



SOMANEWS

From the Sonoma County Mycological Association

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MARCH 2016

SOMA Speaker: Catharine Adams

March 17 At the Sonoma County Farm Bureau

“How the Death Cap Mushroom Conquered the World”

Cat Adams is interested in how chemical ecology influences interactions between plants and fungi. For her PhD in Tom Bruns’ lab, Cat is studying the invasive ectomycorrhizal fungus, *Amanita phalloides*. The death cap mushroom kills more people than any other mushroom, but how the deadly amatoxins influence its invasion remains unexplored.

Previously, Cat earned her M.A. with Anne Pringle at Harvard University. Her thesis examined fungal pathogens of the wild Bolivian chili pepper, *Capsicum chacoense*, and how the fungi evolved tolerance to spice. With the Joint Genome Institute, she is now sequencing the genome of one fungal isolate, a *Phomopsis* species, to better understand the novel enzymes these fungi wield to outwit their plant host.

She also collaborates with a group in China, studying how arbuscular mycorrhizae can help crop plants avoid toxic effects from pollution. Their first paper is published in *Chemosphere*.

At the SOMA meeting, Cat will explain how scientists determined the death cap mushroom, *Amanita phal-*



loides, was an invasive species, and why we should care. She’ll then tell you about 10 years of research at Pt Reyes National Seashore examining how *Amanita phalloides* spreads. Lastly, Cat will outline her ongoing work to determine the ecological role of *Phalloi-*
des’ toxins, and will present her preliminary findings.



NEED EMERGENCY MUSHROOM POISONING ID?

After seeking medical attention, contact Darvin DeShazer for identification at (707) 829-0596. Email photos to: muscaria@pacbell.net and be sure to photograph all sides, cap and of the mushroom. Please do not send photos taken with older cell phones – the resolution is simply too poor to allow accurate identification.

Remember: Always be 100% sure of the identification of any mushroom before you eat it!

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www.somamushrooms.org

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Dispatch From The Duff: March 2016

Variation of the northern California weather pattern has most of us guessing what's to come the next few months. Between the low rainfall and then warm days of February, expectations for our recent foray at Salt Point were modest. Indeed, those thoughts were borne out by the low count of species found. However, low expectation did not prevent 45-50 people from making the drive up the coast. Many were from the Bay Area and came a little earlier to ensure they had a "spot" in the group. More than half the attendees had come for the first time. All said they had a great afternoon in the woods and enjoyed the excellent pot luck dishes prepared by a number of talented cooks. There was just enough food to satisfy all appetites and fuel everyone for their trip home. Many thanks to David Batt, Michael Miller, and Aaron Miller for leading people through various parts of the park.

At the February Membership Meeting, Natalie Hambalek, a SOMA Scholarship recipient, spoke about her work at Oregon State University. She is working toward her Masters of Science degree in Integrative Biology. Last year, Natalie was one of four students in the country to receive the Graduate Student Policy Award by the Ecological Society of America (ESA). She was recognized for her commitment and experience in development of public science policy. Her studies are based on stress factors associated with amphibian population declines in, Andrew Blaustein's Laboratory, at Oregon State University. Natalie discussed the relationship dynamics of multiple stressors on population health. Factors in her study include climate change, habitat degradation, pollution, and infectious diseases. She outlined her work on the effect of pathogens and how their physiological mechanisms allow them to thrive within a host. Natalie plans to graduate this May and then look for opportunities in her field.

Erin Axelrod and John Grant prepared mushroom cultivation kits at the February meeting. Inoculant was left over from camp and John was able to preserve it. An assembly process was set up in the Farm Bureau parking lot, and more than 40 kits were made. Many curious folks pitched in to help finish and then cleanup in a timely manner. Growth media was prepared using two techniques, a "hot pasteurization" and a "cold pasteurization" method. We look forward to see if yields were different between the methods.

Work continues on the redesign of the current SOMA website. Steve Warner has made significant progress and will try to finish his part in the project before, or in, early spring. We are developing a plan for future maintenance and upkeep of the website. A description of the tasks needed and timing for implementation will be done shortly. If you have experience or can advise the group, please feel free to share it with us. We do need support for an important feature of SOMA group.

Best regards,

Jim Wheeler
SOMA Board President

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JOIN SOMA! Your membership in the Sonoma County Mycological Association, or SOMA, is a great way to meet and interact with other mushroom enthusiasts. Head to <http://somamushrooms.org/membership> and sign up; the season is just beginning!

The Foragers Report: March 2016

By Patrick Hamilton

"Man Eating Panthers and Other Tales of the Sylvan Jungle"

One of the most perceived-to-be odd endeavors some mushroomers do is to push the possibilities of their palates around their plates, testing the limits of what's good enough to eat or what's barely good enough chew just a few wee bits. Fun for some, not so much for others, I hear and know.

Out in the sylvan jungles of our coastal woods lie fungal panthers which some men eat boldly but others might say badly. Preparing *Amanita pantherina* for the table is a simple task (as is the same essentially for *A. muscaria*) but intrepid toadstool tester Chad Hyatt tells me that you should boil the slices for 7 minutes, toss that water then do it all over again, well, then these pieces of panther flesh are good to go. Sauté them up in oil and/or butter and you've got a fine fungal feast.

Chad is maybe a bit like the great taster of mushrooms past, Charles McIlvaine, whose book *One Thousand American Fungi* (I happen to have the 1912 edition two volume set) lists a whole bunch of perhaps peculiar to us now statements about the edibility and toxicity of lots of mushrooms. To wit: "*A. muscaria*. . . POISONOUS." "*A. pantherina*. . . Doubtful." Huh. This shows part of the evolution of how mushrooms have been/are considered fit to eat.

I enjoy his reportage also on *A. calyptrata*: "Dr. Lane says that, having found that the Italians made use of this mushroom for food, he began eating it and introducing it to his friends, and he learned by personal trial that it is a thoroughly good and wholesome mushroom, which, when broiled with bacon, fried, baked, or stewed, may be eaten with perfect safety and that it is a nutritious food." Both Chad and I would certainly agree and Chad might even try his next panther these ways too.

McIlvaine did eat some neither Chad nor I have tried (photo included), like what we now call *Omphalotus illudens* but was *Clitocybe illudens*; but even then as now it is "Jack O' Lantern." Here's McIlvaine: "This fungus is so inviting in quantity and beauty that one turns from it with a regret that lingers. Eaten in quantity it acts upon some persons as an emetic. I have several times

eaten of it without other than pleasurable sensations, but persons partaking of the same cooking have been sickened. Yowzer. I've have eaten of *A. gemmata* (Chad apparently has yet to) with rather strangely pleasurable sensations but know of few others who have. I tend to leave any emetics alone though.

Chad did send me a fine list of fungi he's taken varying pleasure in and here I note some of the could-be-perceived-by-others edgy or odd (the whole list is very long and populated with some commonly eaten ones):

Albatrellus flettii, *Amanita augusta*, *Amanita cochiseana* (AZ Caesar), *Amanita constricta*, *Amanita muscaria*, *Amanita novinupta*, *Amanita pachycolea*, *Amanita pantherina*, *Amanita vaginata*, *Amanita velosa*, *Boletus rubriceps*, *Caulorhiza umbonata*, *Chroogomphus vinicolor*, *Clitocybe nebularis*, *Cortinarius ponderosus*, *Cuphophyllus pratensis*, *Entoloma bloxami*, *Gomphidius oregonensis*, *Gymnopus dryophilus*, *Hygrophorus agathosmus*, *Hygrophorus russula*, *Leucoagaricus leucothites*, *Pseudohydnum gelatinosum*, *Russula brevipes*, *Strophoria ambigua*, *Suillellus amygdalinus*, *Trametes versicolor*, *Tremella aurantica*, *Tricholomopsis ritulans*, and *Turbinellus floccosus*.

Chad did relate that Plums and Custard (*T. ritulans*) is rather overbearingly nasty. Thanks, Chad, now we don't have to try it!

I know a few of you out there have too taken culinary fungal Russian roulette exercises to fine extreme and I'm asking you to share them, to write either to me or submit your tallies directly to the SOMA News editor Charles Thurston (not McIlvaine).

On other notes, this has been a bad (bad!) season for blacks so far but noticeably in the woods recently have come more, along with widely spread apart fruitings of just single belly button hedgehogs. White and red russulas still are popping and those wiggly, goofy, and silly *Pseudohydnum gelatinosum* still appear in numbers enough to delight ones' friends by sticking one or two in your nose and making didgeridoo harmonic sounds. It's not for everyone but I do spend a lot of time in the woods.



Jack O' Lantern/Charles McIlvaine

Recipe of the Month: **By Lynn Brown**

Wild Mushroom Soup (From BON APPÉTIT NOVEMBER 2005)

YIELD: Makes 4 servings

TOTAL TIME: 35 Minutes

INGREDIENTS:

6 tablespoons (3/4 stick) butter
2 cups finely chopped onions
6 ounces crimini (baby bella) mushrooms, chopped
6 ounces fresh oyster mushrooms, chopped
6 ounces fresh shiitake mushrooms, stemmed, caps chopped
1 tablespoon chopped fresh thyme
3 tablespoons brandy
2 tablespoons all purpose flour
4 cups beef broth



telegraph.co.uk

PREPARATION

Melt butter in large pot over medium-high heat. Add onions; sauté until golden, about 5 minutes. Add all mushrooms and thyme; sauté until mushrooms begin to brown, about 8 minutes. Add brandy; stir 30 seconds, then mix in flour. Slowly stir in broth; bring soup to boil. Reduce heat; simmer uncovered 10 minutes. Season with salt and pepper. Ladle into bowls.

Image Of The Month

By Alan Rockefeller



Microglossom viride

SOMA Volunteer Board: Open Positions

SOMA Website Manager

SOMA's new website is being completed by an outside builder and the delivery date is not far away. We need someone with a bit of experience managing a website, including very basic HTML. Hopefully, the new site will be far more user friendly than the old one. Responsibilities would be to post new announcements, notices, photos, stories, etc., and coordinate with the Board for any membership tasks.

Please contact Jim Wheeler at SOMApresident@SOMAmushrooms.org.

SOMA News Editor

We are seeking a new editor of the monthly newsletter to assist in all phases of material gathering, editing, layout and distribution. The position can be fulfilled from your home office, using your computer and phone, and our software, and would require approximately one day per month. The primary software is Word for documents, and In Design for layout. We currently use Excel and Mail Chimp for distribution, but are open to other methods/software. The website is currently being rebuilt, and hopefully incorporate more automation for the newsletter production and distribution in the near future.

The position would also be to contribute new ideas in coverage and/or channel distribution that will help spread our readership and drive new members for SOMA, wherever they may be located.

If you are interested, please send an email to me, Chaz Thurston, at chazwt@gmail.com stating your situation and any skills that would ease your learning curve.

SOMA Director of Communications

We are also seeking candidates for a new position, director of communications, to work closely with the director of public relations and the board to enhance contact and information flow between club members, members of the board, prospective members, event participants, other clubs and the mycological world at large. The position requires someone comfortable with speaking to anyone or any group about almost anything, and the ability to electronically communicate through various channels.

The position will likely be incorporated into the board composition, sooner or later, and would require about one day per month, apart from monthly board meetings.

If you are interested, please send an email to Patrick Hamilton at mycochef@sbcglobal.net, describing your experience, skills and ability to donate time.

SOMA Director of New Membership

We also are seeking candidates for a new position, director of new membership, to help the club attract more, younger, enthusiastic members into the fold. The ideal candidate may be younger than the average board member, and should be familiar with multiple information channels that the club can utilize to offer new members all that SOMA does and can do. While the club now has a Facebook page, various affiliate Yahoo groups, we are seeking more and better ways to communicate with potential and new members. The candidate would help draft a campaign for new membership as well as new program elements for new members. The position likely will require one day per month in addition to attendance of monthly board meetings.

If you are interested, please email Jim Wheeler at SOMApresident@SOMAmushrooms.org.

MUSHROOM ID LIST SOMA CAMP 2016

By George Riner

Curious, indeed....The rain comes and mushroomers stay indoors! It seemed to me that the lectures were very well attended this year. And those who did go collection pretty much stayed their focus on getting their edibles in. Not a lot of edibles coming onto the tables this year. Overall, species counts was way down over recent years. Nevertheless, there were some interesting collections:

Darvin brought in a *Tubaria vinicolor* to start things off, and get a new one added to the SOMA camp list. Another new discovery in the *Tremella encephala* which is another example of a species of *Tremella* parasitizing a *Stereum*. As the name perhaps suggests, the *Tremella* is completely covering the remains of the *Stereum* that's inside, and unrecognizable. The *Tephrocybe* is another unusual collection. I've heard that it's one to pop up when there's been a long drought and then the rains appear. Soil chemistry is a bit altered in extreme weather and bring unusual fruitings.

Thanks to the photographers helpers. Thanks to the sorting assistants, too. And a big thanks to the ID team for working in the rain.

List Notes: The notation (1x) or (2x) or (3x), etc., means that 1 or 2 or 3, etc., specimens were found. Separate collections were identified to that genus only. "(New)" means it's new to the accumulated list. So-called "name changes" are not noted.

Agaricus sp (1x)
Agaricus hondensis
Agaricus subrutilescens
Agaricus xanthodermus
Agrocybe pediades



Agaricus hondensis - a pair together

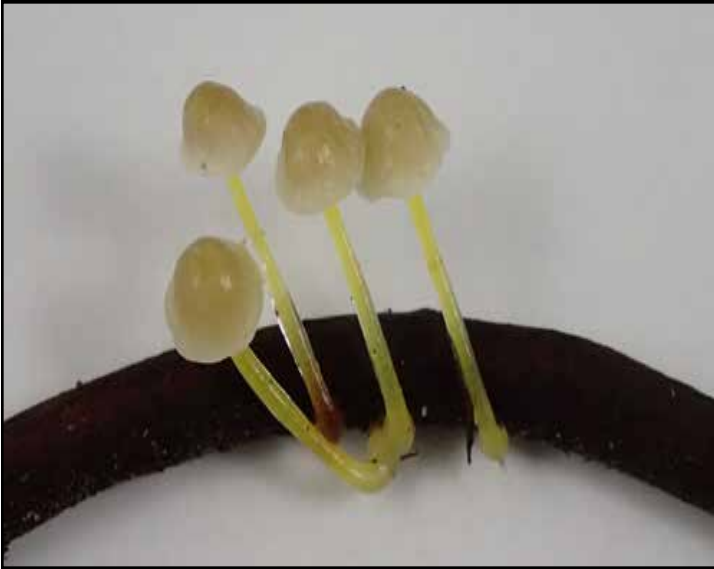
Aleuria aurantia
Amanita augusta
Amanita constricta
Amanita gemmata (group)
Amanita muscaria
Annulohyphoxylon thouarsianum
Armillaria sp (1x)
Auriscalpium vulgare
Buchwaldoboletus orovillus
Bulgaria inquinans
Cantharellus californicus
Caulorhiza umbonata
Chlorociboria aeruginascens
Clavaria fragilis
Clitocybe fragrans



Aleuria aurantia - pretty orange peel

MUSHROOM ID LIST SOMA CAMP 2016

...Continued



Mycena epipterygia - on a twig

Clitocybe nebularis
Clitocybe nuda
Clitocybe sp (2x)
Cortinarius glaucopus
Cortinarius infractus (new)
Cortinarius rubicundulus
Cortinarius sp (9x)
Craterellus calicornucopioides
Crepidotus mollis
Crucibulum laeve
Cuphophyllus graveolens
Cuphophyllus russocoriaceus
Cuphophyllus sp (1x)
Cuphophyllus virgineus
Dacrymyces chrysospermus
Deconica coprophila (new)
Elaphocordyceps capitata
Entoloma medianox
Entoloma sp (3x)
Fomitopsis ochracea (new)
Fomitopsis pinicola
Galerina marginata
Galerina sp (1x)
Ganoderma australe
Ganoderma oregonense
Gliophorus psittacinus
Gomphidius oregonensis
Gomphidius subroseus
Gymnopilus sp (1x)
Gymnopus villosipes
Hebeloma crustuliniforme

Helvella dryophila
Helvella vespertina
Hericium abietis
Hohenbuehelia petaloides
Hydnum umbilicatum
Hygrocybe flavescens
Hygrocybe singeri
Hygrophorus agathosmus
Hygrophorus eburneus
Hygrophorus purpurascens
Hygrophorus russula
Hygrophorus sp (1x)
Hypholoma fasciculare
Hypogymnia imshaugii
Hypomyces cervinigenus
Inocybe lilacina
Inocybe sororia
Inocybe sp (5x)
Laccaria amethysteo-occidentalis
Laccaria sp (1x - bicolor?)
Lactarius alnicola
Lactarius argillaceifolius
Lactarius deliciosus
Lactarius rubidus
Lactarius rubrilacteus



A slime mold; pretty in pink

Lactarius subviscidus
Lactarius xanthogalactus
Laetiporus gilbertsonii

MUSHROOM ID LIST SOMA CAMP 2016

...Continued

Lentinus strigosus
Leotia lubrica
Lepiota decorata (group, new)



A bright *Ramaria*

Lepiota magnispora
Leptonia carnea
Leptonia parva
Leptonia sp (1x)
Leucangium carthusianum
Leucopaxillus albissimus
Leucopaxillus gentianeus
Lycogala epidendrum
Lyophyllum decastes
Marasmius calhouniae
Mycena epipterygia
Mycena galericulata
Mycena haematopus
Mycena leptcephala
Mycena purpureofusca
Mycena sp (3x)
Mycena stiptica
Myxomycetes (1x?)
Nolanea sp (1x)
Omphalotus olivascens
Otidea alutacea (new)
Otidea leporina

Panaeolina foenicicii (was *Panaeolus foenicicii*)
Panaeolus papilionaceus
Panus conchatus
Phaeolus schweinitzii
Phellinus pomaceus
Phlebia tremellosa (new)
Pholiota terrestris
Pholiota velaglutinosa
Phyllotopsis nidulans
Pisolithus arhizus
Pleurotus dryinus
Pleurotus ostreatus
Pluteus cervinus
Pluteus leoninus (new)
Polyporales (1x)
Postia leucospongia
Protostropharia semiglobata
Psathyrella piluliformis
Pseudohydnum gelatinosum
Ramaria botrytis



Tremella encephala -
one fungus devouring another

Ramaria gelatiniaurantia (new)
Ramaria sp (5x)
Ramaria vinosimaculans
Ramaria violaceibrunnea

MUSHROOM ID LIST SOMA CAMP 2016

...Continued

Rhizopogon sp (1x)
Rhodocollybia butyracea
Rhodofomes cajanderi



Tubaria vinicolor - a rare one!

Tremella encephala (new)
Tremella foliacea
Tremella mesenterica
Tricholoma equestre
Tricholoma fracticum
Tricholoma griseoviolaceum
Tricholoma magnivelare
Tricholoma myomyces
Tricholoma saponaceum
Tricholoma sp (1x)
Tricholomopsis rutilans
Tubaria furfuracea
Tubaria vinicolor (new)
Tubifera sp (1x)
Tyromyces chioneus
Vascellum lloydianum
Volvopluteus gloiocephalus
Xerocomellus zelleri
Xerocomus subtomentosus
Xylaria hypoxylon

:George (the guy in the tent trying to keep track of all this)

Russula cremoricolor
Russula cyanoxantha
Russula nigricans
Russula silvicola
Russula sp (4x)
Sarcodon fuscoindicus
Scleroderma polyrhizum
Scleroderma sp (1x)
Scutigera pes-caprae
Stereum hirsutum
Stereum ochraceoflavum
Suillellus amygdalinus
Suillus lakei
Tapinella panuoides
Tephrocybe sp (1x) (new)
Trametes betulina
Trametes hirsuta
Trametes versicolor
Tremella aurantia



Crucibulum laeve - with the cover pried open

SOMA Op Ed: Mushroom Danger?

By Lee McCarthy-Smith

One of my neighbors sent out an email to all our neighbors (a fairly large distribution list) and to a watershed non-profit we both belong to. His message was of caring and concern, what he sent was a link to an article on KQED and an associated video by PBS. The title of the email and the title of the article, "This Mushroom Starts Killing You Before You Even Realize It". If you are interested, you can find the article and video by googling "KQED Mushroom".

The video starts off saying, "Beware of what you find in the forest", "Something deadly is popping up in the forest". Wow! It sounds so dramatic, like no one should go in the forest, you might inadvertently touch or be attacked by a dangerous mushroom. The video (and article) go on to interview a person named "Donna" who says she was poisoned by a "Death Cap" she picked at Salt Point State Park in 2014. She says, "I felt confident enough that I knew what I was doing" and she made a soup out of the mushrooms, ate it with a group friends and luckily only she was poisoned.

The first thing I learned at my first SOMA foray 9-years ago was the #1 rule of mushrooming and that is if you are not 100% sure of your identification for each and every mushroom, do not eat it. You wouldn't go out to the yard and pick plants to add to your salad if you weren't sure each and every piece was safe and edible, right? The same thing goes for mushrooms. And for the record, in this area, it is perfectly safe to touch mushrooms, touching a poisonous mushroom will not hurt you.

What is concerning about the KQED article and the video is the lack of information, the unsubstantiated information presented like facts and the dramatization. Did a mycologist or toxicologist positively identify what "Donna" ate was in fact a Death Cap, an *Amanita phalloides*? Or could it have been a different poisonous mushroom? The video and article fails to mention there are other poisonous mushrooms in California and at Salt Point State Park. Is it possible Donna could have been poisoned by something else? Why did no one else who ate her mushroom soup get poisoned or sick? The information in the article and video about the poisoning are very suspicious to me.

David Arora, author of couple of bestselling

mushroom identification books, gave a sold out talk in Sebastopol a couple of weeks ago. The topic of the talk was ironically "Mushrooms Demythified". One of the key things David Arora conveyed during his talk is how readily misinformation about mushrooms is spread. It is this misinformation that can cause the perception that mushrooms are dangerous and we, the public need to



Amanita phalloides/Wikipedia

be protected from them. Leading to, "Don't allow people to collect and eat wild mushrooms they could die".

All it takes is a story or even a statement about mushrooms missing or lacking facts, containing misinformation and/or making dramatic and scary statements printed or posted by a source people believe is reputable to negatively change the thoughts, opinions and perceptions of a lot of people. There are poisonous mushrooms out there that are a danger to eat but let's not accept anything but the facts. Learn how to identify mushrooms, use caution and common sense, and do not eat and certainly don't share mushrooms for cooking and eating unless you are 100% sure you know what they are.

On that note, if you are interested in learning more about Death Caps (*Amanita phalloides*) it will be featured at the next SOMA Mushroom talk given by Catherine Adams (a graduate student at UC Berkeley who researches Death Caps) at the Santa Rosa Farm Bureau at 7 pm on Saint Patrick's Day, March 17th, 2016. Be sure to bring mushrooms you want help in identifying. Hope to see you there.

The Hunters and the Gatherers

By Meredith Sabini

Among mushroomers, the terms “hunting and gathering” are used casually and often interchangeably to describe what we do: hunt mushrooms, gather mushrooms, go hunting and gathering. As I was preparing to teach the class at Camp on how to collect specimens and what equipment to take, I realized these two approaches are actually quite distinct, just as hunters and gatherers were in Neolithic times. An encounter with a neighbor illustrated this.

Last November, I was chatting over the fence with a young fellow eager to learn about mushrooming. He’d heard from a friend that Matsutakes were fruiting in Las Posadas; while he and I were talking, a text arrived telling him where to meet up with his friend. Later that same day, I was driving down the mountain to do errands in town when, at the side of the road above the creek, I noticed a tall bare tree trunk stacked high with oyster mushrooms. Laughing to myself about needing a bumper sticker that warned, “I brake for ‘shrooms,” I screeched to a halt and got out gloves and a spade.

As I was carrying the first load of rain-soaked *Pleurotus* to my car, I saw my neighbor’s white truck coming up the road, and flagged him down. He looked at the huge specimens in my basket, then at the tree, and exclaimed, “What are those?” Remembering that he’d lived on the mountain only a few winters and that the oyster crop had been diminished during the drought, I explained that these were a regular feature of our landscape. “Oyster

mushrooms? Damn! We should have stayed here. We went all the way to Las Posadas and saw nothing but a single Matsie.” I pointed to the tree trunk and said there were still plenty above my reach, and he rushed home for a ladder.

Oysters are one of the first very visible fungi to fruit in our area, and they often appear in abundance along the creek. I’m not especially fond of their flavor, which seems as pale as their color, but they are lovely to look at, easy to collect, fun to show people, and add well to many dishes.

My neighbor had driven a long way with a specific target in mind. I hadn’t driven anywhere with anything in mind; my peripheral vision just happened to spot the blond layers of shelf fungi on a leafless, branchless tree trunk. Like hunters in Paleolithic times, my neighbor had gone in search of big game; like gatherers, I’d merely ambled along a known path, letting nature show itself to me. It was mainly women who gathered nuts, tubers,

shoots, and fungi, since they could carry on conversation as they went and keep the children safely in tow. And it was mostly men who were more likely to hunt the boar, elk, seal, peccary, bison, or bear, ranging as far as the quarry might take them.

For its first hundred years, the field of anthropology was dominated by persons of the male persuasion, who hunted for evidence that big game provided the nutrient mainstay for tribal societies. As women began to enter the profession, they looked more closely at coprolites and debris around the campfire, and discovered that the bulk



Pleurotus ostreatus/Miles Oleskiw

The Hunters and the Gatherers

...Continued

of calories came not from hunted meat sources but from crops obtained by gathering. The seminal anthology, *Man the Hunter*, eventually had its counterpart in the book *Woman the Gatherer*. They are two equally valid and necessary occupations, defined not so much by the gender of the person as by an attitude and set of behaviors that accompany the endeavor.

The new field known as Evolutionary Psychology, which I've been teaching and contributing to over the past ten years or so, has brought together professionals from varied disciplines in order to ascertain what propensities are fundamental to our genus, *Homo*. Having been shaped by almost two million years of evolutionary history, they are: living in clans of 20–40, monitoring the group's territory, keeping track of social debts and credits, telling stories around the nightly campfire, and living in modest balance with environmental resources. The conclusion is that these basic instincts still give form to human societies and can be found in modern people, albeit in atrophied condition. 99.5% of our genus's lifespan has been spent foraging, and this mode of being has survival value. Just think: we now do our hunting and gathering at flea markets, garage sales, thrift shops, and malls everywhere. We love barbeques. And some of us love mushrooming, its science, its art, its cuisine. We love an excuse to get out in the woods and see what we can find.

There are those among us who prefer to hunt for top ticket items—the morels, porcini, chanterelles—and keep careful track of when and where they fruit. We may drive long distances in hopes of bringing back enough to make the trip seem worthwhile. Others among us prefer to gather, and are content to check out our own neighborhood or local parks. We take home whatever fungi we might encounter, taking pleasure in the surprise and the sharing. I belong to the latter group, being a lazy locavore pleased by simple finds and the

chance to study a new specimen.

So, in preparing to teach that class at Camp, I realized it was important to distinguish between these two styles or modes, since the equipment would differ. For the hunter, a pocket knife and grocery bag kept in the cab of the truck would probably suffice. With little to carry, the hunter is ready when the call comes to venture into some wilder-



Foray Kit/Nate Runals

ness. For the gatherer, who won't know when peripheral vision might spot something worth collecting, a more complete kit is helpful: the trowel, brush, notebook, camera, small bags, a flat-bottom basket. The hunter may not need to get a spore print, since (s)he knows what the morel or chanterelle looks like (and should know the false ones as well). The gatherer will benefit from keeping black and white paper and a flat box in the car in order to get spores on the way home, since the fungi found may be unknown.

Attending my class were mushroom hunters who had places they knew morels or chanterelles or porcini could be found; they now wanted to learn more about the refined details of how to collect in general and what equipment to bring so they could expand their repertoire. And there were novice gatherers who were delighted to learn they could use a simple flat basket for collecting specimens in the field and a cardboard or plastic box kept in their vehicle where fungi could be laid out to spore.

If you want to read about the presence of our primordality in modern life, I suggest Anthony Steven's excellent work, *The Two-Million-Year-Old Self*, a series of short lectures in which he outlines how restoring our evolutionary heritage could contribute to healing the wounds to nature that our overly civilized lifestyle has inflicted. Personally, I find it deeply meaningful to know I belong to a tribal clan—the mushroom clan—that may be ahead of the curve in terms of accepting and appreciating our ancient forager instinct.

Sonoma County Science Fair Awards

By Rachel Zierdt

What do “King of the Yeasts”, “Teacher Influence on Middle Graders,” and “Optical Illusions and Gender” have in common? They are part of the science projects that a team of SOMA judges evaluated at the Sonoma County Science Fair. One of our goals at SOMA is to encourage the study of science. That is one reason we have been helping to judge science projects at two science fairs in Sonoma County for the past seven years.



King of Yeast/Rachel Zierdt

Darvin DeShazer, joined Lee McCarthy Smith, Jim Wheeler, Patrick Hamilton, and myself in our quest for excellence in science studies from grades 6-12. Each judge was placed in a team evaluating about 10 projects in different aspects of science such as behavioral science, physics, and biology. Each project was judged in the areas of creativity, originality, scientific thought, organization, rigor, thoroughness. Every participant or group of participants was also subjected to a 15 minute interview discussing and supporting their projects.

It was refreshing to meet the students, hear their reasoning processes, what they discovered, and what next steps they might take to expand further on their subject. Patrick and I, forming one team, were impressed by the poise and confidence our students exhibited. The discoveries were also interesting. One group found that the older the students were, the less they were influenced by their teachers’ opinions. Another team hypothesized that class grades and higher level math students would be better at remembering long sequences of numbers. That proved not to be true and that C students

taking relatively easy math classes did better than those who received A’s taking Advanced Calculus. One young man found that girls were better and quicker than boys when it came to finding details in pictures that were optical allusions.

Jim’s team were very impressed by a brother and sister team who studied hatching rates of eggs sourced from different places. Darvin enjoyed his stint at reviewing physics projects. (Not his area of expertise, however.)

Lee’s judging team felt that King of Yeasts by Alexander Cox, a 7th Grader at Saint Francis Solano School, had a project that most closely aligned with mycology. He wanted to see if bread yeast would ferment apple juice faster than three different types of wine yeasts. He found that bread yeast took the longest to ferment. This was his second year of experimenting in the fungal world. Last year his project was about rust. Perhaps his interest in this subject is heightened by the fact that his father is a wine maker?

This year the science fair organizers asked us not to present financial awards to students with worthy projects as we had in the past. This year, we chose instead to single out Alexander for a certificate of merit and have offered him the opportunity to come to the upcoming SOMA Mushroom Camp along with a parent or teacher. We hope he takes the time to come and learn more about the fungal world.

Next week, a team of three judges is off to Healdsburg for their science fair. There we will judge students’ work from Kindergarten to 12 grade.



SOMA CALENDAR, NOTICES & NOTEWORTHY EVENTS

SOMA Calendar for March & April 2016

Salt Point State Park Foray is March 19th. Meet at 10 AM at the Woodside Campground; look for the SOMA banner. Pot Luck and ID session follows the foray, around 12:30-1:00. Parking requires \$7 exact change. See website for more details.

The SOMA Epicurean Group is hosting a celebration of spring mushrooms!

I have had a number of folks email me to volunteer in the kitchen. Now, we need folks to sign up to attend the day. So, this is a reminder that we will be having an event on March 20th.

I'm not sure what the mushrooms will be yet. So, I am thinking of a menu celebrating Spring time: roasted lamb salad with roasted mushrooms, crisp potatoes, and a garlicky vinaigrette. savory mushroom, spring onion, and goat cheese tart in puff pastry; Spring vegetable ragout with pesto. Starters and desserts provided by the Epicurean group attendees.

The event will be at the Graton Community Club -- 8996 GRATON ROAD, GRATON, CA 95444 -- on Sunday March 20th from 3 to 6 PM. (If you are volunteering in the kitchen, please arrive at 1 PM.) Appetizers will be served at 3:30 PM. Bring everything you need to present your dish, as well as your dining plates, silverware, napkins and wine/beer glass.

We are considering possibly having a presentation to make the day more interesting and educational. Let us know if you have an idea about something you want to share with the group.

We ask that you bring either an appetizer or a dessert and let us know what that dish will be. The main course will be prepared by Julie Schreiber and her staff of volunteers. Please let us know if you can help, in any way, with the following - set up, clean up, kitchen help. If you want to work with Julie, please let her know you are interested (julieschreiber@hotmail.com). We are encouraging community participation with these events.

Contributions for this meal are \$20 per person. Mail check, payable to SOMA, to: Chris Murray, PO Box 624, Forestville, CA 95436. Please put "Epicureans" in the note field of the check - this helps our book-keeper. Checks must be received by one week ahead of the event in order to guarantee your place and allow the chef to estimate ingredient purchases.

We have a new form to register to participate in an Epicurean event : https://docs.google.com/forms/d/1pYsl3WEUfX7sskk_9hPoUdVAqnag7XdpJKGUlytLAec/viewform?c=0&w=1&usp=mail_form_link

Please complete the form so we know you will be attending.

The form to claim reimbursement for cost of ingredients will be sent to you once you have registered for the event. Please save a copy of the form for future reference. You must submit one together with itemized receipts to: SOMA Treasurer, PO Box 7147, Santa Rosa, CA 95407. Remember, no form or no receipt, no money.

Please take note: You must be a SOMA member to participate in this event. If you are a member, you can bring a guest. Please note that information in the form when you fill it out.

Point Reyes Foray & Mushroom ID Saturday April 9; Foray goes rain or shine.

. Meet at the entrance to the Bear Valley Ranger Station at 10 AM, rain or shine. We can walk from there or car pool to the top of the ridge and walk back, down hill, to Bear Valley. Maps are free and available inside the station. Collecting two gallons is the legal limit and no permits are required. This is not a food foray so bring your own lunch.

To participate you will need to bring a copy of Mushrooms Demystified by David Arora, 1986. Keep your book dry in a zip-lock bag in case of rain.

This foray is specifically designed to learn how to identify mushrooms by practicing it. We'll collect both edible and non-edible species and then using the field guide keys, practice identifying them.

JOIN SOMA!

Your membership in the Sonoma County Mycological Association, or SOMA, is a great way to meet and interact with other mushroom enthusiasts, learn more about identifying fungi, and share interests such as cooking and cultivating mushrooms.

Sure, most of what SOMA does is open to the public, but wouldn't you rather join SOMA and get all the goodies?

Head to <http://somamushrooms.org/membership> and sign up!



SOMA Monthly Meeting Directions & Map

SOMA usually meets on the third Thursday of the month throughout the year (September through May), at the Sonoma County Farm Bureau, 970 Piner Road, Santa Rosa, California, 94931. Fungi are displayed at 7 PM, and speakers begin around 7:30 PM. Bring in your baffling fungi to be identified!

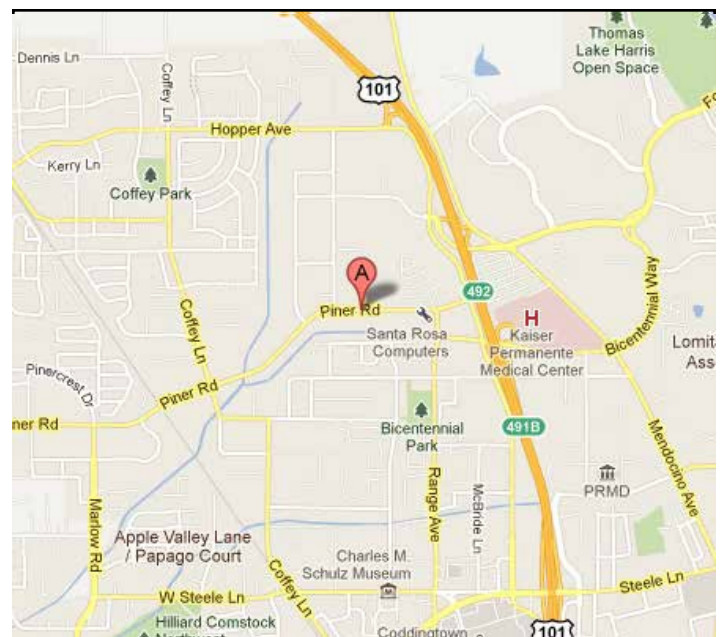
Directions to the Sonoma County Farm Bureau

From the south:

- Go north on Hwy 101
- Pass the Steel Lane exit then take the Bicentennial Way exit
- Go over Hwy 101 (heading west) and then right on Range Ave
- Turn left on Piner Rd. and go about 1/4 mile
- Turn left into Farm Bureau parking lot at 970 Piner Road

From the north:

- Go south on Hwy 101
- Take the first Santa Rosa exit for Hopper Ave/ Mendocino Ave
- Stay left on the frontage road (it becomes Cleveland Ave)
- Turn right on Piner Rd. and go about 1/4 mile
- Turn left into Farm Bureau parking lot at 970 Piner!



Myco Art of the Month:



Parasol Mushrooms By Anne Yen