org, e-mail SOMAcampinfo@SOMAmushrooms.org, or call (707) 773-1011.

Deadline for the January 2008 issue of *Mycena News* is December 15.
Please send your articles, calendar items, and other information to:
mycenanews@mssf.org