SOMA NEWS

VOLUME 28: 4 December 2015

Pot Luck Dinner! Dec. 12, 7:00 PM

Bring your favorite mushroom dish to the annual pot luck dinner, for members only, to be held at the Sonoma County Farm Bureau, 970 Piner Road, in Santa Rosa. BYOB!

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

SOMA OFFICERS

PRESIDENT
Jim Wheeler
SOMApresident@SOMAmushrooms.org

VICE PRESIDENT
Rachel Zierdt
SOMAvicepresident
@SOMAmushrooms.org

SECRETARY
Gene Zierdt
SOMAsecretary@SOMAmushrooms.org

TREASURER
Judith Tye-Angell
SOMAtreasurer@SOMAmushrooms.org

COMMITTEES & BOARDS

EPICURIAN GROUP
Chris Murray
SOMAculinary@SOMAmushrooms.org

FORAYS
Patrick Hamilton
mycochef@sbcglobal.net

MEMBERSHIP
George Riner
SOMAmembership
@SOMAmushrooms.org

MUSHROOM DYE COORDINATOR
Dorothy Beebee
SOMAmushroomdyes
@SOMAmushrooms.org

SCHOLARSHIPS
Rachel Zierdt
scholarships@SOMAmushrooms.org

SCIENTIFIC ADVISORS
Darvin DeShazer
(707) 829-0596
muscaria@pacbell.net

Chris Kjeldsen, Ph.D.
(707) 544-3091
chris.kjeldsen@sonoma.edu

SOMA CAMP REGISTRAR
Chris Murray
SOMAregistrar@SOMAmushrooms.org

SOMA NEWS EDITOR
Charles W. Thurston
SOMAnewseditor@SOMAmushrooms.org

SOMA WEB MASTER
Martin Beebee
SOMAinfo@SOMAmushrooms.org

VOLUNTEER COORDINATOR
OPEN POSITION
Volunteer@SOMAmushrooms.org

Dispatch From the Duff

December 2015: A reminder, the SOMA Pot Luck Dinner for members is December 12th, 2015 at the Sonoma County Farm Bureau. Setup is at 6:30pm and we plan to eat by 7pm. With the recent rain there is hope for more wild mushroom dishes than the previous two years and we look forward to seeing you there. Please remember to bring examples of any wild mushrooms used in your dish.

At the November membership meeting the speaker, Dorothy Beebee, talked about development of the chemistry and techniques used in the early years to dye various fabrics using wild mushrooms. Miriam Rice, the author of the first published book on the subject, lived in Mendocino County and used locally found specimens to experiment and build her knowledge. As with most experimentation, it was an iterative process and she learned much by trial and error. Miriam was particularly adept at planning meaningful trials and then expert at noting and recording results. It was through her work the book, "Mushrooms for Dyes, Paper, Pigments & Myco-Stix" was written and published in 2007. A second printing in 2012 is available from the SOMA Bookstore if you would like a copy.

The November foray at Salt Point State Park was attended by 40 – 45 people, and about half of them had come for the first time. Many thanks to David Batt, Danielle and Chris Murray, Michael, and Aaron Miller for leading groups to hot spots in the park. Many different specimens from various genera were found. Patrick Hamilton held the group's interest as he talked about keys to identification and edibility of some of those collected. The foray pot-luck was outstanding, as usual, and was augmented by another chef who prepared an excellent pasta dish. I hesitate to name the mystery chef, but if you ask me, I will tell you who he is, as well as a summary of his recipe. Another reminder, the SOMA Foray on December 19th, 2016, is for members only.

SOMA Camp registration is on target for becoming another success, i.e. "Full Camp", in 2016. Some think that it will always sell out, but that is not the feeling of those who organize and plan the event starting in March of the previous year. However, by December any worries or anxious moments and most obstacles have been crossed off the list, and Camp fills again. So, please register, if you haven't, and be prepared for an exciting and informative two-and-a-half days in January.

The club needs to find an assistant SOMA Newsletter editor. Charlie Thurston does an excellent job editing and publishing the SOMA Newsletter. Regrettably, he has a real job as well and demands on his time have increased over the months. Someone is needed to help organize and move the publish date closer to the first of the month. Please consider the opportunity; you will need word processing computer skills and about 4-8 hours per month. Of course, the wage-benefits package is among the best available and you will never regret the decision to take on the responsibilities. Honest!

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Best regards,
Jim Wheeler

INSIDE THIS ISSUE :

Gingerbread Santa Credit: Lane Hyatt

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: December 2015

The Truth About El Niño By The Old Mushroomer

Once upon a time was sooth put forward telling of floods with coming storms (pestilence, pillaging, plundering, locust swarms?) and lots of mushrooms to be sprouting forth fruitily. But like so much attempt at soothsaying said sooth has held little truth.

Those who lead folks into fall and winter woods need at times to come up with reasons, answers, posits, points and just plain poo poo too to help figure stuff out for everyone not blessed with certain insights into Mother Nature's whims and whatnots.

Russula Pseudointegra **Credit: Dario.z/MushroomObserver.org**

Sure there are gazillions of rarely seen teeny Southern Red Crabs afloat off the Channel Islands, asea in unnatural warmth. And there are brown pelicans mating with white ones due to weird light refracted off heated ocean currents apparently temporarily blinding them and causing obvious a-natural behaviors.

There are pelagic birds going even further out to sea to get some relief from heat waves close to shore and Scandinavians were seen swimming off Ft Bragg (wearing those Spandex tighties--yikes!).

Yep--weirdnessess abound but no El Nino yet coming around. And what's up with that? Well, here at SOMA Weather Central HQ we call it like it is: We are the Snopes.com of the mushroom world. The FactCheckers of fungi. TruthfulFungalFinders.org ain't far from it. Nope.

The truth about El Nino is that no one ever said it'd come early and that happened. As in "didn't happen" happen.

And since we all got so full of expectations about a possible upcoming drought buster and its attendant mushroom effectations we all got disappointmentfull instead. We all thought porcini might pop in October, matsutakes in November, and maybe blacks and hedgehogs right now.

But no. And that's the truth about El Nino.

What is truly going on after 4 years of drought and some strange weather in between no one knows. Nope, redux.

The forest floors have barely been dampened by dribbling rainfall so far this season and the once-expected mycena carpets are not there. Nor are many of the other usual fungi like pine spikes, red Russulas, pounds of short fat Suillus, corals, false or scaly chanterelles, spies, and piles of porcini.

Recipe of the Month:

By Phalaenopsis619

Russulas with Leeks & Cashews en Croute

From www.healthy-life.narod.ru

Servings: 6

phalaenopsis619.files.wordpress.com

Ingredients:

½ lb/225 g puff pastry, frozen is fine

1 tbsp/15 ml olive oil

12 oz/350 g chopped leeks

2 cloves garlic, crushed

6 oz/175 g *Russulas*/ or other wild mushrooms

2 oz/50 g cashews, toasted and chopped

3 0z/75 g cheese, optional

Fresh basil leaves

A few drops of Tabasco

2 tsp shoyu sauce

Salt and pepper

Sesame and poppy seeds

1 egg, beaten, or 1tbsp soya flour mixed with 2tbsp water to glaze

Cooking Instructions:

Preheat oven to gas mark 6/200C/400F. Sauté the leeks in oil for five minutes. Add the garlic and mushrooms. Remove from heat after a couple of minutes, add the nuts, basil, Tabasco, salt, pepper and shoyu. Leave to cool. Roll out the pastry to 12in x 8in and place on a greased baking tray. Place the filling down the middle and top with the cheese if desired. Cut diagonal strips of pastry on either side of the filling, leaving in uncut on each side of the filling. Plait the strips using some of the egg/soya mixture to bind each piece. Brush with the remaining egg/soya mix, sprinkle with the seeds. Bake for 20-25 minutes until golden.

PICKING WHAT MUSHROOMS AT 11,000 FEET MAY TRIGGER A HEART ATTACK?

by Curt Haney

(Curt Haney claims to be a 63 year old white male)

Every August for the past few years I have been attending the Telluride Mushroom festival as a vendor, presenter, participant, or all three. This year started out no different than in past years, except I took a southern route from San Francisco to Telluride instead of a northern route or straight across the desert. Traveling on old Route-66, I started finding good edible fungi on and around Mt. Taylor near Albuquerque New Mexico. The next day I headed north to Flagstaff Arizona where I continued to find moisture and abundant fungi. Continuing north to Chama Arizona, I entered the southern range of the San Juan Mountains. Adequate moisture and good edible mushrooms continued to be available.

It was now time to start heading to Telluride and obtain a campsite in the town park before it filled up for the "Shroomfest" Magic Mushroom Festival. I traveled north to Pagosa Springs Colorado, then headed west to Durango where I turned north again on scenic highway 550. I stopped on the 10,000 foot high pass near Purgatory above the historic town of Silverton and took in the view, along with a short walk. On the walk I filled my basket with beautiful Porcini buttons and a few chanterelles. Then I turned west again onto highway 62 and into the beautiful little town of Telluride Colorado and set up camp for an adventurous week ahead.

Telluride Magic Mushroom Festibal **Credit: Langdon Cook**

It was Monday and I had time to kill before the festival started on Thursday. The next morning I packed up my Honda 250 dual purpose motorcycle, which I carry on the front of my truck camper and headed south to Alta Lakes and Lizard Head Pass. I knew I was early and ahead of the crowds of mushroom harvesters headed my way later in the week, so I wanted to stock up on good edibles to take home to California. At Alta Lakes there was lots of moisture from the previous two weeks of rain and I started finding nice patches of chanterelles. Next, I rode over to Lizard Head Pass

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PICKING MUSHROOMS AT 11,000 FEET ....Continued

and found more chanterelles, and lots of fresh Porcini buttons, along with some small patches of Shrimp Russulas. The Shrimp is one of my favorite mushrooms with its shrimp like seafood taste. Another of my favorites is the small dense Rocky Mountain Chanterelles which have a fabulous flavor, and the gills are a striking florescent yellow orange color.

back to the campground in Telluride an hour later which is lower in elevation than where I had been earlier. I spent the afternoon cleaning and cooking the mushrooms I had collected and had a mushroom feast for dinner, followed by a quiet evening.

The next day I awoke at 6:30 am had breakfast, spent an hour reading and then got ready to head back out into the forest. Next, there was a knock

Rocky Mountain Chanterelles **Credit: terrafunga.com**

So here I am at 11,000 feet in elevation, by myself, in the middle of nowhere picking some of my favorite mushrooms. I had been at elevation for nearly a week so I was mostly adjusted to the higher elevation and had been drinking plenty of water. Suddenly I felt a little tired, short of breath, a slight tingling in my arms, and a slight tightness in my chest. I thought, I thought to myself, it must be the elevation and I am just working too hard. So I took a break for a few minutes, drank some water, took a few deep breaths, felt fine and went back to picking. This had occurred maybe 4 or 5 times in a 4 hour period, each time I had recovered very quickly. At about 2:00 pm it started raining pretty hard so it was time to head back to camp. I got

on my door; it was my friend Britt Bunyard of Fungi Magazine fame! He had come to pick up the two frozen abalone, plus the preserved Hericium abietis and Agaricus agustus mushrooms I had brought from northern California for the feast we were planning for friends and the Fungi Magazine crew. While we were talking I Suddenly felt a much bigger pain, (tightness) in the center of my chest. I put my hand on my chest and told Britt I did not feel very well. Britt chuckled a bit and asked, you're

not having a heart attack, are you? I said I don't think so, and in a minute I felt ok again. Then Britt said, you should go to the clinic in town and get checked out.

...Continued

PICKING MUSHROOMS AT 11,000 FEET .....Concluded

I said yeah ok, maybe so, and Britt told me where it was located which was not far away. Then Britt left and I felt better and read my book some more. An hour later I needed to walk over to the campground office and re-register my campsite. I did that and headed back back to my campsite. About half way back, a bigger pain occurred in my chest, along with shortness of breath, pain radiating down my arms, and sweating a lot. I stopped in my tracks and said to myself "CURT" you're having a heart attack.

I had taught CPR as an instructor for many years when I was in the Navy and my knowledge and training finally kicked in. I was able to slowly walk back the 50 yards to my truck and sit down. I immediately drank some water and took four 81mg baby aspirin. I take one every day, and had already taken one earlier that morning. In about 10 minutes I felt great, so I jumped on the motorcycle and was at the clinic in 5 minutes.

I walked in and told the man at the counter that I was having a heart attack; he immediately took only my name and led me into the ER. I disrobed, put on a gown and had no sooner laid down on a gurney that I had the "big one". A doctor and two nurses went to work on me immediately, IV in the arm, oxygen, mobile chest x-ray, and both oral and injectable pain killers and blood thinners. After about an hour I was stabilized and transported by ambulance to Montrose Memorial Hospital an hour and a half away. Once there I was taken to the OR where a catheterization was performed to determine what was going on in my heart. They discovered two arteries on the front of my heart that were blocked, one of which could not be repaired with a stint. The doctor also told me that when I was up picking mushrooms at 11,000 feet I most likely was not getting enough oxygen to properly oxygenate the blood passing through my heart.

The next day, I was transported by ambulance to the cardiac unit at St Mary's Hospital and Regional Medical Center in Grand Junction Colorado, one hour away. Two days later I underwent open heart surgery and had a double bypass performed. Three and a half days later I was discharged and flew home with my wife Carol to San Francisco.

As of today, 17 September, (my birthday) it has been 34 days since my surgery. During the surgery I had a small stroke which affected my vision which is much better now, but I am still having a little trouble reading and typing. I also continue to have an abnormal EKG reading, so I have and will continue to have many more tests to determine what's still wrong with my heart. I will be taking 2 different prescription drugs for the rest of my life, plus a health daily dose of Ganoderma Lucidum, (Reishi) which has been shown to be a very good treatment for arterial heart disease.

King Bolete **Credit: Wikipedia**

Looking back now, I consider myself a really lucky man! I am now in recovery which tends to be a slow process. I am not allowed to drive yet, but I am walking 1 to 2 miles a day and getting out and about more when I have a driver available. My cardiologist told me it may take up to a year for a full 100% recovery that will allow me to get back in the ocean to scuba and free dive, and hike the mountains in pursuit of fungi.

I am planning on returning to Telluride Colorado next year where I usually spend up to a month exploring fungi laden areas of the beautiful Rocky Mountains. I also have my costume ready to go for the 2016 Telluride Mushroom Festival Parade, which is always a blast.

So, back to the question of; "Picking what mushrooms at 11,000 feet may trigger a heart attack"? You probably guessed it by now, King Bolete, (Boletus Edulis), Chanterelle, (Cantharellus chibarius), and Shrimp Russula, (Russula xerampelina).

Stay calm and shroom on!

Image Of The Month

By Taylor Lockwood

Cantharellus cinnabarinus

MUSHROOM FIBER-ARTS WORKSHOPS AT SOMA CAMP 2016

By Dorothy Beebee

Cortinarius smithii **Credit: Wikipedia**

Quick History: It was way, way back at the first SOMA Camp, (about 18 years ago, at the heat-challenged Soccer Camp up near Boonville), that Miriam Rice was first invited to introduce a workshop in Mushroom Dyes. In later years, after SOMA Camp was moved to the more spacious WellSprings Retreat Center in Philo, Miriam introduced "Papermaking with Polypores" to a small group around the old wood stove – Ah, those were the simple days…. Over the years, Dorothy Beebee took on the mushroom dye classes when Miriam could no longer come, and Catherine Wesley (a former paper-making student of Miriam's), took on the Papermaking workshops… As we moved SOMA Camp to larger and roomier quarters, interest in these fungal fiber arts grew, to the point that we had to start "preregistering" the attendees to keep the size classes reasonable in limited spaces.

Now 19 years later SOMA Camp is offering a wide variety of mushroom fiber arts options and many of our former students have now become the instructors! Classes in Felting, Shiborii, Surface Design, have been added to the colorful palette that Miriam first set before us. We welcome you to come join in the colorful fiber art fun at SOMA Camp 2016!

Collecting Fungi for the SOMA MUSHROOM DYE CLASSES:

So far we have collected *Pisolithus tinctorius* and *Phaeolus schweinitiziii* fungi (see previous SOMA Newsletter issues) for yellow, gold, and brown autumnal hues on wool and silk, but now with the promise of more rain we want to add other dimensions – red, rose and coral dyes with the brightly colored gilled *Cortinarius* fungi we often find hiding in the pine duff near and under huckleberry and salal shrubs of the coastal Bishop pine forest of Salt Point. Also we are searching for the more elusive toothed fungi in the *Hydnellum* and *Sarcodon* families for their tempting promises of blue-green dye. Hopeful the freezing weather of the end of November has not made popsicles out of my dye fungi wish list! Here are just a few to start seeking!

Gymnopilus sp.: A buttery yellow dye from these golden yellow gilled mushrooms, often found in huge clusters on stumps of Bishop Pine or other dead pines around Sonoma County. Sometime the cap of *Gymnopilus spectabilis* may be as large as a small dinner plate! Other smaller species of yellow *Gymnopilus* found growing on logs and wood ships also make great yellow and gold dyes with an alum mordant and olive green with iron. Gold spores.

Omphalotus olivacsens ("Jack O' Lantern mushroom"):

Yellowish orange cap with olive overtones, with same colored gills descending down the stalk, this trumpet shaped mushroom found in massive clumps on stumps of or at the base of dead hardwoods. Older specimens produce lavender with no mordant, purples with alum and dk. forest green with iron. Spore print: white to cream.

Cortinarius smithii (formerly known as *Dermocybe phoenicea var. occidentalis*):

This favorite of the dyers, sometimes called the "dyer's cort" for the beautiful rose dyes it produces, is most often found in the Bishop pine woods of northern Sonoma County, and north growing in relation to (or possibly mychorrizal with) members of the Heath family such as salal, huckleberry, and/or manzanita. But it may also found in the mixed conifer/madrone/ hardwoods further inland around Occidental and Cazadero. With a cap of polished dark red (sometimes called "ox-blood red"), iridescent red gills, and straw yellow stalk. Spores :cinnamon brown

Cortinarius malicoria & Cortinarius cinnamomea: Both of these orange gilled mushrooms are also lovers of pine trees, and fortunately for us, this species is commonly seen under them in Sonoma County in winter, after some good rains

MUSHROOM FIBER-ARTS WORKSHOPS AT SOMA CAMP 2016

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in Sonoma County in winter, after some good rains very similar in appearance, and difficult to differentiate, they both have the typical "umbonate" cap of all this group - silky cinnamon brown in color, with brilliant orange gills that turn rusty with spores (as do all of the other *Dermocybes*) and a yellowish stalk: Both mushroom species produce a range of apricot/coral dyes with alum mordant which will intensify to orange if white vinegar is added to the dyebath! Spores Cinnamon spores.

habitat. Can produce soft blue-green dyes, if specimens are mature in alkalinity. Spores: brown

Sarcodon fusco-indicus: An incredible dk. blue green dyes can emerge from this solitary dark violet "toothed" mushroom which often likes the acidic habitat in the Bishop pine forest / tan oak / madrone areas of Salt Point and north along the coast or in deep conifer woods. Preferred excellent dyer for dark blue-green dyes. Spores: brown:

Hydnellum aurantiacum ***Credit: Wikipedia***

Hydnellum aurantiacum: A "toothed" mushroom that has whitish-apricot suede-like cap when young, often then turning dark brown with a pinkish-orange edge when older. Teeth are beige when young, darkening with age, the stalk is a definitive dark orange. Common in Fall/Winter coastal pine

SPECIAL NOTE!:

Please do contact me at dbeebee@sonic.net if you find some of these fungi to contribute for SOMA Camp dye classes!

See you at camp/

Biodiversity and Phylogeny of *Marasmius* From Madagascar

By Jacqueline Shay

(Editor's note: This abridged graduate prospectus covers work that Jackie was performing in 2014 under Professor Dennis Desjardin at SFSU when she received a SOMA Research Scholarship.)

Abstract

Members of the mushroom genus *Marasmius* play key roles in the decomposition of leaf litter in rainforest ecosystems. Previous work has indicated that when studying litter-decomposition fungi from under-explored tropical habitats with high levels of endemism, nearly 80% of mushroom species encountered represent new species. This project is designed to generate the first monograph and phylogenetic treatment of *Marasmius* from Madagascar, based on data generated from specimens collected during a one-month expedition in January and February of 2014, and from borrowed exsiccata. Species will be delimited using morphological characteristics and DNA sequence data.

Comprehensive descriptions of macromorphological and micromorphological features, illustrations, photographs, a dichotomous key for identification, comparisons with similar taxa, and molecular (ITS sequence) data are provided. Material studied was collected in Madagascar from 12 January – 13 February 2014, and exsiccata of known Madagascar *Marasmius* were borrowed from international herbaria. Molecular phylogenetic reconstructions are presented based on ITS sequence data. Phylogenetic and morphological data were compared to delimit species and distinguish closely related taxa. The result is a comprehensive monograph of species of *Marasmius* from Madagascar.

Background

There has been a recent interest in understanding the biodiversity of Marasmius (Antonín, 2003, 2004a, b; Wannathes et al.,2004; Antonín et al., 2005; Desjardin and Ovrebo, 2006). As key players in forest ecology, these natural recyclers decompose leaf litter and vegetative waste. They are also known as saprotrophs, organisms that feed on dead organic matter and have the ability to turn dead plant material into reusable carbon. They do this by breaking down organic matter (proteins, lipids, and starch) into their more basic compounds. These products are then reabsorbed by the fungal mycelium and by the soil around it, making them available for other organisms to use. This is what makes them significant in understanding ecology, especially in diversity-rich regions such as Madagascar.

Earlier reported species were described from Madagascar and published by Patouillard (1924, 1928) and Hennings (1908). Some species housed

at the Natural History Museum in Paris were based on collections from Madagascar made by Raymond Decary, a French resident in Madagascar (Patouillard, 1927). The study of Marasmius collections sent by Decary was later continued by George Métrod but never published. Unfortunately these collections were kept in alcohol and most have dried out and have not been available for further study or descriptions (Wannathes, 2009).

Tropical biotas are natural labs for the study

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Marasmius From Madagascar

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of evolutionary diversification and biodiversity patterns (Vences, 2009). It is reported that approximately one fourth of the Malagasy fungal taxa appear to be endemic (Antonín and Buyck, 2006). This study was a preliminary investigation of *Marasmius* from the region. They reported 19 taxa of Marasmius from Madagascar, Mauritius and Réunion and published the macro- and micromorphological characteristics for these taxa. In addition, they provided a key to identify these species; however, the molecular analysis of these collections was not performed. In general, there is a lack of molecular information on fungi from Madagascar. For this reason, it is scientifically important to obtain these early collections from Madagascar, extract their DNA, and compare it to collections obtained from Madagascar earlier this year.

Problem statement

To date, no monographic treatment has been published for the genus *Marasmius* from Madagascar. This will be the first molecular phylogenetic reconstruction of a significant *Marasmius* dataset from this region.

Hypothesis

It is anticipated that the majority of *Marasmius* findings collected from Madagascar will represent novel species. These taxa will provide data for the first comprehensive monograph of *Marasmius* from Madagascar.

Marasmius **Credit: Danny Newman**

Specific Aims

The overall goals of this study are (i) to provide descriptions for all specimens observed including macro- and micromorphological features, including photographs of fresh material, (ii) to produce a dichotomous key to aid in identification of *Marasmius* for future studies, and (iii) to generate phylogenetic hypotheses based on ITS sequence data to better understand evolutionary relationships within this genus.

Experimental Design Sampling protocols

Rainforests are an ideal location for sampling leaf-decomposing fungi. A variety of eastern rainforests from Madagascar were surveyed including Ranomafana National Park, the forests near Andasibe, and the littoral forests of the east coast. Using the morphological characteristics of known *Marasmius* morphotypes (thin, wiry stipe; white spores; growing from leaf litter) all possible species of Marasmius sensu strictu were collected, totaling 83 by the end of the expedition. Specimens were collected and notes on size, color, and GPS coordinates were recorded for each sample.

Previously collected material from Buyck will be sent from Moravian Museum, Dept. of Botany, Brno, Czech Republic and material collected by Antonín will be sent from Muséum National D´Histoire Naturelle, Dépt. Systématique et Evolution, Paris, France respectively. The macro- and micromorphological notes will be compared to new material during analysis.

Morphological protocols

Data on all macromorphological features were documented in the field at time of collection. Features noted include cap diameter and depth, color and surface features; number and width of lamellae, color and attachment to stipe; length and width of stipe, color and surface features, attachment to the substrate; presence or

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Marasmius from Madagascar .....Concluded

absence of rhizomorphs; odor and taste. Other macroscopic notes include plant host species names, habitat, GPS coordinates, altitude and specificity to hosts. Material was subjected to 3% potassium hydroxide (KOH) and Melzer's reagent and any staining reactions were recorded. Reactions in KOH or Melzer's reagent represent important characteristic traits. Photographic images were taken for all material collected. Specimens were then dried and packaged with notes. All measurements and colors reported for microscopic features were observed at SFSU by rehydrating the material in 95% ethanol followed by KOH or Melzer's reagent to record reactions. All microscopic features were documented and include shape, size and ornamentation of basidiospores, basidia, basidioles, stipe cortical and medullary hyphae, lamellar tissue, pileus tissue, and any cystidia or setae.

Marasmius **Credit: Danny New-**

Phylogenetic protocols

DNA was extracted from dried herbarium specimens. Extraction of material was performed using the E.Z.N.A. Forensic DNA Extraction Kit. Polymerase chain reaction (PCR) was performed using AccuPower® HotStart PCR PreMix. ITS regions 1 and 2, and the 5.8S rDNA, were amplified using primers ITS1-F and ITS-4 (Gardes and Bruns, 1993; White et al, 1990). DNA fragments were amplified on MJ Research PTC-200 Peltier Thermal Cycler. The thermocycling profile was as follows: an initial denature at 94˚C for five minutes, 39 cycles of denaturing at 94˚C for 30 seconds, annealing at 57˚C for 30 seconds, and extension at 72˚C for 45 seconds. The final extension was at 72˚C for seven minutes. PCR products were purified using ExoSAPIT Kit and run on an ABI PRISM® 3100 Genetic Analyzer. Sequence editing was performed with Geneious software. Edited sequences will be deposited in GenBank. Every specimen from my collection and from the previously collected material will be sequenced and compared phylogenetically.

Anticipated Results & Conclusions

It is anticipated that the majority of *Marasmius* species reported from Madagascar will represent novel species. All data will be combined into comprehensive descriptions, supported by molecular phylogenetic hypotheses, augmented with line drawings and color photographs, and included in a dichotomous key for accessible identification.

This monograph will be the first of it's kind from Madagascar. By understanding how this group has evolved and how much diversity is present it can be inferred how the role of these saprotrophs has changed over time. It is essential that when trying to understand biodiversity, especially of a tropical biota, there are monographs available so future research will have a framework to work from. By providing a comprehensive key, detailed notes on each specimen, and genetic data available on GenBank, future collections of *Marasmius* will be easier to identify and novel species will be more apparent. Future researchers in this area of study will have indefinite access to the sequences extracted from the Malagasy specimens to work with in comparing new material. This is a huge step towards understanding not only *Marasmius* of Madagascar, but of fungi from a biodiversity hotspot in general.

Future Directions:

As this will be the first exploration into the genetic diversity of genus *Marasmius* from Madagascar, it is suggested that additional molecular research be conducted, to sequence more genes from the material on hand, and to continue to collect more *Marasmius* specimens from this region and from Africa as a whole. This will create a more robust phylogeny and a broader understanding of Marasmius species diversity.

SOMA Volunteer Board: Open Positions

SOMA Camp 2016 Help Wanted

We are looking for someone who will be willing to take over the job of sourcing items for our very successful silent auction. Help with this year's silent auction and learn the ropes and then take over for camp 2017. Please contact Rachel. This is a fun job which takes a bit of time in fall to source and collect donations.

Last year we raised almost $4000. That money goes directly into scholarships here in Sonoma County and to graduate level students. The more money we have, the more we can award. Come and help with this worthwhile effort.

SOMA News Deputy Editor

We are seeking a deputy 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.

While the current goal is to create a backup editeor and ease the workload, the eventual desire is that the deputy editor would assume the position of editor sometime over the near to mid-term. If you are interested, please send an email to me, Chaz Thurston at chazwt@gmail.com stating your case 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.

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!

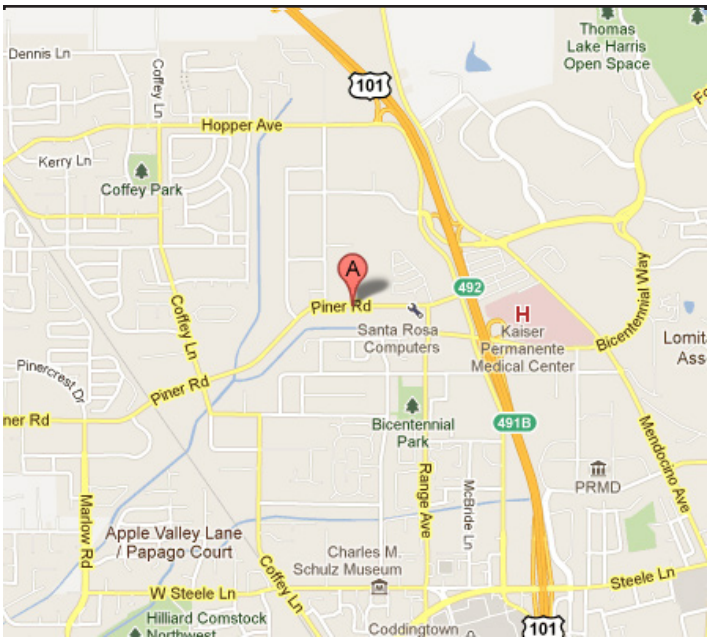
Directions to the Sonoma County Farm Bureau

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!



SOMA CALENDAR, NOTICES & NOTEWORTHY EVENTS

SOMA Calendar for December 2015

Pot Luck Dinner ***Members Only***, at Farm Bureau; Dec 12th at 7pm
Foray at Salt Point ***Members Only***; Dec 19 at 10 AM

SOMA CAMP AUCTION/RAFFLE DONATIONS SOUGHT

SOMA is requesting donations for the coming mushroom camp in January 2016, for use in the silent auction and raffle. Proceeds support the many scholarships SOMA presents to grade school through graduate research students. Contact Rachel Zierdt, SOMA vice president at SOMAvicepresident@SOMAmushrooms.org.

Amazon Smile for SOMA Credits

We can increase SOMA's donation potential by spreading the word about AmazonSmile. Sign in to http://org.amazon.com and click on Marketing Tools to access customized online tools to let your supporters know that their AmazonSmile shopping can support Sonoma County Mycological Association. Here are several tactics that have been successful for participating organizations.

Share this link: http://smile.amazon.com/ch/68-0486141 and ask your donors, volunteers, employees, and friends to bookmark this link so all their eligible shopping will benefit Sonoma County Mycological Association.

Send an email: In your next email newsletter to supporters, promote your AmazonSmile participation and include the link above.

Copy and paste this message in a Facebook post: When you shop at AmazonSmile, Amazon donates 0.5% of the purchase price to Sonoma County Mycological Association. Bookmark the link http://smile.amazon.com/ch/68-0486141 and support us every time you shop.

Copy and paste this message in a Tweet: Amazon donates to Sonoma County Mycological Association when you shop @AmazonSmile. http://smile.amazon.com/ch/68-0486141 #YouShopAmazonGives.

Contribute to SOMA News!

The monthly SOMA News wants you to contribute to our pages with news about your life with mushrooms in Sonoma County and beyond. We need art images, photos, short or long stories, academic or other musings on mycology, recipes, notices, events and more.

The deadline for each issue is the weekend before the first of the month.

You needn't be a professional artist, photographer or writer to join in; just take an interest in sharing what you know and find with others!

Email me at chazwt@gmail.com or
call 707-799-9766 with inquiries.
Thanks, Chaz Thurston
SOMA News editor.