Morel Madness this year will take place at Knob Noster State Park. We are spreading our wings and moving across the state. (Sorry, that’s my Audubon coming out.) Knob Noster is a state park just 8 miles east of Warrensburg, MO. Trust me - the morels are just as yummy over here. We will be conducting multiple forays on Saturday. Some will be along Clearfork Creek, and the first ones to fill will probably be the forays around Morel Lake. Sunday morning we will have a special egg foray for those with youngsters. So if you have children who would like to hunt eggs, please bring some candy to fill up the eggs and basket for the hunt. And make sure to get there in plenty of time on Friday for our evening entertainment, Jeopardy!

Items to make sure you bring: compass (mandatory), mesh bag or basket for collecting, a whistle and some good boots. You will need layers for the weather.

continued on page two...
Morel Madness Registration Form

April 18-20 at Knob Noster State Park

Deadline to register is April 6

Name of person completing form: ____________________________

Address: ________________________________________________

Phone (day/evening): ______________________________________

Email: __________________________________________________

All names must be listed

Name: ________________________ Fri __ Sat __ $________

Name: ________________________ Fri __ Sat __ $________

Name: ________________________ Fri __ Sat __ $________

Name: ________________________ Fri __ Sat __ $________

$30 per person for all or part of the weekend. Children 16 and under free. Members only. Not a member of MOMS? The whole family can join for $15, visit http://momyco.org/BecomeMBR.cshtml for more information.

Total enclosed: $____  Number of children (for Easter egg hunt): __________

Cabin sharing preferences: _________________________________

Dietary Preferences: ______________________________________

Please consider volunteering - Preferred task and time:

Mail check payable to MOMS to Dan Liles, 164 Caraway Circle, Ozark, MO 65721

For more information contact Dan Liles, hughdborg@aol.com, call or text 417-234-6205.

Accommodations:
We will be staying at Camp Bob White. The registration fee for this year will include a bed in a cabin for both nights. There are restrooms in each cabin and showers within walking distance. We will have access to a dining hall with a full commercial kitchen.

Food:
Dinner on Friday and Saturday night will be potluck as we’ve done in the past, so be sure to bring a dish to share for each night.

Included in the registration is lunch on Saturday and breakfast on Saturday and Sunday mornings. Place settings and silverware will be provided for all meals.

Speaker: Britt Bunyard of Fungi Magazine. We do not know the topic yet, but if you’ve heard Britt speak before, you know you are in for a treat!

MOMS Member
Dennis McMillian

Photo by Jon Kapp

MOMS Annual Forray 2014

October 9-12, 2014 | Camp Arnold near Eatonville, WA

Mushroom collecting in the shadow of Mt. Ranier. Details coming soon...
A Rare Blue Bolbitius

After collecting numerous mushrooms for MOMS' voucher database, it finally happened! It happened at Duck Creek, October 5th, 2013 on a rainy day in a spot I've never before collected mushrooms and MOMS has only been to once before, back in September 2005.

Josh, my grandson, said that he wanted to hunt just north of where everyone had parked their vehicles. Most of the group went south on the other side of the road, but I followed Josh into the wooded area he picked for us to hunt. We separated a little from each other and all you could hear was the continuing raindrops hitting the leaves on the trees and underbrush. Both of us had wandered far into the woods because the rain had slowed to almost nothing for a short time.

Lee Toll lowered the tailgate on his truck for us to put our basket and proceeded to head back to the cars because the rain was steady now.

We met up again and I was surprised to see that Josh hadn't lost any of his enthusiasm, always asking if I saw the mushroom I had just passed up. I saw a downed tree branch that was lying almost horizontal and what I thought was a jelly fungus on the top side of the branch. I propped my camera up on the branch and took several photos until it started to rain steady. I finished up and turned to walk away when my eye caught a bright blue mushroom with a cap about one inch in diameter with a matching stem, located on the ground directly below the fallen branch in the leaf litter. I reached down and quickly pinched the wood it was attached to, placed it in my basket and proceeded to head back to the cars because the rain was steady now.

I followed Josh into the wooded area he picked for us to hunt. Mycologist Drew Minnis immediately saw the bright blue mushroom and said that it was unusual and I might want to take some photos of it. At that time he thought it might be in the Marasmius genus. It was soaking wet and very hard to handle because it was so viscid. On returning to Camp Latonka, I placed the mushroom on a piece of glass to get a spore print, placed that in a wax bag and tucked it away.

When I got back home, the mushroom had gotten smaller, but I had the spore print I needed. I made a spore mount and took some photos of the spores. They were different. They were brown, and blunt on one end. I had never seen that type of spore shape before. I emailed Dr. Methven and asked if he would have the time to look at the specimen and he agreed. I emailed him my photos and he told me that he felt it was a Bolbitius species but had never seen one that color. I then asked him if he would do a further examination of it if I sent him the specimen. He agreed and recommended we run its DNA and sequence it. I immediately sent it off to him and that is its current status.

In the meantime I emailed Jay Justice because I know Jay has been on hundreds of forays, has his own collection of rare mushrooms, and he is another chief mycologist in MOMS. Jay tried to find a match for it and told me that he had never seen a blue Bolbitius before this one. I was really excited to have found what appeared to be a very rare mushroom. I am anxiously awaiting the outcome of the more extensive examination that might include DNA results. I know nothing of how any of this works and feel very fortunate to be a part of what might be the first time this species is documented.

I want to give a special thanks to Drew Minnis for his help and comments. He has encouraged me to move to the next level and obtain DNA results for further identification. Also, without Dr. Methven's patience and readiness to help me out with difficult specimens, I wouldn't know how to correctly identify most of the mushrooms that I have vouchered. And Jay Justice for being there to help me through the jungle of the latin names for all these mushrooms, and continually providing me with updates on the constant changes in mushrooms names.

**Controlled Burns: Honeysuckle**

The following article was taken from the Missouri Department of Conservation website. It features information on two topics that MOMS members have been discussing a lot recently: controlled burns and honeysuckle. We hope you enjoy!

“Efforts to control Japanese honeysuckle infestations have included the following methods: mowing, grazing, prescribed burning and herbicides. While grazing and mowing reduce the spread of vegetative stems, prescribed burns or a combination of prescribed burns and herbicide spraying appears to be the best way to eradicate this vine.

“In fire-adapted communities, spring prescribed burns greatly reduced Japanese honeysuckle coverage and crown volume. Repeated fires reduced honeysuckle by as much as 50 percent over a single burn. A previously burned population of honeysuckle will recover after several years if fire is excluded during this time. By reducing honeysuckle coverage with fire, refined herbicide treatments may be applied, if considered necessary, using less chemical. Because Japanese honeysuckle is semi-evergreen, it will continue to photosynthesize after surrounding deciduous vegetation is dormant. This condition allows managers to detect the amount of infestation, and allows for treatment of the infestation with herbicides without damage to the dormant vegetation.”

2 ounces rice-stick noodles (pad thai noodles)
1 tablespoon vegetable oil
10 large shiitake mushrooms (about 4 ounces),
   stems discarded and caps thickly sliced
1 large garlic clove, thinly sliced
1 1/2 teaspoons finely grated fresh ginger
4 1/2 cups chicken stock or low-sodium broth
1/2 pound pork tenderloin, cut into
   2-by-1/2-inch strips
1/2 teaspoon cornstarch dissolved in 1 tablespoon cold water
1 teaspoon Asian sesame oil
Salt

• Soak the noodles in a bowl of hot water until pliable, about 5 minutes.
• Meanwhile, in a large saucepan, heat the oil until shimmering. Add the shiitake and cook
  over high heat, stirring occasionally, until lightly browned, 2 to 3 minutes. Add the garlic
  and ginger and cook, stirring, for 30 seconds. Add the stock and bring to a boil.
• Drain the noodles, add them to the saucepan and cook over moderate heat just until
  tender, about 3 minutes. Add the pork, vinegar, soy sauce and chile-garlic sauce and
  simmer until the pork is nearly cooked through, about 2 minutes. Add the snow peas,
  scallions and cornstarch mixture and cook until the vegetables are crisp-tender, about 1
  minute. Stir in the sesame oil and season with salt. Ladle the soup into bowls and serve.
Winter Luncheon

With no mushroom hunting for months, it’s a good thing we have the Winter Luncheon to raise our spirits! As usual, the event was filled with delicious home made appetizers, entrées, sides, desserts and drinks. What a creative and talented group! Some of the dishes included mushroom and cheese pâté, candy cap cheesecake with chanterelle cream sauce and candied crimini bark, and green beans with truffle oil, shaved truffles and portabellas.

The auction was also a big success, featuring a combination of home made and purchased items. There were several types of dried mushrooms, home brew beers, wine, gift cards and books.

Instead of a speaker, the entertainment this year was trivia. Questions were themed around mushrooms, members, and club history, and of course, teams were named after mushrooms!

Thanks to Ken Gilberg for chairing the event. Thanks also to Barb O’Brien for organizing and creating the centerpieces, Renee Bomanz for registration and silent auction, including getting some great prizes, Linda Mueller for audio visual, Jan and Charlie for organizing and writing the original article, Blake Larson and Melissa Gibbs for the trivia contest, Patrick Harvey for all the publicity on Facebook, John Davis for accounting, George Sackett for bartending, and everyone who came from near and far, and brought tasty, interesting food.

In the words of Ken Gilberg, “The twenty fifth annual Winter Luncheon brought us together for an affable afternoon in the bleak of January. For some, this was their very first Winter Luncheon, others had been to the very first. We hope the tradition continues.”
Microscopic fungi that live in plants' roots play a major role in the storage and release of carbon from the soil into the atmosphere, according to a University of Texas at Austin researcher and his colleagues at Boston University and the Smithsonian Tropical Research Institute. The role of these fungi is currently unaccounted for in global climate models.

Some types of symbiotic fungi can lead to 70 percent more carbon stored in the soil.

"Natural fluxes of carbon between the land and atmosphere are enormous and play a crucial role in regulating the concentration of carbon dioxide in the atmosphere and, in turn, Earth’s climate," said Colin Averill, lead author on the study and graduate student in the College of Natural Sciences at UT Austin. "This analysis clearly establishes that the different types of symbiotic fungi that colonize plant roots exert major control on the global carbon cycle, which has not been fully appreciated or demonstrated until now."

"This research is not only relevant to models and predictions of future concentrations of atmospheric greenhouse gases, but also challenges the core foundation in modern biogeochemistry that climate exerts major control over soil carbon pools," added Adrien Finzi, co-investigator and professor of biology at Boston University. Averill, Finzi and Benjamin Turner, a scientist at the Smithsonian Tropical Research Institute, published their research this week in Nature.

Soil contains more carbon than both the atmosphere and vegetation combined, so predictions about future climate depend on a solid understanding of how carbon cycles between the land and air.

Plants remove carbon from the atmosphere during photosynthesis in the form of carbon dioxide. Eventually the plant dies, sheds leaves, or loses a branch or two, and that carbon is added to the soil. The carbon remains locked away in the soil until the remains of the plant decompose, when soil-dwelling microbes feast on the dead plant matter and other organic detritus. That releases carbon back into the air.

One of the limits that both the plants and the soil-dwelling microbes share is the availability of nitrogen, an essential nutrient for all life. Most plants have a symbiotic relationship with mycorrhizal fungi, which help extract nitrogen and nutrients from the soil and make that nitrogen available for the plants to use. Recent studies have suggested that plants and their fungi compete with the soil microbes for the nitrogen available in the soil and that this competition reduces decomposition in the soil.

There are two major types of the symbiotic fungi, ecto- and ericoid mycorrhizal (EEM) fungi and arbuscular mycorrhizal (AM) fungi. EEM fungi produce nitrogen-degrading enzymes, which allows them to extract more nitrogen from the soil than the AM fungi.

Examining data from across the globe, Averill and his colleagues found that where plants partner with EEM fungi, the soil contains 70 percent more carbon per unit of nitrogen than in locales where AM fungi are the norm.

The EEM fungi allow the plants to compete with the microbes for available nitrogen, thus reducing the amount of decomposition and lowering the amount of carbon released back into the atmosphere.

"This study is showing that trees and decomposers are really connected via these mycorrhizal fungi, and you can’t make accurate predictions about future carbon cycling without thinking about how the two groups interact. We need to think of these systems holistically," said Averill.

The researchers found that this difference in carbon storage was independent of and had a much greater effect than other factors, including the amount of plant growth, temperature and rainfall.


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**Cooking Fungus with Fun and Flair**

*By Maxine Stone*

**Wednesday, April 23**

**6:00 – 8:00 pm**

**$20 per person**

Josh Galliano, world-class chef, is offering MOMS a cooking class. Josh is the chef/owner of The Libertine in Clayton, MO. At The Libertine, Josh combines his love of local ingredients with a playful approach to good food while always letting the ingredients speak for themselves. Through the menu, Josh’s past and food loves shine through with a distinctive Southern accent, New Orleans reverence, and appreciation for the cuisines of the world.

This class will have three mushroom recipes demonstrated and available for tasting during the evening. The recipes will focus on available mushrooms from local producers and possibly some recently foraged mushrooms. The recipes will combine familiar flavors with interesting techniques. Each attendee will be given a set of recipes to take home. Since this is not dinner, we can go out after for food and drinks, and hopefully, Josh will join us.

We will meet at Hickey College, 940 Westport Plaza #101 at 5:45 pm for a 6:00 class.

If you’d like to participate, send your check for $20 with a note stating that it is for the class, to Maxine Stone, 314 Park Road, St Louis, MO, 63119. For answers to your questions you can contact Maxine at VeryMaxine@aol.com or 314-963-0280.
**2014 Calendar**

MOMS members will need to notify the leader of the foray they wish to attend before the evening prior to the foray at the very latest. Please meet at the Visitors Center, unless otherwise specified, 15 minutes prior to the time listed.

### Wed 3/5

7 pm, Program, Spring Mushrooms and Fungi of Missouri, Missouri State Museum, Jefferson City, Stan Hudson, shudson@momyco.org

### Sat 3/15

10:30 am, **Class**, Mushroom Madness, Runge Nature Center, Stan Hudson, shudson@momyco.org

### Sun 3/16

12 pm, **Bimonthly**, Michael Kuo presents A Contemporary Look at Stinkhorns, Missouri Dept. of Conservation Central Regional Office, 3500 East Fans Road, Columbia, MO, Stan Hudson, shudson@momyco.org, 9001 Clayton Road, Cici Tompkins, ctompkins@momyco.org, 303-775-7084

6 pm, **Bimonthly**, Michael Kuo presents A Contemporary Look at Stinkhorns, Ethical Society, 9007 Clayton Road, Cici Tompkins, ctompkins@momyco.org, 303-775-7084

### Sat 3/22

10 am, Cultivation Workshop, featuring Braze Thundersmith, Babler State Park, potluck to follow, Cici Tompkins, ctompkins@momyco.org, 303-775-7084

### Sat 3/29

10 am, **Class**, Poisonous Mushrooms of Missouri, Babler State Park, Maxine Stone, verymaxine@aol.com, 314-963-0280 or Brad Bomantz at brad_bomanz@yahoo.com, 636-225-0555

Morel Madness, featuring talk by Britt Bunyard, Knob Noster State Park, Warrensburg, MO, Dan Liles, hughdorg@aol.com, 417-725-9481

### Wed 4/23

10 am, **Foray**, Babler State Park, Joe Walsh, jone1641walsh@hotmail.com, or 636-343-6875

6 pm, **Class**, Cooking Fungus with Fun and Flair, featuring Chef Josh Galliano of *The Libertine*, Hickey College, Westport Plaza

### Wed 4/23

Sun 3/16

### Sat 3/22

Sun 3/16

### Sat 3/29

3/18-3/20 Morel Madness, featuring talk by Britt Bunyard, Knob Noster State Park, Warrensburg, MO, Dan Liles, hughdorg@aol.com, 417-725-9481

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### Sat 4/26

10 am, **Foray**, Annual Leland Foray, Pere Marquette State Park, Leland Von Behren, 618-259-8517, or Maxine Stone, verymaxine@aol.com, 314-963-0280

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10 am, **Foray**, Annual Leland Foray, Pere Marquette State Park, Leland Von Behren, 618-259-8517, or Maxine Stone, verymaxine@aol.com, 314-963-0280

### Tue 5/13

6 pm, **Bimonthly**, Mushrooms 101, Powder Valley Nature Center, Don Evans, 314-574-4523

### Sat 5/31

10 am, **Class**, Poisonous Mushrooms of Missouri, Missouri Dept. of Conservation Central Regional Office, 3500 East Fans Road, Columbia, MO, Malissa Underwood, malissa.underwood@mdc.mo.gov, 573-301-0082

### Sat 6/7

10 am, **Foray**, place TBA, Dennis McMillan, 618-939-8939

### Sat 6/13-15

Campout, Ha Ha Tonka State Park, Stan Hudson, shudson@momyco.org

### Sat 6/28

10 am, **Foray**, Cuvier River State Park, post foray garden and vineyard tour, Vern Creely, vernbevecreely@netzero.net, 573-898-3553

### Sat 7/5

10 am, **Foray**, Hawn State Park, Patrick Harvey, pg_harvey@hotmail.com, 314-575-2262

### Tue 7/8

4 pm, **Bimonthly**, Foray and Food Fest, Babler State Park, Alta Shelter, Maxine Stone, VeryMaxine@aol.com, 314-963-0280

Sweat ‘n Chanterelles, Meramec State Park, group campsite A, Cici Tompkins, ctompkins@momyco.org, 303-775-7084

10 am, **Class**, Common Mushrooms of Missouri, Part 1, Missouri Dept. of Conservation Central Regional Office, 3500 East Fans Road, Columbia, MO, Malissa Underwood, malissa.underwood@mdc.mo.gov, 573-301-0082

### Sat 7/9

10 am, **Class**, Common Mushrooms of Missouri, Part 2, Babler State Park Maxine Stone, verymaxine@aol.com, 314-963-0280 or Brad Bomantz at brad_bomanz@yahoo.com, 636-225-0555

### Sat 9/7

10:30 am, **Foray**, Charleville Winery. Chuck Yates, s2yates@yahoo.com, 314-843-5580

### Tue 9/9

**Bimonthly**, Presented by Margaret Evans, lifelong ecologist and Don Evans’ mother, Powder Valley Nature Center, Don Evans, 314-574-4523

### Sun 9/20

10 am, **Foray**, LaBarque Creek, Don Evans, 314-574-4523

### 10/2-10/5

Mingo, Mingo Wilderness Refuge, Latonka Girl Scout Camp, Contact TBD

### Sun 10/26

11 am, **Foray** and Potluck, Wild Times, Babler State Park, Place TBD, Steve Booker, arohd2@aol.com, 618-980-0866, or Jan Raiser, charlieraiser@aol.com, 314-773-4551

### Sun 10/26

10/31-11/2 **NAMA Annual Foray**, Camp Arnold near Eatonville, WA

### Fri 8/2

10 am, **Class**, Edible Mushrooms of Missouri, Babler State Park, Maxine Stone, verymaxine@aol.com, 314-963-0280 or Brad Bomantz at brad_bomanz@yahoo.com, 636-225-0555

### Sat 11/11

6 pm, **Bimonthly**, Photo Share, Powder Valley Nature Center, Patrick Harvey, pg_harvey@hotmail.com, 314-575-2262

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Submissions for the June Earthstar issue are due April 20th. Email articles and photos to Charles: charles.henri.tompkins@gmail.com
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Mushroom Identification Classes

By Maxine Stone

Have you ever walked in the woods and seen a group of beautiful white mushrooms? You thought they looked pretty delectable but you just didn’t think you should pick them and eat them. You weren’t sure if they were edible, non-edible or worse yet, poisonous. Most of us got started with this passion we call “mushroom-hunting” in the same way. The curiosity is there, but sometimes the knowledge is not. We are offering classes on mushroom identification for you, MOMS members, so that you can gain a greater confidence in your fungi facts.

Come to the mushroom classes offered by MOMS four times a year!

March 29: Poisonous Mushrooms of Missouri
June 7: Common Mushrooms of Missouri, Part 1
August 2: Common Mushrooms of Missouri, Part 2
October 4: Edible Mushrooms of Missouri

Each session offers classroom as well as field experience. Also as an option, there is take home study work for you to complete in your own time. Classes offer a wealth of knowledge in a friendly and easy-going environment. After your “homework” is completed and returned to the instructor, you will then be tested on the classroom experience. For each class attended, homework approved, and test taken, you will be awarded a beautiful pin. It is not necessary to complete all four classes, but for those who do, you will receive the Harry Thiers Certificate for Mushroom Proficiency. You will also walk away with a lot more knowledge about fungi.

Don’t let homework and tests scare you off. No grades are given and you can do as much or as little as you wish. You can even come to every class, every time, every year, and never do homework or a test. Actually, many people do that and their input is greatly appreciated. For more information or to sign up for a class, please contact Maxine Stone at verymaxine@aol.com, 314-963-0280 or Brad Bomanz at brad_bomanz@yahoo.com, 636-225-0555.