



Symbiosis[©]

The newsletter of the Prairie States Mushroom Club

Volume 31:2

Spring

<http://iowamushroom.org>

Looking Forward

by PSMC President Glen Schwartz

What a long, cold winter. Finally, the snow has melted and our thoughts are directed back to the great outdoors. Actually, Roger and I were quite active during the winter months with hikes, snowshoeing, and cross-country skiing. Whenever we were in the woods, I was always on the lookout for fungi. I did not see too much until a late winter outing at Wickiup. One of us spotted a tree circled by a dark fungus maybe 10 or 12 feet above the snow. Not being sure what it was, I knocked some down with a stick. We were surprised to see this was a large fruiting of *Auricularia auricula*, the Tree Ear. What a nice find on a cold winter day.

I have been with the Prairie States Mushroom Club for seven or eight years now, and I think this is the strongest the club has been during this time. We have some new blood in the Board of Directors, a new newsletter editor, a publicist for the first time ever, and several new and active members. We have been teaming with county naturalists for a few years now, and they usually bring in an enthusiastic local crowd. Let's hope the weather cooperates, and this is the best year ever for PSMC. 

On February 8th we had our first, hopefully annual PSMC banquet. Great thanks go to Barbara, Jennifer, and Michael for all the work they put into making this event a blast. Since most of our club members reside in eastern Iowa, and the banquet was held in Ames, there were not too many club members present. This was not a problem, as Barbara recruited several acquaintances from the university and the local area. It was a real treat interacting with this eclectic group. To top it all off, the food was fantastic. We had so much fun, several people attending the banquet signed up as club members.

Mushrooms are returning to Iowa!

by Cody Gieselman

Once again, I am going to make a prediction of a banner year for morels in Iowa. I have been making the same prediction for several years in a row now. I figure eventually I will get it right. Speaking of morels, we have three upcoming forays where we might score some. See our website foray page (<http://iowamushroom.org/forays.php>) for more details. I recently received an email from a guy in Massachusetts who is planning a trip to Cedar Rapids to look for morels. He and three others are expected to join us on our first foray May 3rd at Wickiup. We whine about driving two hours to look for morels, while this group is traveling halfway across the country with no guarantees.



On March 11 I was thrilled by an early sighting of a *Polyporus squamosus* on a living hardwood tree near downtown Iowa City. Several older fruitbodies were alongside one robust specimen, and all were a much-welcomed harbinger of spring. 

Flammulina velutipes in the Yard

by Dave Layton

Yesterday (April 12th) one willow tree was sprouting fresh oyster mushrooms, and today Sally noticed a few *Flammulina velutipes* at the base of our hackberry stump. They were actually growing from under the bottom of the stump on long white and golden stems. They were just the top caps on a beautiful bundle of tender enoki. I figured if ever there is a time were these are edible, it's now – but how best to prepare them?

They seemed to get lost when I'd cooked them with other mushrooms in the past. The answer I found on the internet is really easy: save all but the base of the stems and eat the smaller ones raw in salad.

We made a light vinaigrette tossed salad with sliced roast beef. The little larger ones we ate with cream cheese in sliced beef rollups – delicious! The largest ones I sliced and threw into cream-of-mushroom soup with some of the oyster mushrooms and a variety of frozen mushrooms. In the soup they provided an excellent, golden contrast to the lighter mushrooms and the darker blewits.

In all my years of mushroom hunting this is the first time I've found wild *Flammulina* to be absolutely delightful! The only problem is we kind of pigged out on them and they're now gone – until the next harvest, that is. These were the first spring edible mushrooms, but a few weeks above freezing in winter could produce the same thing, so I don't know if I even consider them spring mushrooms. With the right weather conditions, oyster mushrooms and enoki can be found any month of the year, but cold-weather harvests taste best. 🍄



Fungi vs. climate change

Reprinted from <http://www.sciencedaily.com/releases/2014/01/140108133257.htm>

Symbiotic Fungi Inhabiting Plant Roots Have Major Impact On Atmospheric Carbon, Scientists Say

Jan. 8, 2014 — 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 extract.

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. 

50 Tips to put more morels in your basket

by Mike Krebill, Board Member
Prairie States Mushroom Club

1. Post morel photos around the house before the season begins.
2. Build confidence with affirmations.
3. Learn to recognize mycorrhizal partners. (Elm trees, Oak trees, Ash trees, etc.)
4. Find promising spots before morels appear. Obtain permission.

5. Buy an instant-read thermometer to check soil temperatures. Begin looking for morels when daytime air temperatures reach the 60s, nighttime temps are in the 50s, & the soil temp is 53° Fahrenheit.



6. Start hunting in the south & follow morels north with the spring. Track the progression of morels from Mexico to Canada at http://morelmushroomhunting.com/morel_progression_sightings_map.htm (You don't have to pay to look.) [Editor's note: Mike says morels have been spotted in Southern Illinois and Southern Missouri as of April 10.]

7. Register and log in to <http://www.morels.com/forums/>. Click on Message Boards and go to the forum for your state. You'll get feedback on when and where morels start being found and the relative degree of success.

8. As a general rule in Iowa, start looking in mid-April. Continue to hunt through mid-May.

9. Get there first!

10. Never divulge the places where you find morels.

11. Hunt when dandelion blooms become noticeable.

12. Hunt after warm spring rains when worms litter the pavement.

13. Once you see a morel, look for more *before* picking it. Remember, morels occur singly, but they also occur in groups.

14. Map productive locations and return the following season.

15. Look beneath elms that are dying or have died within the last year. Most of the bark will be on the tree, but sections of it will be loose.

16. Oak trees rank second in Iowa after diseased elms as a place to find morels.

17. Look around bigger ash trees. Their bark has interlacing ridges that form elongated diamond shapes like canoes seen from above. The limbs have opposite branching.



18. Old apple orchards are another great place to hunt.

19. Don't overlook black locust groves.

20. Morels have been found in white pine plantations.

21. Morels have been found near aspen groves, wild black cherry trees, shagbark hickory, in river and stream bottoms with cottonwood and silver maple and sycamore, near wild grape vines and beneath Osage orange trees. In fact, they are known to be mycorrhizal partners with 22 species of trees. In the Southeastern US, look around tulip poplars.

22. They have been found along fencerows, well away from trees, in lawns, and even in prairies.

23. When times are dry, head downhill. Search the base of slopes and along stream valleys.

24. If practical, hook up a sprinkler in your woods. (Hide it so that it is not visible from the road or from your nearest neighbor's house.)

25. Check mossy ground. Moss holds water, and it also makes morels easier to see.

26. Thoroughly investigate areas with heavy to moderate ground cover, using a hiking stick to lift screening vegetation or to move leafy plants to one side.

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50 Tips...

(cont. from pg. 4)

27. Use a hiking stick to gently open up raised clumps of leaves, as morels may be pushing them up.
28. Use a hiking stick to flip over large pieces of elm bark that have fallen on the ground.
29. Early in the season, forage creek and river bottoms with sandy soil, seeking areas where sunlight hits.
30. Check the edges of woods and fields and look around stumps, where sun can warm the soil.
31. Early in the season, when the ground is still warming up, concentrate on searching south-facing slopes.
32. Later in the season, as south-facing slopes dry out and get overgrown with vegetation, hunt north-facing slopes.
33. Hunt islands.
34. If an area floods, it takes two to three years before morels can recover, so don't waste time searching recently flooded areas.
35. Don't count on your peripheral vision to spot morels. Foveal vision, where the view of both eyes overlaps, is the sharpest, most focused, highest resolution part of our gaze. You will identify more morels if you concentrate on slowly sweeping for them using your foveal vision.
36. The time spent looking is far more important than the distance covered. For every minute of walking, spend six minutes looking.
37. If you are not seeing any mushrooms, change locations.
38. Look 10 to 20 feet away, not directly down. Morels can blend right in against the leaves on the ground if you are looking down at them. It helps to see them standing up above the forest floor.
39. Get a lower perspective in order to see the mushrooms sticking up above the ground. Squat or kneel down, or try the Groucho Marx walk.
40. Bring children or grandchildren hunting with you. Being closer to the ground, they may add many to your harvest once you help them find the first morel.
41. Study the pattern of pits and ridges in a photo of morels. Look for that pockmarked natural sponge pattern when hunting. It will distinguish morels from their background if you search for it.
42. A dog's sense of smell is 200,000 times greater than a human's. Dogs can be trained to find morels. You can hire someone to do it for \$6,000 or do it yourself. Go to this link to find out how to do it yourself: <http://www.shroomery.org/forums/showflat.php/Number/10247655>
43. Mid-season morels are often found in groups. Canvass the area thoroughly after a find and carefully move ground cover and plants that might be hiding more before moving on.
44. Buy books on morels to get tips from authors. Here's some I own:
 - Larry Lonik. *Morels: True or False. The Essential Field Guide and More.* RKT Publishing, Hazel Park, MI. 1999.
 - Chris Matherly. *Morel Mushroom Hunting Secrets.* www.morelmushroomhunting.com. 2010.
 - John and Theresa Maybrier. *Morel Hunting.* Stackpole Books, Mechanicsburg, PA. 2010.
 - Milan Pelouch. *How to Find Morels Even As Others Are Coming Back Empty-Handed.* The University of Michigan Press, Ann Arbor. 2008.
 - Michael E. Phillips. *Morel Mushrooms: Best-Kept Secrets Revealed.* Thunder Bay Press, Holt, MI. 2011.
 - Nancy Smith Weber. *A Morel Hunter's Companion: A Guide to the True and False Morels of Michigan.* Thunder Bay Press, Lansing, MI. 1995.
45. Watch video clips and DVDs on morel hunting. Warning: occasionally the clips posted on YouTube will try your patience as the person – eager to show you morels – is totally unaware of how hard he is making it to watch the recorded footage. The camcorder bounces up and down when he walks, then jerks back and forth as he tries to search for morels through the viewfinder. Dizzying! Some are very low resolution, suitable perhaps for viewing on a computer, but absolutely awful on a modern HD TV. Others are nicely produced and can be very instructive. Not long ago, I ordered the *Morel Mushroom Hunting* double-DVD set from National Morel Mushroom Hunting Champion Alex Babich. It promised over two hours of morel-hunting secrets, favorite recipes, motherlode finds, and more. Alex, his wife Nana, and even their young daughter make it look easy. (Their website is www.mushroomgear.com.)

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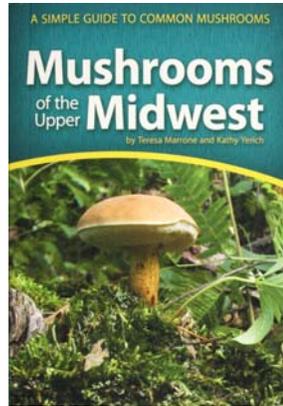
Book Reviews

Teresa Marrone and Kathy Yerich. *Mushrooms of the Upper Midwest: A Simple Guide to Common Mushrooms*. Adventure Publications, Cambridge, MN, 2014. \$16.95

ISBN: 978-1-59193-417-2

[http://](http://www.adventurepublications.net/mushrooms-of-the-midwest-field-guide.html)

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I heard about *Mushrooms of the Upper Midwest* from coauthor Teresa Marrone, a friend of mine who lives in Minneapolis. Teresa has been gathering and preparing wild edibles for 30 years, and has written over a dozen outdoor-themed books. I served as technical editor on two of them.

Co-author Kathy Yerich is on the board of the Minnesota Mycological Society. She has been an avid mushroom hunter for 10 years, and is also a member of the North American Mycological Association.

Kathy and Teresa were assisted by consultant and reviewer Ron Spinosa, who served as president of the Minnesota Mycological Society for four years. His special interest is mushroom cultivation, and he chairs NAMA's Cultivation Committee.

Kudos to all those involved in producing this beautifully illustrated, thoughtfully organized, carefully written pocket-sized paperback.

The diversity of mushrooms can be overwhelming, with perhaps 3,000 to 5,000 different species in our region alone. The authors and their technical advisor have done a masterful job in selecting commonly encountered mushrooms, choosing 400 species. A feature of the book that I especially like is how they have grouped the mushrooms into types with color-coded pages based on features such as “cap with gills” or “cap with pores” to help with identification, making it easier for beginners to distinguish mushrooms in the field. Once you find the right section for your type of mushroom, you only have to search the pictures in that

color-coded section. Then you check the key of identification features in green print on that page to match your find. If even one or two of the characteristics don't match, then you still have an unknown mushroom. That's acceptable. No book has them all, which is one reason why most serious mushroom hunters own a bevy of books.

The introductory sections of the book cover important concepts for the beginner to understand. The photographic illustrations do a fairly good job of showing features of caps, stems, gills and pores that are useful in distinguishing mushrooms. The book encourages readers to consider joining a local mycological society in their area, and lists websites for each state's groups – including the Prairie States Mushroom Club and our website.

One intriguing feature of this book is that the “Top Edibles” and “Top Toxics” mushrooms have their own sections right up front, before the color-coded sections. The Top Edibles are in a green-banded section. The Top Toxics are in a red-banded section with a prominent skull-and-crossbones symbol on each page.

The layout of facing pages for most of the mushrooms in the book is this:

The book is laid out so that each mushroom's information is on the left side, with photos of it on the right. The content on the left-hand page begins with the color-coded band and icons at the top, followed by the mushroom's common and scientific names. The meat of the page is organized with bold-faced headings: Habitat, Description, Spore Print, Season, Other Names, Compare, and Notes. The Notes contain edibility information and cautions. The key characteristics of the mushroom are printed in green to speed identification. Combining clear information on the left with the photo of the mushroom on the right is a great, quickly referenced layout.

If you pick up a copy of the book and start flipping through the pages, I am sure you will be impressed by its design and abundance of superb photos. Out of

(cont. on pg. 7)

curiosity, I counted the mushroom photos (including the cover) and came up with 440. Now that's impressive in a 288-page book! I believe I'll get two books: one to keep in my car, one to keep in my reference library by my desk.

Special alert: Adventure Publications was selling this great little book at a promotional price of \$8.48 when I checked online today. That is half of its retail price of \$16.95.

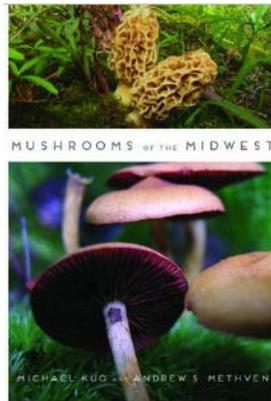
Reviewed by Mike Krebill

Michael Kuo and Andrew S. Methven. ***Mushrooms of the Midwest***. University of Illinois Press, Champaign, IL, May 2014. \$39.95
ISBN: 978-0-252-07976-4
www.press.uillinois.edu/

From the University of Illinois Press website:

Fusing general interest in mushrooming with serious scholarship, *Mushrooms of the Midwest* describes and illustrates over 500 of the region's mushroom species. From the cold conifer bogs of northern Michigan to the steamy oak forests of Missouri, the book offers a broad cross-section of the fungi, edible and not, that can be found growing in the Midwest's diverse ecosystems. With hundreds of color illustrations, *Mushrooms of the Midwest* is ideal for amateur and expert mushroomers alike. Michael Kuo and Andrew Methven provide identification keys and thorough descriptions. The authors discuss the DNA revolution in mycology and its consequences for classification and identification, as well as the need for well-documented contemporary collections of mushrooms.

Unlike most field guides, *Mushrooms of the Midwest* includes an extensive introduction to the use of a microscope in mushroom identification. In addition, Kuo and Methven give recommendations for scientific mushroom collecting, with special focus on ecological data and guidelines for preserving specimens. Lists of amateur mycological associations and herbaria of the Midwest are also included. A must-have for all mushroom enthusiasts!



W. Hamilton Gibson. *Our Edible Toadstools and Mushrooms and How to Distinguish Them*. Harper & Brothers, New York, NY, 1895.

In 1895, Harper & Brothers Publishers first published William Hamilton Gibson's *Our Edible Toadstools and Mushrooms and How to Distinguish Them*. Gibson lived from 1850 to 1896 and some of his books were published (or possibly republished) posthumously.

I can't vouch for the information in *Our Edible Toadstools*, but the 30 colored plates are beautiful. There are other black-and-white illustrations that are equally lovely examples of scientific illustration. The small drawing of bird's-nest fungi at the end of the index (page 337) is delicate and so graceful. The spore prints and anatomy drawings are done in exquisite detail, and the photography is wonderful – a photo on page 147 titled 'Thirty Pounds of Vegetable Meat' depicts a huge cluster of oyster mushrooms covering the base of a tree.

As cautions, the first part of the book deals with poisonous mushrooms and myths of identification that Gibson calls "worthless traditional tests for the discrimination of poisonous and edible mushrooms." The amanita plates here are particularly beautiful.

I recently discovered Gibson's nature books and illustrations. When I requested several of his books through interlibrary loan, I did not know that this one is out of copyright and available on the Internet Archive in a variety of formats for e-book readers, and as a pdf by Google books. Links are available at: <https://archive.org/details/ouredibletoadst02gibsgoog>

For the cooks among PSMC members there is a recipe chapter, with recipes such as "Mushroom Catsup" and "Clavaria Stew." And with morel season ahead, perhaps "Morelles á la Italienne" will appeal.

Book Reviews

(cont. from pg. 7)

To really enjoy the illustrations, the original book is best. Scanning the plates from the old and fragile book for personal enjoyment seems to be acceptable, so I have scanned the morel illustration, and wish morel hunters luck this spring.

Reviewed by Linda Loos Scarth

[Editor's note: an html version of this book may also be read online at: <http://chestofbooks.com/flora-plants/mushrooms/Distinguish-Edible-Toadstools-Mushrooms/> 

50 Tips...

(cont. from pg. 5)

46. Areas burned by fires often have large fruitings of morels.
47. Since there are many variables that influence morel fruiting, keep a journal. Record the date of your hunt, the weather, the place you hunted and if it was great, so-so, or bad. Note how many you found, with advice to yourself for next season. Briefly describe the vegetation and soils.
48. Clay soils tend to stay cold and wet. When there's a drought, they can become as hard as a rock. Perhaps for those reasons, at least one author has given them a thumbs-down.
49. If you find morels near a tree, there may well be more as far out as the canopy extends, so take a little time to scope it out.
50. As ash trees become weakened by the emerald ash borer, there will be a temporary increase in morel populations around infected trees. When the tree dies and loses its bark, however, morels will vanish in that spot. 

Calendar update

by Glen Schwartz

Here it is, April 2014, but it is already time to start planning for the 2015 PSMC calendar. I have decided to devote this calendar to edible fungi. I plan to feature mushrooms that are easy to identify and/or have no other similar-looking mushrooms to confuse people. Most of the calendar sales have gone to folks with limited exposure to mushroom identification, so we want to keep it easy for them to confirm they have an edible. Of course, there will be a disclaimer about verifying the identity, allergies, eating only a small quantity, and saving some to give to the hospital if it goes badly wrong.

Here is a list of what I thought would be a good selection: Yellow Morel; Black Morel; Half-Free Morel; Giant Puffball; Old Man of the Woods; Hen of the Woods; Chicken of the Woods; Lion's Mane; Bear's Head; Black Trumpet; Hedgehog; Indigo Milk Cap; Cauliflower Mushroom; Pheasant Back; Lobster Mushroom; and the Chestnut Bolete. If you add up these selections, you will notice there are more than 12 fungi listed here. I need some extras in case no one in the club has a calendar-quality photo of an otherwise good selection.

Speaking of photos, I am requesting that you send your high-quality photos (of any of the above-listed fungi) to me for consideration for the 2015 calendar. The photos should be free of camera motion, properly focused, and a high-enough resolution for printing. Don't worry about the resolution too much – sure, more is better, but I have software that can fill in the missing bits. I can't fix bad focus though. I know that Jim Frink has great photos of some of these edible mushrooms, but I want to feature as many club photographers as possible.

Please feel free to comment about my selection of fungi for the calendar. Do you have a favorite one I left off the list? Are there any on the list you think should not be featured in the calendar? My email address is: GlenASchwartz@gmail.com

I thank you in advance for helping with the 2015 Calendar. 

Upcoming PSMC Events & Forays

Saturday, May 3rd, 8:00 a.m.

Foray led by Marty Augustine at Wickiup Learning Center
Linn Co. near Cedar Rapids, Iowa

Marty Augustine of the Prairie State Mushroom Club will lead a hike in a search of fungus! Meet at the Wickiup Hill Learning Center parking area. This is a great chance to learn from an expert while in the field. Bring a container to collect mushrooms (morels may be out) and dress for conditions.

This event is free for PSMC members. Cost for non-members is \$2.50 for adults, \$1 for children 16 and under, and \$5 for families.

Directions: From Cedar Rapids, take exit I380 at Blair's Ferry Rd NE and go 5 miles west and north to Feather Ridge Rd. Turn right and go 1 mile north to Morris Hills Road. Turn left and go west 1 mile to the Learning Center. For more information about this park, visit their website:

<http://www.mycountyparks.com/County/Linn/Park/Wickiup-Hill-Learning-Center.aspx>

Saturday, May 10th, 10:00 a.m.

Foray at McNeil Nature Preserve
Jackson Co. near Preston, Iowa

PSMC has never been to this park, so this will be new to most of us.

Directions: From Hwy 64 at the east edge of Preston, Iowa, go north 0.7 miles on 446th Ave. Turn right and go east 1.2 miles on 33rd St. Turn right and go south into the park. Note that there are no restroom facilities at this park. For more information about this park, visit their website:

<http://www.mycountyparks.com/county/Jackson/Park/McNeil-Nature-Preserve.aspx>

Saturday, May 17th, 10:00 a.m. (foray starts at 1:00 pm)

Wild edibles and morel hunting with Mike Krebill
Wapello County Conservation Board
Pioneer Ridge Nature Center, 1339 Highway 63,
Bloomfield, Iowa 52537

At 10:00 a.m., Mike Krebill of the Prairie States Mushroom Club will present a program on spring's wild edibles, focusing on "10 Ways to Eat a Dandelion." Participants can try dandelion bratwurst made by Dave's Meat Market in Montrose (Mike is furnishing the dandelion leaves) and homemade DandyBlend™ Ice Cream. It's recommended that attendees bring their own lunch as well, so there are enough samples for everyone.

After lunch Mike will give another presentation, "Tips to Put More Morels in Your Basket." He'll also have wild-edible and mushroom reference books for sale at a discount.

The cost for both presentations is \$10 a person, or \$20 for a family. Reservations are required, and the event is limited to 28 people, so be sure to RSVP early by contacting Annette Wittrock at the Pioneer Ridge Nature Center: phone (641) 682-3091; Fax (641) 683-4621; email: annette_wittrock@hotmail.com.

A morel-focused PSMC foray will follow Mike's event at 1:00 p.m., free for members and non-members alike. There's a picnic shelter a short walk from the parking lot for those who'd like to eat their lunch while waiting for us to finish and come out at 1:00 pm.

Directions: Pioneer Ridge Natural Area is 6 miles south of Ottumwa on Hwy 63. Meet at the Nature Center. Here's a link to the location: <http://www.mapquest.com/#e8e57f7d5dca0541e39e5160>. For more information about this park, visit their website:
<http://wapellocounty.org/departments/conservation-board/pioneer-ridge-nature-area/> 

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c/o Roger Heidt
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PSMC Web Site:
<http://iowamushroom.org>



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Join the club

by Gabby Schulz

If you're not yet a member of the Prairie States Mushroom Club or the North American Mycological Association (NAMA), joining both is an invaluable way to increase your fungal knowledge (at any level) and get more connected with local and national mushroom experts.

Membership also gets you discounts on PSMC and NAMA events, as well as subscriptions to both *Symbiosis* and NAMA's excellent publications, *The Mycophile* and *McIlvainea*.

As a NAMA-affiliated club, your PSMC membership grants you a discount on NAMA membership, so sign up for that first. PSMC membership is \$15 a year; for payment, contact PSMC Treasurer Roger Heidt at rwheidt54@hotmail.com or by phone at (319)-573-4795.

To become a NAMA member, go to <http://namyco.org/join/>. Dues can be paid online or by check. A one-year membership for PSMC members is \$24, and includes digital newsletters and access to NAMA-sponsored events. Make sure to include that you're a member of the affiliated Prairie States Mushroom Club to receive the discount! 

For those connected to social media, take note that the PSMC is on Facebook and Twitter. Club members can regularly share items of interest and information about upcoming events. Find us on Facebook at <https://www.facebook.com/pages/Iowa-Mushroom-Club/212320365449662>. Follow us on Twitter at <https://twitter.com/iowamushroom>

by Cody Gieselmann