



Symbiosis[©]

The newsletter of the Prairie States Mushroom Club

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Rare Mushroom Found at Brushy Creek Foray

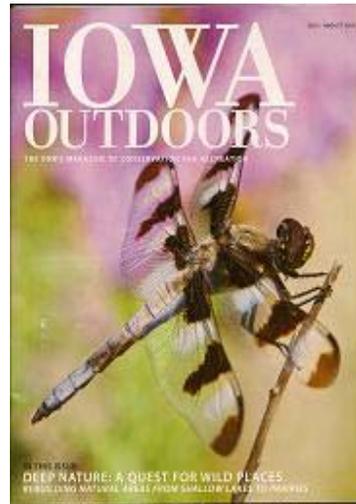
By Dave Layton, Dean Abel and Roger Heidt



The rare fungus *Underwoodia columnaris* was found on June 12th at Brushy Creek State Recreational Area foray in a size and abundance never before documented. This gave us a chance to add to the overall body of knowledge about this rare mushroom. Dean Abel did background research and Roger Heidt took photos of both fruiting bodies and spores. All the specimens that were collected were dried and sent off to Deb Lewis at the Ada Hayden Herbarium at Iowa State University along with the photos and scans of the mushroom. A small piece was sent to Rosanne Healy. Rosanne plans on doing a DNA sequence from the sample. In this article I note physical characteristics and habitat. Here's what we found – first background info from Dean:

The find of *Underwoodia columnaris* gets better and better. This mushroom is an ascomycete related to the Helvellas (it looks like a giant *Helvella crispa* without a cap).

(cont. on pg. 2)



Editors note: Photography of PSMC members, Bob and Linda Scarth is displayed in the July/August 2010 issue of *Iowa Outdoors* both on the cover and in an article featuring excerpts from the book *Deep Nature* which includes their photographs along with fascinating essays by John Pearson. I asked Linda to write about the making of this wonderful book. Following is her article. *Deep Nature:*

Photographs from Iowa can

be ordered online at www.iowanaturestore.com or by calling 1-866-410-0230. Cost is \$29.95 plus shipping and handling. This is a book any Iowan would be proud to own.

The making of *Deep Nature: Photographs from Iowa*

by Linda & Robert Scarth
<http://www.scarthphoto.com>

Our book on the small and beautiful in Iowa began many years before Holly Carver, retiring director of the University of Iowa Press, asked us to prepare a set of images for a book. We have photographed together all our married life and during that time the proportion of natural



history images has increased. And of those, close-ups and details have become our specialty. In 1983, Linda attended a week long session at the Maine Photographic Workshops led by Les Line, then the editor of Audubon Magazine. He encouraged her to photograph the native

(cont. on pg. 7)

Rare Mushroom...

(cont. from cover)

According to an article in the January 1918 issue of *Mycologia*, this mushroom genus was founded in 1889 by Peck who named it in honor of Professor Underwood, who originally received three specimens collected by J. T. Fischer in Kirkville N. Y. Underwood continued looking for it for many years finding only a few fragmented specimens.

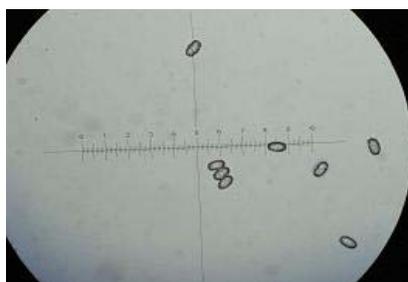
Seaver in *North American Cup Fungi* 1928 reports in the "Additions and Corrections" that the range of this mushroom has been extended to Iowa. Lincoff in *Audubon Society Field Guide to North American Mushrooms* 1981 pictures this mushroom in Plate 696, which is attributed to photographer Arne Bendon. Bessette et al. in *Mushrooms of Northeastern North America* 1997 use the same photo. This must be a hard fungus to find. The McKnights in *Peterson Field Guides: Mushrooms* illustrate it in Plate 2 and call it by the common name "Ivory Candle". Arora keys it out but has no description or photograph.

I note that several authors appear to simply repeat the description of earlier writers. The mushroom is reported over and over as being up to 4 inches (8-10 cm) in height. In our collection the biggest specimen is over 8 inches (20 cm) in height. Roger and I will attempt to dry our specimens for posterity. This was truly a great find!

As I stated earlier the size and abundance were a big part of this being a great find. We were split into two groups, both of which found over a dozen large specimens scattered over a hillside of secondary growth woods. Most were on bare soil beneath a dense canopy of linden, ash, elm, locust and similar trees. There had been excessive rain, which I believe caused these to continue growing and swell in size. It may also have drowned out competitors.

At their base they had a pleasant mushroomy smell similar to other cup fungi that are edible. If these mushrooms were young, abundant and fresh, I'd have been tempted to experiment with their edibility. Of course I wouldn't have wanted this article to state, "*They were edible and tasty – every last one of them.*"

Anyway, specimens were slimy and fetid smelling on top. At first this led me to wonder if the slime was where spores were produced like a stinkhorn, but Roger found spores originating all along the mushroom surface, so the slime was just desiccation. This makes sense if the tops are the first part to emerge into the atmosphere. This seems to be corroborated by the only Internet image that appears on a Google image search. It shows these mushrooms as short finlike structures. This image is found at <http://flickr.com/photos/60614767@N00/3850681392/>.



There are previous drawings of the spores, but it's possible that Roger has the first actual photos of them. Plus photos of these mushrooms by Roger, Dean and Glen Schwartz appear to more than double the known archive of *Underwoodia* photos. All of their photos can be found by going to the PSMC website iowamushroom.org then click the SmugMug link, go to the foray 2010 folder and click on Brushy Creek. There are also other interesting photos of that foray including an uncommon miniature *Volvariella* and Dave McDowell watching Glen take that picture.

This extraordinary mushroom find underscores the value of PSMC membership to me. I wouldn't have found Brushy Creek State Park much less these rare mushrooms if not for this foray led by PSMC member, Dave McDowell. Even if I had been at the right time and place myself, two other members of my group, typically, asked if that wasn't some kind of mushroom that I just walked by. PSMC has provided measureless new knowledge for me, and now new knowledge for the world. 

Annual Meeting

We will have our annual meeting October 2nd, 10:00AM at Ashton Wildwood Park, near Baxter, Jasper Co. Iowa following the foray there. Directions to this foray and meeting are on the upcoming foray list page. Please join us and help us chart PSMC's course for the next year.

Mushroom Trivia for Senior Olympics

by Dave Layton

My co-worker, Joan, is in charge of Senior Olympics Trivia Challenge. She asked me to devise mushroom trivia for the championship round. It was lots of fun - for me anyway. I guess the contestants thought the questions were too hard. See how you do on it answers are on page 7.

1. What is a scientist who studies fungi called?
2. Morels can most likely be found when?
 - a. Lilacs are blooming;
 - b. Magnolias are blooming;
 - c. Basswood or Linden trees are blooming.
3. Complete the age-old adage: There are old mushroom hunters and there are bold mushroom hunters but there are no _____?
4. When someone asks you where you found your big bag of morels, the correct response is?
5. How can you tell if a wild mushroom is edible?
6. The Earth's largest single living organism is:
 - a. A giant Sequoia tree;
 - b. A fungus;
 - c. A blue whale.
7. Almost any kind of mushroom can be eaten. The only problem is?
8. If a mushroom is mycorrhizal to a tree, what is it doing to that tree?
9. With perfect conditions, theoretically one giant puffball could produce how many new puffballs?
10. What develops inside a giant puffball that can potentially produce so many offspring?

Get Your Order In for the 2011 PSMC Calendar!

This calendar features the amazing mushroom photography of Jim Frink depicting the dynamic beauty that can be found in popular Iowa mushrooms. A few words are shared about each one.

At a price of \$15 this calendar makes a great Christmas present. Orders can be made to Roger Heidt, 125 Timber Lane Robins, Iowa 52328-9632.



SEPTEMBER 2011

PRAIRIE STATES MUSHROOM CLUB
 iowamushroom@gmail.com

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Last year shortly before my September birthday our best friends, out for a neighborhood walk tugged a bushel basket sized Chicken of the Woods to our house. We gave some away, froze some, and then cooked enough for a birthday party.

11. Mushrooms like all living things have first and last Latin names such as *Leucoagaricus americanus*. *Leucoagaricus* is this mushroom's _____ and *americanus* is this mushroom's _____.
12. Pure silver, pure palladium and dead caterpillars sprouting mushrooms can all be found in the Tibetan highlands. Which is the most valuable?

(answers on pg. 7)

2010 Spring and Early Summer Foray Report



Dean helping members identify mushrooms

Already this year we've experienced some of our most unusual mushroom finds ever as evidenced by our feature article about the rare *Underwoodia* found at the Brushy Creek foray.

Our first foray at Palisades Keplar State Park on May 1st was also the first proof that this was not a normal year. Usually this is the start of morel season but we came out of the woods with huge old morels like are found at the end of the season. Still a good variety of mushrooms, a good number of mature morels were found and a good group of folks attended. 

By the next week at Shimek Forest near Keokuk the morels were almost gone but there were some interesting finds like Devils Urns and other cup fungi, and the people attending still made it an interesting enjoyable experience, as Mike Krebill explains:

Twelve people turned out for the foray. While the conditions and the collecting were not ideal, I was impressed by the positive attitude and enthusiasm of our PSMC members. It was interesting to hunt the burned area; if morels had been there, they would have been easy to see. I always learn something from the group. This time Glen Schwartz showed us his simple bubble compass, Dave McDowell told me his favorite way for cooking up young *Polyporus squamosus*, which I want to try, and Bob Scarth showed me a homemade flash softener and spreader, and a eyecup magnifier/shade that fits over his digital camera's view screen that I'd like to have in my arsenal. 



Sam Overturf with large morels



Foray group at Brushy Creek

Brushy Creek Foray on June 12th near Fort Dodge was a great combination of people and fungi especially cup fungi such as *Auricularia* (tree ears) and the Rare *Underwoodia* featured were abundant. We were lucky because it just stopped pouring before we arrived. Finding the *Underwoodia* pointed to the value of exploring new areas and documenting what we find. 



Log filled with *Auricularia aricula* at Brushy Creek

The Amana Nature Trail Foray on June 10th had a few less foreyers, but they were treated to over seventy species of fungi including many which are usually found later in the season such as black trumpets. The group had a great time in this old natural habitat.

On July 10th at Indian Creek Nature Center near Cedar Rapids we held a foray with a presentation afterwards. We met several new folks who learned a lot about fungi, but the mushrooms were a little disappointing. According to Glen, "The weather was nice, but the mushrooms did not cooperate. I think we found more species of mosquitoes than mushrooms. We found very little fungi, partly due to the heavy undergrowth present at the Nature Center. Oh well, it was still a nice walk in the woods.

There are many more pictures of forays on the PSMC SmugMug portfolio that you can find by going to the PSMC website iowamushroom.org. We have more great forays coming up so see you in the woods! 

BOOK REVIEW: *Mushrooms and Other Fungi of the Black Hills and Surrounding Area*

by Mark J. Leoschke

Mushrooms and Other Fungi of the Black Hills and Surrounding Area by Audrey Gabel and Elaine Ebbert is published by Black Hills State University Press, Spearfish, South Dakota. Copyright 2004. Paperback, 164 pages with color photographs plus black and white drawings. Dr. Audrey C. W. Gabel earned her masters degree and doctorate in mycology under Dr. Lois H. Tiffany at Iowa State University. Elaine Ebbert was an undergraduate student of Dr. Gabel's at Black Hills State University.

This book is the result of the authors' multi-year inventory of fungi in the Black Hills, a biologically and geologically diverse region that straddles the South Dakota/Wyoming border. Relatively little mycological research has been conducted here. The more common and interesting species found during the inventory that do not require a microscope for identification are highlighted. The format is aimed at the interested amateur. A simple introduction with color photographs, along with black and white drawings, is found in the beginning. It covers the vegetation of the Black Hills, fungi and their role in the ecosystem plus major fungal groups. In addition to fungi, some slime molds and lichens are also included.

Fungi, slime molds and lichens are divided into eight groups and keys are provided for each group. Over 100 species are illustrated with one or more beautiful color photographs. Common and scientific names are provided (some of the common names are humorous like Boring

Gymnopilus and Tippler's Bane). Each species is described along with basic information about habitat and edibility plus a comments section with additional information on these topics and appearance, life history, etc. A mushroom calendar, glossary, references and county locations by species are found in the back.

Some of the species familiar to Iowa fungi fans include King bolete (*Boletus edulis*), netted mushroom (*Rhodotus palmatus*), red polypore (*Pycnoporus cinnabarinus*) and fringed polypore (*Polyporus arcularius*). Other species are associated with plants and plant communities not found in Iowa such as truncate club coral (*Clavariadelphus truncatus*), cryptic globe fungus (*Cryptoporus volvatus*), pine waxy cup (*Hygrophorous speciosus*) and burnt sugar mushroom (*Lactarius aquifluus*).

The authors are cautious when describing edibility and rightfully so, since even experts can make mistakes in identification. They emphasize that people may have different reactions to eating the same species of fungus, even fungi considered generally safe like true morels. The comments on edibility are interesting and frequently amusing. The negative comments range from deadly poisonous, can cause cancer, not recommended, too tough to be appealing, inedible, unknown, why bother, certainly not, not worth it, can't imagine, too small to merit eating, not recommended because of the texture, not appealing for consumption and definitely disgusting which is my favorite. I had

no idea there were so many ways to say "be careful" when considering eating fungi! The positive comments include edible and very delicious, reported as one of the best and my favorite "too beautiful to eat"—spoken like true mycologists and lovers of nature!

The Black Hills have different plant communities and species composition than that found in Iowa. The flora includes representatives from the eastern deciduous forest, Rocky Mountains, boreal forests, prairies and the southwest United States. Ponderosa pine, Black Hills spruce, trembling aspen and Rocky Mountain juniper are common. Only one species of oak, bur oak, occurs in the region. The Black Hills is characterized by lower moisture, higher elevations and significantly different geology than that found in Iowa. Despite the different biological and geological settings, I was surprised at how many species our state has in common with the Black Hills. I have used this book to help identify several of the fungi I have collected for the Ada Hayden Herbarium at Iowa State University.

Mushrooms and Other Fungi of the Black Hills and Surrounding Area is certainly a worthy addition to one's nature book shelf, especially considering it covers an area where serious fungal inventory has just begun, but is also useful in Iowa. The book costs \$14.95 and is available from these sources:

Borders Books, 2130 Haines Avenue, Rapid City, South Dakota. 605-394-5334.

(cont. on back cover)

Recipe Corner



Cooking Wine Cap Stropharia

Wine Cap Stropharia (*Stropharia rugosoannulata*) has a unique mild flavor that defies traditional cooking using butter and strong flavors like garlic and basil. It's not really a tomato mushroom either. Instead its favorite vegetable partner is fennel bulb and its favorite herb is nutmeg. Its best cooking medium is extra virgin olive oil and red wine, preferably a dry burgundy that matches the color of young wine-cap buttons. Other ingredients that can be experimented with can be shallots or some type of green or mild onion, artichoke hearts, potatoes, green beans, a little green pepper and a bit of fresh lemon. A little fresh oregano and thyme can provide an interesting contrast too, but those should be used sparingly. When the combination is just right the wine-caps' flavor become meaty and delicious. There was an amazing abundance of wine-caps this spring which gave us plenty of opportunity to experiment. We found several excellent combinations but the best was also the simplest, wine-cap packets on the grill. We also found that the young unexpanded buttons were the tastiest.

Wine-cap Packets on the grill

1 lb young wine-cap buttons *whole, halved or quartered depending on size*
1/4 cup extra virgin olive oil
1/3 cup dry red wine
1/2 cup chopped sweet or green onion or pearl onion bulbs
1-2 large fennel bulbs
3-4 young potatoes and/or artichoke hearts
experiment with a handful green beans or green pepper
1-2 small lemon slices/packet
1/2 teaspoon nutmeg
experiment with a dash of fresh oregano and/or thyme
1/4 teaspoon salt and black pepper to taste.

Stir olive oil and red wine together in a large mixing bowl with herbs, salt and pepper. Add vegetables and mushrooms and mix thoroughly. Divide ingredients onto 4 to 6 sheets of heavy duty aluminum foil. Add lemon slices. Fold the foil into packets, carefully crimping edges under to keep from leaking. Cook over an open fire or on grill until vegetables and mushrooms are tender, periodically turning packets over. This can take anywhere from 20 to 40 minutes depending on the heat of the fire and size of the packets. Remove from fire, let stand for a few minutes and serve in the packet. These make a great addition to any camp-out. Don't be afraid to experiment. The end result will at least be good and quite likely be great! 

The making of...

flowers of the Midwest and of the prairies. Mr. Line died in May 2010 and his photograph of a Turk's Cap Lily that hangs in our living room will always be a reminder of his impact on us.

We lived in Australia from 1985-1992 and moved to Iowa in the fall of 1992 and soon were photographing the little treasures we encountered in the parks, preserves and ditches of the state. We became members of several environmental organizations and nature study groups. The Prairie States Mushroom Club is one that contributes to our photography and to the book by letting us follow all the good fungi hunters on forays. The Iowa Native Plant Society and its generous members also figures highly in locating lovely subjects.

John Pearson, ecologist with the Iowa DNR, graciously consented to write an essay to accompany our images and short essay. He writes with compassion and clarity about the preserves in our highly developed state. Some of the images were possible because of his work in protecting environments and species.

We were asked to prepare 75 square format images for the book. We are SLR (now DSLR) photographers so had to look for images that could be cropped as squares and still offer interesting compositions. Most came from our files though we did make some new images to include. During production, space was found for five more images so the final group is eighty representations of the diversity and beauty found here in Iowa and really throughout the Midwest.



In the book, the Coral Woodcrust on page 78 was found on a PSMC foray to Brown's Woods in Des Moines. It was the last time we saw Dr. Lois Tiffany. Roger Heidt and Glenn Schwartz led a foray to see a community of Fly Agaric at Wickiup Outdoor Learning Center. The emerging mushroom is on page 58.

(cont. from cover)

The Jack-o-lanterns on page 34 were found on a tree at Mount Mercy College. Bob visits the tree each fall hoping for another group. No such luck.

As well as enjoying and wanting to portray the abstract beauty we find around us, we hope our images help viewers to look and see the wonderful world in which we live. We believe that conservation, preservation and sustainable use only happens when

people know and admire the world. We have a presentation about the book which we show to interested groups. Our web site includes a supplement to the book found at <http://www.scarthphoto.com/bookimages.htm>. Please visit and also stop by our blog to see what we have been doing lately.

We are indebted to so many people and places. A book is a community effort from inception to the book sellers' shelves. Thank you to all.



Mushroom Trivia Answers

1. A Mycologist
2. Lilacs
3. Bold, old mushroom hunters.
4. In the woods
5. You know exactly what kind it is and have up-to-date information on it's edibility
6. B. A single honey mushroom "plant" with identical genetic material found in Oregon covers nearly 5 square miles.
7. Some will kill you after you've eaten them
8. Its helping the tree to grow and absorb nutrients into its roots
9. Trillions
10. Spores
11. Genus, species
12. Dead Catipillars sprouting mushrooms Cordyceps sinensis are valued as high as \$9,000 lbs Palladium is next highest at \$7,200 lbs.

More pictures, species lists and interesting information can be found at the PSMC Website: www.iowamushroom.org

Submissions are requested. If you have a fungi article, picture, recipe or joke to share please submit it to:
email: davelayton@q.com
fax: 309-793-6807
mail: Dave Layton
542 9th Ave., S
Clinton, IA 52732

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www.iowamushroom.org



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Upcoming Forays

Sunday, July 25th, 9:00 a.m.

Pinicon Ridge Park, Central City, Linn Co. Iowa.

Pinicon Ridge Park is located in the town of Central City, south of the river. Follow the signs into the park. We will meet at the parking lot 0.1 miles past the boat rental drive.

Saturday, August 21st, 10:00 a.m. Eden Valley, Baldwin, Clinton Co. Iowa.

Directions: Meet at the Eden Valley Nature Center, 2 miles south of Baldwin on 50th Ave. (AKA Co. Hwy. Y32). We will explore Eden Valley park for about 2.5 hours, then gather back at the Nature Center to discuss our fungal finds.

Saturday, September 18th, 10:00 a.m.

Bill and Marlys Brown’s farm, near Canton in Jackson Co. Iowa.

Directions: From Canton, go north on 6th Ave. for 1.3 miles. Turn right on 166th St. and go east for 0.5 miles. Turn left on 21st Ave. and go north about 1.8 miles. The farm gate is on your left, a short distance past the cemetery.

Saturday, October 2nd, 10:00 a.m.

Ashton Wildwood Park, near Baxter, Jasper Co. Iowa. **We will have our annual meeting at this foray.**

Directions: Ashton Wildwood Park is in the northwest corner of Jasper County, (think Newton) a few miles west of Baxter on Co. Hwy F-17, just before you get to Hwy 330.

From I-80: get off at exit #159, go north a few hundred feet as the road curves a bit and turn left (north) on Co. Hwy S-52. Take it north about 10 miles to a T-intersection with Hwy. F-17. Turn left again and go west on Hwy F-17 for 7 miles. You will see the large brown county arrowhead signs directing you to turn south on W. 122nd St. N. The park entrance is to your right, just after you pass the little white Ashton Chapel. Follow the road into the park, it will turn into a large circular drive...keep to your right and the picnic shelter is on the far side of the circle to the west.

Book Review

(cont. from pg. 5)

Black Hills Parks & Forests Assoc., 26611 U. S. Highway 385, Hot Springs, SD 57747.

Downloadable order form: [http://](http://www.blackhillsparks.org/printable_order_form.htm)

[www.blackhillsparks.org/
printable_order_form.htm](http://www.blackhillsparks.org/printable_order_form.htm)

Black Hills State University Bookstore,
Black Hills State University, 1200
University, Spearfish, SD 57799. 605-642-
6279.

Dr. Audrey C. W. Gabel earned her masters degree and doctorate in mycology under Dr. Lois H. Tiffany at Iowa State University. Elaine Ebbert was an undergraduate student of Dr. Gabel’s at Black Hills State University.

This article first appeared in a slightly different version in the January 2010 issue of *Erythronium*, the newsletter of the Iowa Native Plant Society.