



# Symbiosis<sup>©</sup>

The newsletter of the Prairie States Mushroom Club

Volume 29:3

Summer 2012

<http://www.iowamushroom.org>

## Looking Forward

by President Glen Schwartz

The 2012 mushroom season started out with a bang, with morels showing up a full month ahead of schedule. Many people found morels this year, but our club forays for morels were a bust. We set the schedule well in advance, and only found a few morels on our first two forays. We might have to rethink our strategy for morel forays for next year. As soon as the morel season was over, it stopped raining and has been hot and dry. We need rain, or we won't find much on our summer forays. Roger and I have checked out two new Nature Conservancy locations recently, but neither one looks good for fungi. As always, if you know of a good location for fungi, let us know about it so we can do a short notice foray this year, or schedule a foray there for next year.

using some photos taken by Roger, Marty, and myself, but I need more to choose from. Jim Frink supplied all of the pictures for the last calendar, so this time we are giving you the chance to be a star and have hundreds of people see your photos. I need to select the photos by the end of August to have time to get the calendar published by October. I looked online and found a printer that can make calendars for about \$6.00 each, so we should be able to sell them for \$10.00 this time.

See you in the woods,  
Glen 

Our voucher specimen initiative has, so far, been a bust. We had a few opportunities, but forgot to save the fungi.



We thought we had found a rare species at a short notice foray at the Amana Trail, but the Herbarium had this species listed under an older name. Still, it was kind of cool to find what at first looked like an *Amanita* – tall, white, with a sack at the base of the stipe – only to turn it over and see pink, free gills like a *Pluteus*. For me, it was shocking to find these features on a

mushroom...like looking at a Honda Civic from the front with Cadillac tail fins on the back. Use the club website and/or the SmugMug site to figure out what we found.

I still need photos for the 2013 club calendar!!! If you have any good quality fungi photos, send them to the club email site for possible use in the calendar. I know I will be

## Extra! Extra! Foray Saturday!

by Roger Heidt

An unscheduled mushroom foray will be held at Wapsipinicon State Park, near Anamosa in Jones County, Saturday, July 21 at 9:30 a.m. We will meet near the Dutch Creek Shelter. Hardwoods to the north and pines to the south. Directions are given on page 9.

It's been dry but there was a half-inch of rain Friday and it's raining right now.

<http://www.iowadnr.gov/Destinations/StateParksRecAreas/IowasStateParks/ParkDetails.aspx?ParkID=610132&idAdminBoundary=218>

[http://www.iowadnr.gov/portals/idnr/uploads/parks/maps\\_pictures/wapsimap.pdf](http://www.iowadnr.gov/portals/idnr/uploads/parks/maps_pictures/wapsimap.pdf)



# Candy Cap Odor Mystery Solved

by William Wood

For years mushroom hunters have actively sought the “candy cap” mushroom, *Lactarius fragilis* var. *rubidus*. When it is dried, this mushroom has an intense and persistent fragrance. Because of the distinctive and pleasant smell of these mushrooms, they are frequently used as flavoring in dessert foods, such as cookies, cakes, breads or ice cream.



**Candy Cap** (*Lactarius rubidus*) Photo ©Michael Wood, <http://www.mykoweb.com>

The mushroom’s scent is usually described as being like maple syrup, but has also been said to smell like butterscotch, fenugreek, or burnt sugar. The chemical responsible for the smell of these mushrooms has been recently identified. This discovery resulted from collaboration between Darwin DeShazer, the scientific advisor of the Sonoma County Mycological Association (SOMA), and William Wood, a chemist at Humboldt State University.

Wood and DeShazer started this project over 25 years ago. The identity of the compounds responsible for the maple syrup odor proved elusive. Early attempts to identify the odor compound in extracts of dried candy caps failed. Finally, the gases escaping from the dried mushrooms was trapped and analyzed. A chemical called quabalactone III was identified as a major volatile compound. On contact with water, quabalactone III changes to another compound that has the name sotolon. Sotolon is a commercially available flavoring used in food and other products. At low concentrations sotolon has a pronounced maple syrup-like odor. Surprisingly, the chemicals found in this mushroom are not in natural maple syrup.

The volatile chemical that flavors candy caps was originally identified in the flowers of the Mexican tree, *Rosita de Cacao*. The Aztecs were known to mix

# Want Mushroomrooms? Water Your Yard!

by Mike Krebill

Just finished harvesting two yellow chanterelles (*Cantharellus cibarius*) from among all of those beginning to make their annual appearance in my yard. This is about three weeks earlier than last year.

Southeast Iowa had a wet spring in 2011, followed by a dry summer and fall, and a dry, mild winter. We had a dry spring this year. The first morels I found were in late March – tiny grays that looked and felt like they were dehydrated when I went to pick them. Except for a downpour on the weekend preceding the 4<sup>th</sup> of July, summer is off to a hot and dry start again. Like last year, the tomatoes in my garden began showing stress from the drought and the weeklong temperatures close to 100 degrees. Cracks opened up in the clay soil, and the grass became thinner and began taking on brown tones. I finally relented, bought a new sprinkler as the old one no longer oscillated, and spent three days watering my yard. An overnight rain on the 4<sup>th</sup> day added 1 3/4" to my yard. On the fifth day, I couldn't help noticing the chanterelles that were popping up as if to say “Thank you, thank you!”

So here's a thought: before the next foray, let's all meet at the site, and bring our hoses and sprinklers. ☺

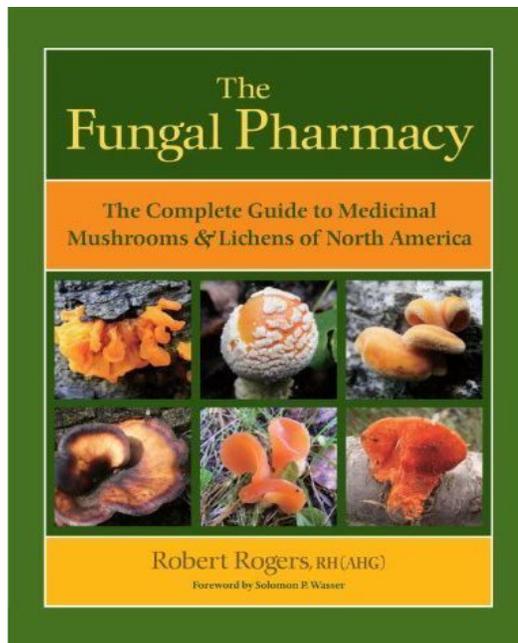


(cont. on pg. 3)

# The Fungal Pharmacy

a book review by Mike Krebill

My sister Lynn and I were browsing in Malaprop's Bookstore in Asheville, NC in early May when I spotted this book and began looking at it. Its subtitle "*The Complete Guide to Medicinal Mushrooms & Lichens of North America*" validated my curiosity.



I flipped the book over and read the synopsis on the back cover. Over 300 species treated, with info. on chemical constituents, clinical studies, use in cultures around the world, homeopathic uses, mycoremediation, propagation, folklore and etymology, preparation methods, and full color photos – it sounded promising. I opened the book. The photos were top-notch and there were a lot of them. The headings and the organization of the book made it look like it would be easy to use. I soon discovered that one could quickly look up a species without resorting to the index, as the fungi are in alphabetical order by genus and then by species. I chose the Turkey Tail,

*Trametes versicolor*, and was able to start reading about it within five seconds. I was fascinated with its uses in treating cancer (harvested commercially for that purpose in Japan) and its ability to break down specific pesticides. The author's credentials, concisely stated on the back cover, convinced me that he ought to know what he was writing about. Nothing else in my reference library came close to the content. Even though I looked the book over carefully before deciding to purchase it, buying it seemed like a no-brainer. It is an excellent book, very informative, and delightfully easy to use.

Here's more information about the book, in the event that you might want to check it out yourself at a large bookstore, or even purchase it online.

Robert Rogers, *The Fungal Pharmacy: The Complete Guide to Medicinal Mushrooms and Lichens of North America*. North Atlantic Books, Berkeley, California, 2011. For those of you who prefer searching by ISBN, the number is 978-1-55643-953-7. The list price of this paperback in the US is \$29.95. On Amazon.com, it is \$21.62. It is also available in a Kindle Edition for \$13.17. I've ordered a lot of books from Amazon.com, and I checked out the reviews on there. Of the five reviews so far, four people rated the book five out of five stars. The one who gave it two stars said that he did so because his was poorly bound, and the pages came out of it easily. (I've had no problem with mine, and the pages are tightly held, so it must have been an isolated

instance.) He did go on to say that the book had a lot of good info. Author Robert Roger teaches plant medicine at Grant MacEwan University in Edmonton. He serves as chair of the medical mushroom committee of the North American Mycological Association, and he's on the editorial board of the *International Journal of Medicinal Mushrooms*. 

## Candy Cap... (cont. from pg. 2)

these flowers as a flavoring in chocolate drinks. The name quabalactone III is derived from the scientific name of this tree, *Quararibea funebris*.

The odor causing chemical, quabalactone III, is not present in living candy cap mushrooms. It is only found in dried mushrooms. Wood and DeShazer theorized that on drying, free amino acids in the fresh mushroom react to form quabalactone III. This research was published in the journal, *Biosystematics and Ecology* [Volume 43, 51-53 (2012)]. The abstracts, highlights and chemical formulas for this article are online at <http://www.sciencedirect.com/science/article/pii/S0305197812000385>.

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# FUNgi FOTOgraphy: photography tips

## Double Up for the Close-Up

by Linda Scarth

The closer the camera is to the subject, the shallower the depth of field even at high f/stops needed for more depth of field (DOF). One solution is to make two photos and combine them in an image processing software.

There are software packages that combine numerous images with incrementally different focus planes to produce more DOF than is possible in a single frame. Manually combining two or three files can increase the perceived DOF in an image.



This trio of images illustrates a simple way to increase sharp focus. We started with two files made using a tripod to keep them in registration. The first is focused on the red fungi and the second image on the white one. The file dimensions are larger than the finished image to have room for selective cropping. Also, if planes of focus are very different, one layer may need to be moved slightly for best placement when using the layer mask.

After downloading, open both files and make any adjustments needed to each file, flatten and save with names to indicate which layer it is. Next open a new empty file of the same dimensions as the original files. Now copy one of the files and paste it to make a layer in the new file. Then copy and paste the second file on top of the first layer. The new file now has three layers – background, red fungi and white fungi.

Next decrease the top layer's opacity enough to see the layer beneath. Photoshop has an opacity slider for each layer. Use the move tool to reposition the top (white fungi) layer to accommodate for size differences caused by the different planes of focus. Edge discrepancies can be cropped later. Return opacity to 100%.

Add a layer mask to the top (white fungi) layer. In Photoshop click on the layer mask icon at the bottom of the layers palette. With a soft brush tool using black as the foreground color from the tool panel, paint on the layer mask to reveal the parts of the middle layer in the sharpest focus. Black reveals what is behind the mask. Change the brush to white to make corrections if the brush slips and reveals part of the out-of-focus white fungus on the red fungi layer. This leaves the white fungi (part of the top layer) in focus and reveals the more sharply focused red ones. Flatten the image, crop the uneven edges or more as desired and save the file with a new name.

This can be done in any photo editing software that uses layers and layer masks. The directions take longer than the execution. Give it a try. Just remember to take the two images from the same position and angle using a tripod or other camera support. Your camera just got better. 

# What is a Fungus Worth?

by Linda Scarth

Humans have a propensity to put dollar values on things that have intrinsic worth which may be hard to measure in monetary terms, even though the earth would not function without them. The words used to corral this concept are Ecosystem Services. Researchers have long tried to quantify the value of various ecosystem components that are necessary for sustaining life of humans as well as all other species.

There are many ecological systems that provide necessary services to make and keep the earth habitable. Many are obvious. Scavengers and recyclers keep the world clean and its fertility replenished. Marshes and uncontaminated soil purify water. Fertile soil provides food. Plants and minerals create soil. Some of the obvious are understood and valued by the public at large, as well as by scientists, ecologists and nature observers. One group that is not so obvious but is vital is fungi in all its forms.

About ten years ago, I clipped an article by Mary M. Woodsen from Audubon magazine titled 'Make Way for Mushrooms.' In a few pages she spoke of mushrooms as the fruit of an unseen world of mycorrhizal mycelia that does a wide variety of things for many other organisms.

One of the main tasks is to provide and recirculate water and nutrients to almost all other plants. There are only a few groups of plants that do not have relationships with microscopic fungi. James J. Hoorman of the Ohio State University Extension Service wrote a fact sheet on "The Role of

Soil Fungus" which states that fungi, along with bacteria, convert "hard to digest organic materials into usable forms." Fungi also store and recycle carbon more efficiently than bacteria, releasing less into the air.

Water management and cleaning are among fungi's big contributions to the planet. Their presence in soil helps create the sponge to absorb heavy rains. The tiny hyphal strands are straws that siphon water up to plants from underground storage. Saprophytic fungi, like the Turkey Tail, are among those that decompose plants, animals and their wastes. Other fungi mycelia can be modified (or as Woodsen said, "trained") to clean chemical toxins from water and sediments. Others can break down chemical warfare agents.

It has been noted that mushrooms are another of the 'canaries in the mine' as they are in decline in areas of heavy air pollution. This is important because air pollution contributes to climate change and fungi are needed to sequester carbon. Almost a third of the carbon in soil is held by globulin that came from mycorrhizal fungi. Healthy fungi keep carbon from escaping from the soil.

This is a short list of some of the Ecosystem Services provided by fungi. Of course, for the mushroom hunter, there is the pleasure of a day in the woods and fields searching for mushrooms. With this comes the intellectual satisfaction of learning more about the natural world while on a foray. And feeling like a million when returning home. 

# Iowa Mentioned in Mycophile

*[Excerpt from The Mycophile, May-June 2012, 52:3, page 1. The Mycophile is the bimonthly newsletter of the North American Mycological Association to which our club belongs. The author of this excerpt is NAMA President Bob Fulgency, and it is one paragraph in his report on the regulatory oversight of wild mushroom harvesting and sale, a report that he began in the previous issue.]*

The State of Iowa has also recently adopted rules covering the harvesting and sale of wild mushrooms. Under its rules the only wild mushroom species permitted to be gathered for sale to the public is the morel. Each mushroom must be identified as a morel and found safe by a certified wild mushroom identification expert whose expertise has been verified and approved. To become a wild mushroom identification expert, one must successfully complete a morel identification course. The fee for the three-hour course is set at \$45. I spoke with Dr. Mark Gleason, a professor at Iowa State University, who developed the course and he advised me that as of January 2012, about 200 individuals have taken his course and the licensing process is working well. 

# A Tribute to Captain Charles McIlvaine

by Dave Layton

Charles McIlvaine was born in 1840 to Anna and Abraham McIlvaine in Chester County Pennsylvania. His father was a dedicated patriot and Unionist who served in the US Congress from 1842 – 1846. He encouraged Charles to support the Union cause when the Civil War broke out in 1860. At age 20 Charles raised a company of volunteers and was elected Captain. His company joined the Pennsylvania Volunteers where he served with distinction and bravery until ill health made him resign in 1863. Interestingly poor health also caused him to leave school at age 13, a pretty inauspicious start to someone who would earn the nickname “Old Iron Guts.”

After the war, Charles led a more leisurely and self-sufficient life. In 1872 – 73, he traveled to Europe and wrote about art, sparking his writing career as a freelance poet and short story writer for the Detroit Free Press. He spun humorous tales under the pen name Tobe Hodge in a West Virginia mountaineer vernacular. As Hodge, he also wrote some popular fictional books. He traveled the mountains of West Virginia extensively, looking for stories and inspiration. That was where he found a different inspiration in 1881 after witnessing a forest floor that had been blackened by fire and turned white by the fungus *Lactarius piperatus* (“piperatus” = “peppery”). This dramatic scene of the first stage of forest renewal was what “first attracted my attention to toadstools” he states in his now famous mushroom guide, *One Thousand American Fungi*. At first he used this species as fertilizer, but at some point began

eating it along with many other species that are too hot or bitter or poisonous for any normal human (hence his nickname.) In his book he calls *piperatus* “...good food when one is hungry and can not get any better.” (Sometimes on our Prairie States Mushroom Club forays we find *piperatus* and suggest a novice taste it, which is soon followed by a

repeated spitting and exclamation, “What did you do to me!” It’s good for a chuckle, for the harmless pepperiness soon disappears and the experiment is followed with a lesson about how there are many reasons why mushroom tasting must be done very carefully and many are inedible, even if they’re not poisonous.)

This is a lesson Capt. McIlvaine apparently never fully learned. Here’s what he says about a few of our least favorites. He states of *Lepiota morgani* (now *Chlorophyllum molybdites*) “I enjoy them immensely, and never feel any worse for eating them.” Although to his credit, he reports that some people are made sick by them, so they should be “tested with caution.” While I was testing these with caution, a housemate got into them and thought he was going to die! Of *Hypholoma fascicularis* (listed as poisonous in all other books), he says, “It’s not



Captain Charles McIlvaine, American Pioneer of Mycophagy. (1840 - 1909)

Photographer unknown.  
<http://inkbluesky.wordpress.com/2012/02/09/american-pioneer-of-mycophagy>

poisonous but one of our most valuable species.” Of the genus *Cortinarius*, in which he doesn’t list the deadly cort (*C. gentilis*), he states “... not one has been accused of harm.” Of the Sickener (*Russula emetica*), “From that time until the present, I have eaten it and I have made special effort to establish its innocence by getting numbers of my friendly helpers to eat it.” Yikes! Even being around that guy wasn’t safe!

Even more dangerous than being one of his friends might be being one of his pets. Often in describing deadly Amanita toxins he explained his experiments as well as experiments of others on dogs and cats, learning that antidotes like atropine had very limited effect on amanita toxins. It’s not like he never got poisoned either. He was well aware of the dangers of *Amanita muscaria*, yet it was important for him to understand more

(cont. on pg. 7)

# A Tribute...

(cont. from pg. 6)

intimately so he experimented on himself as well as dogs. Here's one result from his eating a raw piece of *muscaria* cap the size of a hazelnut, "Dizziness, nausea, exaggeration of vision and pallor result from it."

One might conclude from this that Charles McIlvaine was an ignorant man, but actually the exact opposite was true. He wanted to end the ignorance about fungi that pervaded America and he knew he would have to take risks to do so. He states the reason for his risky actions in the preface to *One Thousand Fungi*,

It was necessary to personally test the edible qualities of hundreds of species about which mycologists have written nothing or have followed one another giving erroneous information. While often wishing I had not undertaken the work because of unpleasant results from personally testing fungi which proved to be poisonous, my reward has been generous in the discovery of many delicacies among the more than seven hundred edible varieties I have found.

I find it interesting that in all my research on Captain McIlvaine, or reading his book, there is no mention in his later life of the health problems that plagued him as a boy and young man. I wonder if it's possible that he was actually receiving more benefit than harm from eating so many kinds of mushrooms.

Despite the risks he took, he was always correct as to the identification of the mushrooms he experimented

with. He took great pains to make sure that the greatest experts at the time confirmed his identifications. His only real mistake was thinking that his extraordinary taste buds and digestive system were not so different than other peoples'. Even though that's a source of humor today, we must not let it overshadow his truly amazing legacy.

In less than two decades from the time he first was intrigued by fungi to the publication of *One Thousand American Fungi* in 1900, he identified, thoroughly described and tested the edibility of one thousand species of American mushrooms. He developed an identification key system based on the grouping of common characteristics such as spore color and delivery (tubes, pores, gills, etc.) that is followed in nearly all subsequent field guides, not just mushroom guides. He established many of the best practices of mushroom hunting, refuting wives tails and misconceptions and insisting on complete positive identification. And he aided identification with many beautifully drawn watercolor plates, which remind us that he was also a gifted artist. The concise yet imaginative language he used throughout the 700+ pages of his book also remind us that his true

profession was as a gifted poet and author. Finally, he was one of the original advocates for mushroom clubs to share knowledge, pool discovery and foster delight in nature and in fungi particularly. He was definitely not your typical Civil War hero! He was truly a modern Renaissance man.

*One Thousand American Fungi* has been reprinted as a paperback by Dover publishing. It includes a guide to the changes in genera and species names from McIlvaine's time to recently. I highly recommend it! With every new find I come across, I may identify it from another book but the most interesting information on it often still comes from the Captain.

[Editor's note: the cheapest place to buy it is through this link: <http://www.abebooks.com/products/isbn/9780486227825>.]

#### References:

George Johnston, ed. *The Poets and Poetry of Chester County, Pennsylvania*. J.B. Lippincott Company, Philadelphia, 1890. Digitized and available as a Google free e-book.  
McIlvaine, Charles, Robert Macadam, and Robert Shaffer. *One Thousand American Fungi: Toadstools, Mushrooms, Fungi; How to Select and Cook the Edible; How to Distinguish and Avoid the Poisonous*. Dover Publications, Mineola, New York, 1973.



# Updating MykoWeb

*an emailed request from Mike Krebill*

MykoWeb (<http://www.mykoweb.com/>) is the grandfather of all web sites devoted to mushrooms. Created in 1995 by Michael Wood, it has grown to encompass more about mushrooms than any other location. It is an incredible compendium of searchable photos and categorized links to web sites worldwide. But wait, there's more! Looking for recipes? They are there! Want to read book reviews about field guides? Read them and go directly to the right place at Amazon.com for purchasing them if you wish. For those of us who use computers and have Internet access, MykoWeb is worth bookmarking.

Thought you might be interested in the email I sent to web master Michael Wood today.

Hi Michael Wood!

For years, I have enjoyed visiting the wonderful website you created known as MykoWeb. I had occasion to visit it again today and thought, while there, to check our Iowa club's information. I found it dated. Thought you'd appreciate being updated regarding contact info.

When our club was formed in 1983, we welcomed adjacent states that had no club and residents of those states who did, but found our forays closer to attend. For that reason, our club's name (Prairie States Mushroom Club) was plural. We've kept the plural name, and still have members who live in Illinois, for example, even though there are now two mushroom clubs in Illinois.

The address listed for our club worked until September of 2010, but we changed presidents then. Here's the contact information for our current president. I've cced him to inform him of this email to you. I don't imagine he would have a problem with it since it is listed on our website, but wanted to let him know as a courtesy.

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Thank you kindly,

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# Upcoming PSMC Forays

by Roger Heidt

**Saturday July 21st**, 9:30 a.m.,  
Wapsipinicon State Park, in Jones  
Co. near Anamosa Iowa.

Directions: Wapsipinicon State Park is just across the river from the city of Anamosa. From downtown Anamosa, go south on S. Elm St. (AKA Co Rd E34), cross the Wapsipinicon River and take the first left. Follow the Upper Park Road to the Dutch Creek shelter on the left.

Roger and Glen scoped out this park last November. It's got everything we need for a great foray, as long as the weather cooperates. There are bluffs, mature woods, and a pine plantation loaded with mossy logs.

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**Saturday Aug. 18th**, 9:30 a.m., Hunt Woods, Des Moines Co. near Burlington Iowa.

Directions: From Hwy. 34 near Burlington, go 2.8 miles south on Hwy. 61 and exit at Hunt Rd. Go 1 mile west on Hunt Rd then 65th St. The park entrance is to the left, south of 65th St.

This is another new park for the mushroom club to explore. This time of year we can expect a significant number of mushrooms to be present.

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**Sunday Sept. 9th**, 1:00 p.m.,  
Oakland Mills Co. Park, in Henry  
Co. near Mt. Pleasant, Iowa.

Directions: Hwy. 218- take the Mt. Pleasant exit. Coming from the north and driving south, you will see Wal-Mart up ahead on the right (west). Take the exit for Ottumwa/Fairfield (before you get to Wal-Mart) – this is the Hwy. 34 bypass. You want to be

traveling west. On the by-pass, you will take exit 231 which is W55/Trenton/Salem. At the stop sign (which is a “T” intersection), take a left onto W55/Franklin Avenue. Go a few miles down the road (you are driving south) until you come to a stop sign. Continue through it, going south toward Salem on W55/Franklin. From this stop sign, it is about 3 miles to the Skunk River bridge. Go over the bridge and clear up the hill – go PAST the entrance to the campground (on the left) and PAST the limestone bluff (on the left). At the top of the hill, you will see a brown arrow sign on the right and a big stone sign on the left that says Oakland Mills County Park. Take a left here – this is Fremont Avenue and you are now on gravel. Our flowers are on the left. Take the first driveway on the left. This is the park entrance, plus you will see another big stone sign. Follow the curve and go PAST the first building on the left – this is the office. It looks like a house – it's yellow with green awnings. The next driveway is the driveway to the Nature Center. Again,

there is a big stone sign. Can't miss the building – it is big with log cabin type siding on it and a water garden out front. You may come in the front of the nature center or come in the door by the pop machine labeled “Environmental Education Classroom.” This door is on the west side of the building. You may park in the upper lot or down by the pop machine if there is room.

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**Saturday Sept. 15th**, 10:00 a.m.,  
Snyder Heritage Farm, Polk County

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**Saturday, October 6th**, 10:00 a.m.,  
F. W. Kent Park in Johnson County,  
off I-80 west of Iowa City. Take the  
Tiffin exit.

Directions: From Tiffin, go 3.6 miles west on US Hwy 6. The park is to your right, north of Hwy 6. Follow the road to the right and go 1.5 miles. Meet at the Conservation Education Center.

We will have a potluck, a program, and our annual meeting after the foray.



Photo and caption from Glen Schwartz

An unusual sighting at the Brushy Creek foray. These look like a *Coprinus* species, but note the color difference. They were attached at the base of the stem, so we know they are the same species. We can assume the dark brown mushroom is a bit older than the light colored one. They must darken with age. Most mushrooms get lighter colored with age.

# Consider NAMA Membership

by Bob Fulgency, NAMA President

*[Editor's note: As an affiliated club, our contact information is listed on the North American Mycological Association's website, [www.namyc.org](http://www.namyc.org). This helps newcomers find us if they would like to join our club. Our president, Glen Schwartz, is emailed a copy of the NAMA newsletter, so he is updated on what is happening nationally. Each of us can get a \$5 discount on NAMA membership by listing our club's name when filling in a NAMA membership application form. The form can be found on the website, but if you don't use a computer or have access to one, you may contact either Glen or me, and we can print off a copy of the form and mail it to you.]*

The NAMA newsletter, the *Mycophile*, contains a wide variety of interesting articles as well as a listing of mushroom events — mainly

throughout North America but also covering other continents. This is a particularly exciting time to be a part of the NAMA family, the premier amateur mycology society of North America. The benefits of being a member of NAMA are many. To name but a few: access to cutting edge mycological articles by outstanding mycologists; exposure to current developments in subjects like mushroom poisonings, medicinal mushrooms, mushroom photography, and mushroom cultivation; and the opportunity to attend the Annual and Regional forays. The foray sites are selected with a view to providing members a relaxed and accommodating atmosphere in a natural and scenic setting. The opportunity is open to them to meet with and learn from prominent professional and talented amateur mycologists and to develop close

friendships with fellow mushroomers near and far.

In addition to the membership benefits, NAMA also makes important gifts to the world of mycology by sponsoring many scientific endeavors. This is accomplished through exceptional publications, and also through its support of activities like the Mushroom Voucher Program, for example. This program maintains a registry at the Chicago Field Museum of mushroom specimens gathered at the many forays over the years. At this time, NAMA also plans to participate in the new Mycoflora project, designed to record fungal diversity in North America. These and other important undertakings are making significant and lasting scientific contributions to our understanding of the fungus world. 

## Forays of NAMA, Regional & National

**July 28 - 29: First Annual Joint Appalachian Foray**, Canaan Valley Resort, Canaan Valley, WV with Gary Lincoff, Bill Roody and Donna Mitchell.  
[www.wvmushroomclub.org](http://www.wvmushroomclub.org)

**August 2 - 5: The NEMF 36th Annual Sam Ristich Foray** at East Stroudsburg, PA.  
[www.nemf2012.org/Registration.htm](http://www.nemf2012.org/Registration.htm) for further information.

**August 16 - 19: The Telluride Mushroom Festival** [www.shroomfest.com](http://www.shroomfest.com)

**August 23 - 26: NMMS/4cmc Foray** in Pagosa Springs, Colorado. NMMS & 4 cmc welcome and encourage NAMA members to visit southern Colorado and enjoy the company and tutelage of our Foray Mycologists Steve Trudell and Britt Bunyard. Field trips will take us into the

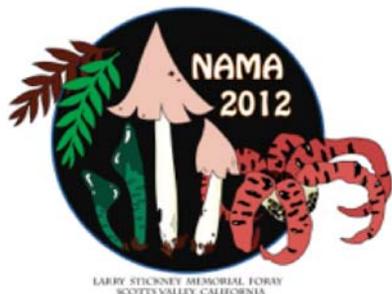
San Juan Mountains, where we'll visit elevations from 7,500 ft to over 11,000. Foray fee is \$100 includes meals but not lodging. Visit [www.mycowest.org](http://www.mycowest.org) for details and registration form.

**August 31 - Sept. 3: Southwest Regional Foray** at Southwest Research Station, Portal, Arizona. Chief Mycologist is Dr. Jack States. Foray cost is \$260 payable to NAMA. For registration information contact Ann Bornstein, 61 Devon Ct., Watsonville, CA 95076; [annstitcher@charter.net](mailto:annstitcher@charter.net) or call 831-786-0782.

**September 13 - 16: Coma Foray** in Hebron, CT with Chief Mycologist Gary Lincoff, Dr. Roz Lowen, John Plischke III and Bill Yule. Leon Shernoff and other mycologists will also be attending. Go to [www.comafungi.org](http://www.comafungi.org) for registration form.

**Sept. 20 - 23 NAMA Wildacres Regional Foray** - Price is \$225 per person. Contact registrar Glenda O'Neil at [glendakoneal@yahoo.com](mailto:glendakoneal@yahoo.com) or at 423-246-1882 and see website [www.namyc.org/events/index.html](http://www.namyc.org/events/index.html)

**Sept. 27 - Oct. 6: The Newfoundland Mushroom Adventure** (Canada) 9 days/nights, strong mycology focus with sightseeing, history, culture in this huge, forested, fungi-rich island in the Atlantic. Premium lodgings, food, foray transport. All inclusive Cost Share Fee: \$2,780 p/p dbl. occ. Organized by NAMA affiliate MycoAficionados of Mexico and Mexican Mushroom Tours. For details, contact Gundi Jeffery and Erik Purre by email at [mexmush@yahoo.com](mailto:mexmush@yahoo.com) or go to [www.mexmush.com](http://www.mexmush.com) 



## The North American Mycological Association

### Larry Stickney Memorial Foray

Mission Springs Conference Center

Scotts Valley, California

Thursday, December 13<sup>th</sup> to Sunday, December 16, 2012

**NAMA's 2012 annual foray** will be held at Mission Springs, nestled in the redwood—forested foothills of Santa Cruz, a famously laid-back coastal city at the northern edge of the Monterey Bay.

Most buildings at the camp are centrally located and within easy walking distance on flat ground (one lodging option is a short drive up a steep hill). The dining, display and meeting halls, and most of the lodging are within 400 feet of each other. For those who are flying to CA, Mission Springs is 60 miles (1:15 hr) from the San Francisco airport and 30 miles (40 min) from the San Jose airport.

We've been working hard at assembling a world-class faculty: UC Berkeley's Else Vellinga will be our head taxonomist, David Arora will lend his legendary field experience and taxonomic expertise, Tom Bruns will lead a microscopy workshop on little-known resupinate fungi, and Tom Volk, Gary Lincoff, Dennis Desjardin, and Rick Kerrigan will also be on hand to inform and enrich our understanding of the ecology, evolution, and identification of fungi. These are just a few of the speakers scheduled for this year's foray; a mushroom dye workshop, mushroom cultivation workshop, and photography seminar will also be on offer for our attendees.

We have obtained very special permission to collect at some of the most impressive of the many nearby state parks and select private lands. The majestic redwood forests of Henry Cowell Redwoods State Park, as well as its Live Oak groves and endemic-rich Zayante Sandhill habitats will be among the primary sites in which we'll focus our collecting efforts. Another expansive park where we'll be foraying is the Forest of Nisene Marks, home of awe-inspiring old-growth redwoods and other mixed evergreens - this park is likely to yield many species that we won't encounter anywhere else during this foray. We will also have access to one of the last three remaining stands of native Monterey Pine forest in the world, where *Amanita* diversity is at its highest in California and the King Boletes grow as big as barstools.

Mission Springs has a wide array of lodging options, available on a first come, first serve basis. All rooms have closets and dressers and come with bedding and towels. Please state on the registration form your 1<sup>st</sup>, 2<sup>nd</sup> and 3<sup>rd</sup> choice of room so we can best accommodate you.

Pre-foray Mushroom Dyes of North America Workshop: Join North America's premier mushroom dye experts Dorothy Beebee, Susan Hopkins and Alissa Allen for an all-day mushroom dye workshop. This full day workshop is only \$65, lunch included.

For complete registration information, please contact [annstitcher@charter.net](mailto:annstitcher@charter.net) or log onto [www.namyco.org](http://www.namyco.org)



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## Chocolate Tube Slime Mold (*Stemonitis axifera*)



Photo taken by: Roger Heidt at Cardinal Marsh in Winneskie County