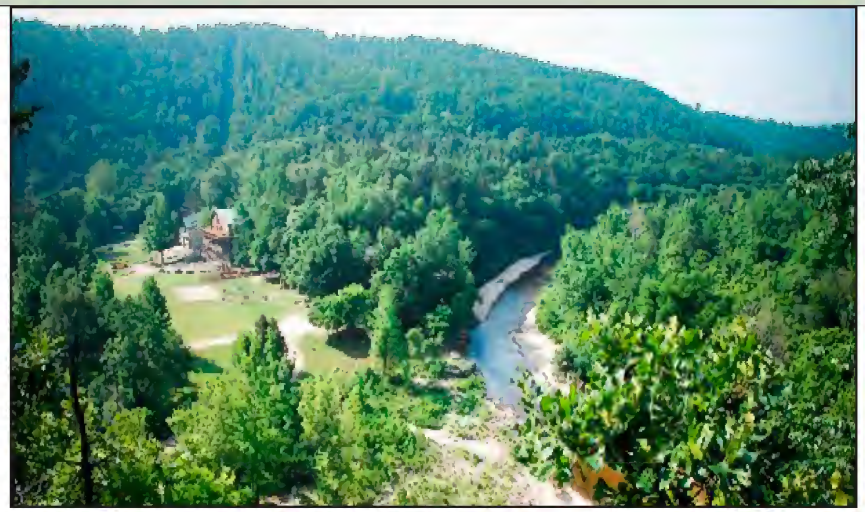
Newsletter of the North American Mycological Association

THE MYCOPHILE

VOL. 53:4 JULY-AUGUST 2013 www.namyco.org



The Shepherd of the Ozarks conference center will serve as the location for the 2013 NAMA foray, a location allowing us easy access to the southern perimeter of the Ozark Mountain Range. Lodging will be provided in nine on site lodges. The majority of these lodges are equipped with full kitchen appliances. Dining, mushroom identification and displaying of the mushrooms will all be done in one large building, the Buffalo Center.

Non-mushrooming folks can take advantage of some of the on site activities including river tubing, fishing, sand pit volleyball, 9-hole disc golf, and for a fee - horseback riding, wilderness paintball, cliffhanger swing, laser tag, and navigating along some high ropes. Anyone desiring additional information about Shepherd of the Ozarks should check out their web-site: http://www.sotocamp.com/

The mycologists participating at this year's NAMA foray include: Dr. Clark Ovrebo, the foray's chief mycologist, Dr. Alan Bessette, Arleen Bessette, Dr. Andy Methven, Dr. Michael Kuo, Dr. Jean Lodge, Dr. Tom Volk, Dr. Britt Bunyard, Walt Sturgeon and David Lewis.

It's going to be a great foray this year in Arkansas! The scheduling of the foray for late October will assure that participants will not have to deal with high temperatures or humidity or ticks or chiggers. As an added bonus the leaves on the oak and hickory trees should be exhibiting some brilliant fall colors. Hope to see you in October!

– Jay Justice, President of the Arkansas Mycological Society and Registrar for the NAMA 2013 foray.

The registration form and waivers for the 2013 NAMA Foray can be found on the last four pages of the May-June issue of ***The Mycophile.***

See also: http://www.namyco.org/events/NAMA2013/index2013.html

FORAYS & OTHER EVENTS

This section of the newsletter is reserved for publicizing the annual forays of NAMA affiliated clubs and other events you may be interested in learning about. If you would like us to list your club's next big event, contact us with details you would like displayed here and send to dianna.smith@comcast.net

http://www.namyco.org/events/index.html

July 26-28: *West Virginia Mushroom Club Foray* in Dry Fork, West Virginia with Gary Lincoff, Donna Mitchell, Bill Roody, Walt Sturgeon and Tom Volk. To register write wvmushroomclub@gmail.com, download the form from the club's Facebook page or see wvmushroomclub.org for further information.

August 7-11: ***NEMF Foray*** in Rimouski, Quebec. For details on location, program and registration visit the Cercle des Mycologues de Montréal website http://nemfdata.org/nextforay.html.

August 15-18: Telluride Mushroom Festival in Telluride, Colorado. Information about the festival can be found at www.shroomfest.com.

August 22-25, 2013 | Pagosa Springs, Colorado: This year the New Mexico Mycological Society returns to Pagosa Springs for its Annual Foray. Twenty miles north of the NM-CO border, Pagosa nestles against the southern slopes of the San Juan Mountains. NMMS welcomes and encourages members of NAMA and other NAMA-affiliated mycological organizations to enjoy the company and tutelage of our Foray Mycologists Jay Justice and Clark Ovrebo. Field trips will take us into the San Juan National Forest, where we'll visit elevations from 7500 to 11,000 ft. Visit NewMexicoMyco.net/foray for Foray Details and Registration Form.

Aug. 30-Sept. 2: ***COMA's Clark Rogerson Foray*** at the Hemlocks Easter Seals Camp in Hebron, CT over Labor Day weekend. Everyone is welcome whether a member or not. Invited mycologists include Gary Lincoff, Roz Lowen, Bill Yule, Leon Shernoff and others. To register, see www.comafungi.org.

Eagle Hill Institute Mycology Workshops in Steuben, Maine
PO Box 9, 59 Eagle Hill Road, Steuben, ME 04680, office@eaglehill.us, www.eaglehill.us.
July 28-Aug. 3: Mushroom Identification for New Mycophiles: Foraging for Edible and Medicinal Mushrooms with Greg A. Marley and Michaeline Mulvey.
Sept. 8-14: Boletes of North America: A Field Seminar and Workshop with Alan E. Bessette and Arleen R. Bessette.

Sept. 6-8 The ***New River Valley Mushroom Club*** in conjunction with the ***Mycological Association of Washington (MAW)*** has an event coming up September 6th-8th at Mountain Lake, VA. Details TBA.

Sept. 12-15: ***Wildacres Regional Foray*** in the Blue Ridge Mountains of North Carolina.

Oct. 3-6: The ***Missouri Mycological Society*** (MOMS) invites you to their Annual Fall Foray at Mingo Wildlife Refuge in southeastern Missouri. See www.MoMyco.org for more information.

Oct. 24-27: ***Arkansas Mycological Society*** hosts the 2013 ***NAMA Foray***. See registration and waiver forms at http://www.namyco.org/events/index.html. *(Note: Membership in NAMA is required to attend NAMA Forays. To become a member please see* http://www.namyco.org/join/index.html*).*

NAMA 2012 HONORARY MENTION PHOTO CONTEST WINNERS

Patrick Harvey, *Kretchmeria deusta* (Pictorial)

Todd Elliott, *Mycoamaranthus sp.* (Documentary)

Todd Elliott *Laccaria amethysteo- occidentalis* (Documentary)

John Dawson, *Omphalotus illudens* (Pictorial)

Patrick Harvey, *Laetiporus sulphureus* (Pictorial)

Katherine Ann, Reishi (Pictorial)

2013 NAMA DIGITAL PHOTO CONTEST!

The contest is open to all mushroomers and a NAMA membership is not required to enter the photo contest. If you're not a NAMA member there is a $4.00 entry fee by check or money order made out to NAMA. Images that have previously won (including honorable mention) are not eligible. Closing date: All entries must be received by the Contest Director on or before August 4, 2013. Allow at least one week for mailing. Up to 15 images may be entered per person with a maximum of 6 in the Pictorial, 6 in the Documentary and 3 in the Judge's Option to make a total of up to 15 images.

Three Entry Divisions
Pictorial: This division is for single photos that illustrate the beauty and variety of fungi in form and color. Mushrooms should not be cut and look natural. Judging criteria include consideration of both technical (focus, depth of field, exposure, lighting, color, absence of distracting elements) and artistic (composition, color, background, lighting) aspects.

Documentary: For single photographs especially suited as illustrations in a field guide of monograph, or for use in a lecture. Emphasis is placed on portrayal of key morphological characteristics such that the usefulness of the image as an identification aid is maximized. Subjects may be shot in the field, laboratory or studio and the photographer has complete freedom to cut, process, manipulate, or orient the specimen in any desired manner to achieve the goal. Close-ups of single features and photomicrographs are acceptable. Judging criteria will be the same as in the Pictorial category but they will be of secondary importance to the overall mycological utility of the photo. Accurate identification of the subject will be a consideration.

Judge's Option: For single photos or series which do not fit into the Pictorial and Documentary divisions. Examples include time-lapse series, ecological relationships of fungi (e.g. fairy rings), fungi with animals, people enjoying fungi, humor, etc.

Awards: First, 2nd and 3rd place prizes will be awarded in Pictorial, Documentary and Judges Option. Honorable Mentions will also be noted for some Pictorial and Documentary photos. Prize(s) such as mushroom books will be given to first through 3rd place winners.

Marking, Listing and Submitting Digitals: The digital photos file name should include 3 things, ***D*** (for Documentary) ***JO*** (for Judge's Option) or ***P*** (for Pictorial), and you the photographer initials, followed by the Genus and species of the fungi or the title for the Judge's Option photo. Digital images may be emailed or mailed on a CD or DVD and will not be returned. Mail images, the entry form is optional from http://www.namyco.org/photography/contest_rules.html and entry fee (check payable to "NAMA") to John Plischke III, 411 Center Avenue, Greensburg, PA 15601 724-832-0271. If emailing images send them to Fungi01@aol.com, and please include your name, address and phone number. Images can also be submitted using free file mailing programs such as http://www.mailbigfile.com/ or Dropbox etc.

Reproduction: Entry in the contest constitutes the consent of the photographer to allow NAMA to reproduce copies of each winning image (including Honorable mention etc.) for circulation or use by the Education Committee among the membership and affiliated societies. NAMA also reserves the right to post images of the winning images on the NAMA web pages and in THE MYCOPHILE and to be used by the marketing committee. All copyrights remain with the photographer.

John Plischke III

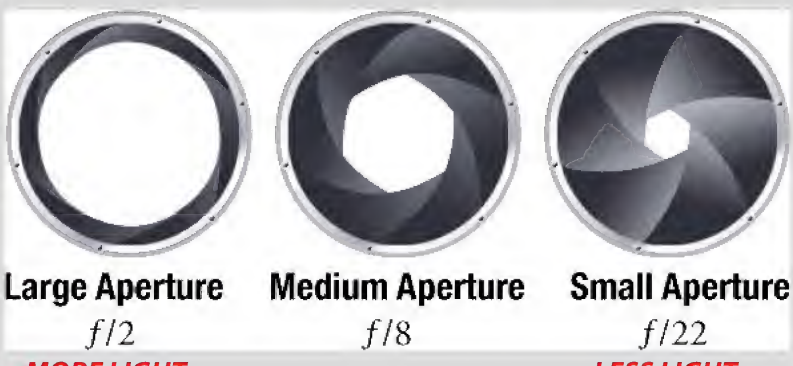
MUSHROOM PHOTOGRAPHY: GETTING GREAT DETAILS AND BACKGROUNDS

By Jim Cornish, Member of Foray Newfoundland

If you are like most beginning photographers, your camera is always set to AUTO. But if your camera has manual controls, learning to use them properly should result in better photographs. In this article, we are going to address the advantages of experimenting with different aperture settings. When photographing mushrooms, flowers or insects in natural light, photographers using a DSLR or SLR must choose between capturing a sliver of the subject in focus against a blurred background or capturing both the subject and background in acceptably sharp focus or something in between. Either way, experimenting with each choice requires an understanding of the concept of depth-of-field (DOF) and how to control a camera's aperture settings in ways not possible with a camera set to AUTO. Because of the physics of light and lenses, there is also a connection between aperture and depth of field. As apertures narrow (move towards f/22), the DOF increases, so more and more of the subject and the background are in focus. As apertures widen (move towards f/2.8), the DOF decreases so less and less of the subject and the background are in focus. This means the background can become so blurred, it is indistinguishable. This blur is called bokeh and is often a desired effect in macro photography. When present in a photograph or digital image, the bokeh does not distract the eye. Instead, it produces a pleasing texture that often compliments the image.

Depth-of-field is defined as the distance between the nearest and farthest sharply focused objects in a scene. In landscape photography, DOF can extend from immediately in front of the camera to the horizon and beyond. In portrait photography, DOF is much shorter, usually extending from the tip of the nose back several centimeters to the ears. In close-up and macro photography, DOF is often reduced to just a few millimeters, in which case only a sliver of the subject appears focused. Whether narrow or deep, depth-of-field is controlled by the aperture- the opening in a lens that limits the amount of light allowed to reach the camera's sensor. The size of the aperture is determined by a series of blades that act somewhat like the eye's iris in controlling the size of the pupil. When the blades turn inward, the size of the aperture is reduced and as with a narrow pupil, less light is allowed through. When the blades turn outward the size of the aperture is increased, and as with a dilated pupil, more light is allowed

Aperture is measured in f-stops. This term is a throwback to the days of film when an external lens ring was turned a predetermined distance (a stop) to mechanically move the aperture blades in a lens. Depending on the lens, apertures generally range from f/2.8 to f/22. A 2.8 f-stop (a small number) is wide open and allows the most light to reach the sensor. A 22 f-stop (a larger. number) is narrow and allows less light to reach the sensor. This is counter-intuitive, and often confuses beginning photographers. Since f-stop choice affects the depth-of-field, keeping this connection straight is very important. Beginning photographers often think of f-stops as fractional numbers. An aperture of f/22 written as the fraction 1/22 is smaller than an aperture of f/2.8 written as the fraction 1/2.8. You might know of other examples that work just as well.



Relationship between f-stop and the size of the opening in the lens (aperture) and the amount of light reaching the camera sensor.

The Exposure Triangle

Whether you use a P&S or a top of the line DSLR, every image you capture is controlled by three camera settings: ISO, aperture and shutter speed. They work together in balance to create a correctly exposed image.

ISO controls the sensor's sensitivity to light. A low ISO, say 100, makes the sensor the least sensitive. This setting is used in bright lighting situations like outside on a sunny day and produces the best quality images. A high ISO, say 800 or more, makes the sensor very sensitive to light. It is used in low light situation and produces a lower quality image.

Shutter speed is a measure of how long the sensor is exposed to light. Slow shutter speeds are used in low light conditions to gather sufficient light to register on the sensor. Fast shutter speeds are used in brighter light or when you want to freeze

Aperture Size and Amount of Light

The most familiar one stop aperture scale is as follows: f/2.8, f/4, f/5.6, f/8, f/11, f/16, f/22. Going from f/2.8 to f/4 is a one-stop narrowing of the aperture and reduces by half the amount of light reaching the sensor. This halving of the light continues with each full stop on the aperture scale. Going from f/22 to f/11 is a one stop widening of the aperture and doubles the amount of light reaching the sensor. This doubling of the light continues with each full stop on the aperture scale. In digital photography, these f-stops change by 1/3 increments (the default) or can be adjusted to ½ increments, depending on your camera.

Choosing an Aperture Setting

What aperture you choose depends on how much of the subject you want focused and how much detail versus bokeh you want in the background. There is really no correct aperture or correct background. It's a matter of taste what effect you desire. If you have a full-size SLR, you want a mushroom isolated from it surroundings and backed by creamy bokeh, the shot requires a wide aperture, something near or at f/2.8. If you want an image that has all of the mushroom and the background in focus, the shot requires a narrow aperture, something near f/22. Something in between might work too. (The DOF on a camera with a smaller sensor is more difficult to achieve. On the other hand, smaller format cameras like point-and-shoots have a greater DOF at any given f-stop). Until you become very familiar with close-up photography and how your camera works, the best approach to photographing mushrooms

Cover page photo of *Mycena adonis* in *OMPHALINA, Vol. 3: Issue 5*.

is to position your camera for the composition you want, and then shoot a series of images, changing the aperture a stop between shots. Unlike the days of film, it costs nothing to take multiple images. You could start at the widest aperture and shoot to the smallest aperture. It's best not to delete any images in the field. When you get home, look at them on your computer to find the one that best represents what you wanted to achieve.

You will quickly discover that when working with apertures, there are always trade-offs. Selecting a narrow aperture setting like f/22 means the camera has to use a slow shutter speed to compensate for the reduced light. This is problematic when shooting flowers on breezy days because the shutter speed is so slow the swaying flowers appear blurred. Since most mushrooms are rigid and close to the ground, they are less likely to be affected by a breeze. Under these conditions, slow shutter speed is only a problem if you hand-hold the camera. Shooting hand held at slow shutter speeds invariably causes camera shake and leaves the subject blurred. This problem can be overcome by either using a wider aperture or by using a tripod or bean bag to steady the camera and, once composed, by using the self timer or a remote shutter release cable to trigger the shutter. An alternative is increasing the ISO to gain a faster shutter speed that will overcome camera shake. The trade-off in this case is an increase in the graininess (digital noise) in the image, especially when printed in large formats.

How to Check the Camera Settings of an Image

In the days of film, photographers had to record the camera settings (ISO, shutter speed, aperture, lens focal length and exposure mode etc.) after each shot. In the digital age, these settings are recorded as part of the image in a file header called the EXIF (Exposure Information File). Parts of this data can be viewed when the image is played back on the camera's LCD (check your manual for the steps to display this information) or later by checking the image properties in editing software. Refer to this information to check how each aperture change affected the depth of field and use this knowledge to help you set up subsequent shots.

Mushroom Photography

There are two types of mushroom photographs. One is the documentary shot. It captures the stem ring, cap warts, zonation, gill color and attachment and even a cross-sectional structure and any color change, all important features in mushroom identification. These types of images are often used in field guide photographs. The other type of mushroom photograph is more artistic. The photographer often uses a combination of point of view, light, shadows and depth-of-field to create a visually stunning image suitable for hanging or inclusion in a photo book. Sharp focus throughout, for example, is less important. When photographing mushrooms, it is best to take both types of shots. The documentary one will help with identification, especially when sending images to a mycologist or posting them on social media. The creative one will help fill your wall with the "hidden kingdom's" beauty.

Ten tips that will improve your mushroom photography:

1. Spend time examining your mushroom finds. Think through how you are going to photograph them before you set up your equipment.
2. Take multiple shots. Except for the polypores, most varieties aren't around long enough for a revisit.
3. To get the maximum benefits of a shallow depth of field, shoot the mushroom at eye level with the back of your camera parallel to the stem of the mushroom.
4. Try varying your position. Sometimes even a slight shift in position can capture a more pleasing background.
5. If possible, shoot from the downslope side of the mushroom to get a better capture of the underside of the fruiting body.
6. Consider removing any debris that obscures details or clutters the background. Some of the more sticky mushroom varieties may have leaf litter attached. Get at least a few shots of this to help capture the mushroom's viscous nature before removing the debris.
7. Consider including a little foreground. Don't worry about it being out of focus as foreground is often less important than the subject, just like the background.
8. Support your camera with a tripod and use a shutter release cable, the self timer or the mirror lock-up feature to reduce camera shake. If shooting on to the ground, use a bean bag for support.
9. Consider shooting a cluster of mushrooms with the closest one to the camera in the sharpest focus and the remainder fading into the background.
10. Be creative and include just a small portion of a single or a cluster of mushrooms. Caps with warts and striae often make interesting images.

[This is a revised version of the original article by Jim Cornish first published in vol 3, issue 5 of Omphalina, the newsletter of Foray Newfoundland and Labrador. (www:nlmushrooms.ca) All the photos were taken by the author.]

CLAVARIA PURPUREA

(Also known as *Alloclavaria purpurea*)

Purple Fairy Fingers

(Photos and text by Tim Wheeler of the Western Montana Mycological Association)

The fruiting body is 3-10 cm tall, and a few millimeters wide and unbranched. The surface is smooth, usually some shade of purple, but often becoming pale and faded. Spore print white.

Like a unique wildflower, this beautiful mushroom was one of the first ones I identified when taking my first mushroom class with Orson Miller back in 1977 at Yellow Bay Biological Station. Although recognized as edible, it did not attract my culinary interest for nearly 20 years, when we turned up a bunch of it at the 1997 fall foray. Enough, in fact, that we decided to fry some in butter. Oh my goodness they were tasty. The fact that you rarely find very many makes them all the more rare and delightful when you can sample them. Still, they deserve our appreciation as a just plain beautiful organism, a wildflower that graces our native woodland areas and one that serves as an indicator of pristine habitat.

Substrate and Distribution: This fungus is found scattered across western Montana in the spring and fruiting at higher elevations into the Fall. It can also be found elsewhere in the west in large quantities at sea-level and in-between as well. In good years, troops of hundreds of fruting bodies can be found in mixed conifer forests. It was assumed to be saprophytic, however there is mounting evidence that they are mycorrhizal with spruce. Widely distributed in western North America. These specimens were photographed in the Jocko Valley of Montana.

(From the May 2013 Fungal Jungle Newsletter (www.fungaljungle.org)

MUSHROOMING!

By Steve Rock

New York State has so many forests and parks with such a wide variety of trees that there may be no better state in the union in which to engage in mycology, the study of fungi. A diversity of trees means a diversity of fungi, some of which produce mushrooms! This is because most plants have symbiotic relationships with species of fungi (some have only one, some have dozens), known as mycorrhizal (myco = fungus, rhizal = root) relationships, which provide the plants with water and nutrients that they cannot access on their own and the fungi with food that they cannot produce. The fungi in the forest floor act as brokers, exchanging nutrients between themselves and the plants with which they are networked. Other fungi are busy breaking down all of the dead matter in the forest.

Many of these forest fungi will, at certain times of the year and/or under certain conditions, produce the fruiting bodies that we call mushrooms. With that knowledge an amateur mycologist can, at specific times of the year, venture into the woods, seek out the various species of trees and have a good chance of finding the mushrooms that fruit from the fungi that are networked with those trees' roots. For example, the beautiful *Laccaria ochropurpurea* as well as species of *Lactarius, Russula* and *Suillus* grow under eastern white pine (*Pinus strobus*). The Paper Birch (*Betula papyrifera)* is host to species of *Lactarius and Leccinum*. While there are arbuscular mycorrhizal associations with maple trees, they do not produce mushrooms, but saprobic fungi such as species of *Armillaria* (honey mushrooms), *Climacodon* and *Marasmius* feed on maples. The gorgeous but deadly *Amanita bisporigera* (the "destroying angel") grows under white oak, but so do many species of *Russula* and *Tylopilus.* Oaks are also the primary hosts for *Grifola frondosa* (the highly prized hen-of- the-woods).

My first exposure to wild mushrooms was not a pleasant one. Some of my earliest childhood recollections involve weekend afternoons in late summer and fall when the entire house would fill with a particularly noxious odor - one that can be created only by what I now consider to be a cardinal sin of mycophagy (cooking with mushrooms): the boiling of mushrooms. My father's method of preparing the species of mushrooms that he collects was handed down to him by his parents, both of whom emigrated from villages in what is now southeastern Poland. They always boiled their mushrooms in the "old country" before preparing their "zypraska," a gravy made from rendered-down pork fat, onions, peppers, garlic, flour, spices and, of course, mushrooms. It smelled horrible, but I later learned that it tasted wonderful. After finally getting over the mushrooms' scent and tasting the delicious gravy (usually served over egg noodles) that resulted from my father's efforts, I immediately re-assessed the displeasure with which I'd previously experienced those exotic aromas and my interest in mushrooms in general.

So I come by my love of mushrooms honestly. I was raised in Cohoes, NY (at the juncture of the Mohawk and Hudson Rivers, a few miles from the magnificent Cohoes Falls) by a first- generation Carpatho-Rusyn Lemko who hunts primarily 2-3 species of "bolete" mushrooms for his culinary purposes. My Lemko ancestors would go into the woods at particular times of the year seeking these delicacies to prepare as my father does and also to dry them for use during the winter holidays. Likewise, my Dad would go out for a morning walk and would often return with a grocery bag full of these odd-looking and earthy-smelling mushrooms, which he would immediately begin to prepare for the table. I never forgot the look of those mushrooms.

And I'll never forget how my pursuit of the fungal wonders of the New York forests got jump-started by that memory. My wife, Margaret, and I had just come out of a favorite woods in Pawling, NY when I spotted a mushroom that looked like the ones my father picks. The following weekend I attended a lecture that was given by a member of the (Westchester County, NY-based) Connecticut-Westchester Mycological Association (COMA). My first mycology mentor, Marge Morris, told the assembled group about many species of mushrooms that we could find in our area. When the lecture ended I returned to my car and found a mushroom similar to the one I'd seen the previous weekend. I brought it back in to show Marge, who immediately held it up in the air like a priest with a chalice and declared "King Bolete! King Bolete!" I'd apparently found a keeper! It was a specimen in the *Boletus edulis* complex, one of the most highly prized wild mushrooms in the world. That was it - I was hooked!

Fortunately for me, Marge lived nearby and was happy to share her hunting spots and her many years of mycological expertise with me. I was eager to learn, so Marge and I spent many weekends hunting on our own and with other COMA members. I was indeed fortunate to be in the company of so many skilled and knowledgeable amateur mycologists who mentored me and became my good friends. Most of them had studied at the New York Botanical Garden under the author of the *Audubon Society Field Guide to Mushrooms of North America*, Gary Lincoff. Their combined expertise was both inspiring and intimidating, but their ability to gradually (and patiently) bring a person from novice to skilled amateur overrode my trepidation. I enjoyed each walk more than the last and was soon leading walks, editing the club newsletter and producing a club promo video for YouTube.

Within a few short years I felt totally capable of foraging on my own, finding various species of delicious edible mushrooms as each fruited through the seasons. I quickly realized that although my interest and fascination with all species of mushrooms was high, I was for all intents and purposes a "pot-hunter,"

a person whose primary interest is in collecting and cooking with wild edible mushrooms. However, one of the great things about learning about mushrooms from experts is that they do not focus only on the specific species that they want to eat. I learned not only to seek certain mushrooms at specific times of the year but also to be open to discover all that nature is providing as I hunt my highly-prized edibles. I am constantly amazed by the beautiful variety of mushrooms that nature produces. On most walks something unexpected or not previously encountered surprises me, all because I'm out there looking for particular mushrooms.

Finding mushrooms and collecting mushrooms are two different things, however, so amateurs must ensure that there are no restrictions on the harvesting of fungi before taking any of them out of the woods in which they find them. Many local and state parks put restrictions on what can be removed from them and we do not want to violate those rules. Even when restrictions are in place, though, I have found that I have been allowed to take a sample or two and an infinite number of photographs for study. Finding those places where edibles can be collected is similar to finding that great secret fishing spot and it can take many years of hiking and hunting to do so. There are even stories of people leaving the location of their morel spots and hen-of-the-woods trees in their wills!

As was the case with me, the foraging for wild mushrooms is a tradition that is typically started by an immigrant ancestor and then handed down through the generations. Those of us who are fortunate enough to have parents who are still able to pursue this delightful and rewarding hobby revel in each opportunity to engage in it with them. In August of 2011 my father told me that he had an incredible crop of "prawdiwek" (the "true mushroom") growing in a lot that he owns. He was bringing them home by the shopping bag full and giving them away to family and friends because he just could not

cook any more. Fortunately I had a high school reunion two weeks later, so I went back to Cohoes and set out with my father to see what remained. I was stunned to see the most beautiful fruitings of *Xanthoconium separans* that I'd ever encountered. Although there were dozens of gorgeous healthy specimens growing under the oak trees my father assured me that it was nothing compared to what had been there earlier. The reunion was an event that I'd looked forward to for many months, but that time spent with my father under those oak trees was the highlight of my year.

Hunting in various parts of the state has been an eye-opener for me, too. I'll never forget the first time I encountered a giant *Boletus edulis* on the northern edge of the Pharaoh Wilderness in the Adirondacks. It stopped me in my tracks, took my breath away and brought me to my knees in amazement and adoration. In my neck of the woods I might find them anywhere from 3" to 10" tall - this one was at least 16 inches in height with a cap that was a foot or more in diameter. A short while later I found another one just as large! Other encounters with Adirondack mushrooms taught me that, despite thinking that they were new to me, they were (for the most part) simply larger specimens of mushrooms that I'd studied 150 miles south of there. The substrata in those ancient forests makes for some amazingly large and healthy mushroom specimens.

With the unusual weather patterns that we have been experiencing I have not seen a "typical" year in the 15+ years that I've been hunting mushrooms. Each year, though, seems to be "the year of" one kind of mushroom or another. A few years ago members of my clubs were harvesting amazing amounts of morels. Then there was the incredible summer of the *Chanterelle* when the temperatures and rainfall had them fruiting in great abundance. Two years ago the *Lactarius* season seemed to go on for months, each weekend producing another delicious crop of one of my favorites, *Lactarius corrugis*. Last year it seemed you could not take 20 steps in an oak forest without encountering another hen-of-the-woods at the base of an oak tree - sometimes five or six of them! And that was on top of the delectable boletes that I'd picked with my father a month earlier.

No matter where you go in NY State, if there are trees there will be mushrooms. As I heard on one of my first COMA forays "you see what you look for." So keep an eye out for those beautiful and fascinating fruiting bodies that we call mushrooms - they're not hard to find if you do. After all, Mother Nature has assigned a wider color palette to the kingdom of fungi than she has to flowering plants. Photograph them to your heart's content, but never eat a wild mushroom that has not been identified as an edible species by an expert mycologist. Remember: "There are old mushroom hunters and there are bold mushroom hunters, but there are no old bold mushroom hunters!"

REFERENCES:
Shernoff, L. Mushroom The Journal of Wild Mushrooms. http://www.mushroomthejournal.com. Accessed 14 June, 2012.
Kuo, M. (2010, November). North American trees. Retrieved from the MushroomExpert.Com Web site: http://www.mushroomexpert.com/trees. Accessed 29 June, 2012.

Steve Rock is a publishing technician for Boehringer-Ingelheim Pharmaceuticals, Inc. With his wife Margaret he enjoys foraging for and photographing mushrooms around their home in southeastern NY State and when vacationing in the capital district and the Adirondacks. This is a revised version of an article published in NY State Conservationist magazine in the June issue of this current year. http://www.dec.ny.gov/pubs/91052.html

Soil Carbon and You: Sequestering begins at Home by Larry Evans

Recently several scientific journals have addressed the issue of soil carbon sequestration. It seems that our methods of measuring the amount of carbon in soils have been inadequate, and the role of soil microorganisms in carbon sequestration and nutrient cycling have been underestimated. So, the dynamics of soils and the importance of fungi are even MORE than we supposed! It's not just a geek thing! Gramps was right, organics are what makes a soil RICH!

We know of the importance of mycorrhizae in acquiring nutrients for trees, but not so many of us realize the critical role of soil carbon as a water reservoir, especially here in the arid west. Brown cuboidal rot (BCR), common in rotting conifer logs, absorbs at least five times its weight in water. These subsoil reservoirs are the main way that snowmelt is captured and utilized in the local ecosystem. Fungal hyphae penetrate these subsoil reservoirs, breaking down the lignins, digesting bacteria, and converting biomass to chitin, the main component of fungal cell walls. The new studies indicate that much more soil carbon is tied up as chitin than previously suspected. Chitin is very stable and durable, and retains carbon in the soil for centuries. The fungal mycelia itself pulls water and nutrients from the brown-rot sponge, and trades drops of nutrient rich water for tiny nuggets of tree-sugar at the mycorrhizae, a knot of tissue formed by tree root and fungus growing into each other. Over 85% of a tree's water, and 100% of its nutrients, arrive via fungus. Having now observed the immense capacity of these soil organisms to sequester carbon, are we doing something about it? Perhaps by outlawing the practice of slash pile burning after logging operations, instead mandate that prescribed amounts of coarse woody debris be buried, chipped, and/or inoculated with fungi.

Fungi might be selected on the basis of their ability to produce an edible mushroom, their ability to produce water-retaining BCR, and value to wildlife. The USFS estimates that at a minimum 360 million tons of carbon dioxide are put in the air from burning operations, and smoke from fire remains the most common complaint to USFS offices nationwide. The act of burning wood is inefficient to start with: flaring off the water molecules present in wood absorbs a large amount of the energy released by the combustion process. This vaporized water and carbon dioxide then enters the atmosphere, and leaves western Montana for somewhere downwind. Contrast that with buried wood, which has a half-life in the soil of several years, during which it will retain and supply moisture, yielding a net gain of moisture to the local environment when it is gone. Virtually all the energy and nutrients released by metabolism will be used by the local ecosystem. A good percentage of the carbon will remain as soil. I recently taught a section at a permaculture class, and they were all excited about Hugelkultur, a novel way to provide plants with moisture without irrigating, by burying a wood pile under your garden, or planting your garden atop your wood pile. The rotting logs in this case do what rotting logs do, absorb and create moisture as they are broken down by fungi. Hugelkultur is another example of how natural processes can and should be employed in our management practices. Soil carbon could be the carbon sink that allows us to sequester enough carbon out of the atmosphere to balance our massive fossil fuel footprint. But we must review and revise the ways we manage soil, because now we are in the process of losing soil carbon, not sequestering it, on a landscape level. The current head set of "fuel reduction" by burning needs to be replaced with a mantra of *Don't Pyrolyze, Metabolize*!

This essay is from the April 2013 online newsletter Fungal Jungle (www.fungaljungle.org).

Movie Night for Mushroomers:

Now Forager, a Film about Love and Fungi

If you're like me, you can spot mushrooms at 60 miles an hour or hear someone mention morels across a crowded room. But it would be easy to miss the independent film Now, Forager, released in October, 2012. It's a movie for mushroom lovers although it has been shown mostly at film festivals and art theaters.

Now, Forager follows Lucien and Regina Echevarría, New York based chefs and foragers, through a year of mushroom hunting, the mushrooms far less dependable than the sun's unvarying orbit. Lucien, played expertly by Jason Cortlund (who also co-directed and wrote the screenplay) wants to spend his life as a forager, following the fungi in a continental span much wider than the rings he makes around Manhattan. Although he is well into his thirties, his adolescent arrogance and impracticality don't ever quite make him a villain. He gains the audience's admiration because watching him hunt in the opening minutes, cutting October's exuberant flushes of grifola, blewits, and enormous puffballs, lets us experience his mastery. Fungi lovers in the audience want to follow his footsteps, maybe even outdo him. He names the genus and species like a mycology professor. In voiceover, he describes how to cook the delicious ones and how to suffer the poison ones.

His wife, Regina (Tiffany Esteb) takes her cues from him, at least in the forest. But Lucien knows his Latin, so he must know that his wife is a queen. Out of the woods, she is loving but assertive; she wants more than their hand to basket existence. Their run their uncertain income, dependent on the whims of the chefs whom they sell to, feels more like an ordeal than an adventure to her. She wants to use her talents as a cook—and pay the bills with less worry. She takes a job as chef at a Rhode Island Basque restaurant only

to find that people don't really want authentic cooking. In the meantime, Lucien sets off to follow his passion—only to find drought, or territory that has already been claimed and defended by whatever means necessary. He never gets farther from New York than the D.C. suburbs, and his baskets never fill the way they did when he hunted with Regina. She returns to New York restaurant work; he housesits outside the city and reaches out to Regina.

Autumn returns, too, and Lucien hopes that Regina will hunt with him again. As Cortlund notes, "the film is structured seasonally and cyclically for a reason. Fungi are an ever-present reminder of the churn from growth to decay to renewal." As the screen fades to black, Walt Whitman's two-line poem, "The Untold Want" brightens it, giving the sense that somehow Lucien can stay true to himself, to love, and to fungi: "The untold want, by life and land ne'er granted, / Now, Voyager, sail thou forth, to seek and find." If there's a connection to Bette Davis' 1942 film Now, Voyager, it's better hidden than a truffle.

Cortlund and his co-director Julia Halperin (who also produced and edited the movie) belong to the New York Mycological Society; Cortlund edits their newsletter. No wonder, then, that Now Forager takes "A Film about Love and Fungi" as its subtitle or tagline. So far, the movie has found its loudest acclaim from film critics. Roger Ebert proclaimed "two thumbs up", and Huffington Post reviewer Daniel Maidman compares the country versus city theme to Shakespeare plays that also contrast the wild world to urbane ways. Fungi, though, are everywhere, country and city alike, and one of my favorite scenes in the movie is Lucien's hallucinatory walk through a city street where fire hydrants and other urban fixtures disguise themselves as mushrooms. Mushroom lovers already know how to spot mushrooms the way Lucien, and the camera does, in Now Forager. Cortlund did the mushroom photography himself while Jonathan Nastasi, who works often for the Food Channel, served as director of photography.

Cortlund thinks that the film puts mushroom people in their comfort zone, "because they're already attuned to a world full of beautiful and diverse fungi." As a result, they can also pay more thoughtful attention to the conflict between Lucien and Regina. "Some of the most nuanced responses to the husband/wife relationship have actually come from mushroomers—I was surprised by that at first, but it really makes some sense." Still, mushroom lovers come prepared to talk mushrooms, too. "At our German premiere last fall, one gentleman even brought a collection of bay boletes wrapped up in his scarf to show me, which he picked just before the screening. Only a real mushroomer would do that."

Halperin and Cortlund are eager to share their love for fungi with more mushroomers and mushroom clubs. "We understand that small, member-supported organizations don't have the same resources for film rentals and travel expenses that an art museum or other big institution might have. So, if a club is interested in setting up a screening, they should just send me an email directly (cortlund@antiquirk.com). We travel pretty frequently to both coasts, so with a little lead-time we're always happy to combine trips and do a screening with an in-person Q&A when possible." The film's closing credits even encourage viewers to join mushroom clubs; after warning against eating mushrooms without absolute certainty about their identification, the last words advise that "to learn more about safe and sustainable foraging practices, contact a mycological society or mushroom club in your area."

Barbara Ching
Prairie States Mushroom Club

THOUGHTS ON MUSHROOM FORAGING

By Bill Bakaitis

(Editor: The following essay by Bill Bakaitis was written in response to concerns expressed by officers of the Mid-Hudson Mycological Association that often new members join just to find out where the best sites for hunting mushrooms are never to be seen again. The issue of extensive foraging for profit also surfaced and is addressed, as is his concern that the recently released movie, NOW FORAGER, may serve to encourage more people to forage without reflecting on environmental impact. With his permision, I am publishing his views so that it may start a conversation among NAMA members, who surely have their own informed opinions on these matters).

I found during my tenure as president, and later as educational director, that many people would join primarily to get to know how to identify edible mushrooms. Once they felt comfortable with that task, they would simply disappear as members. Sad to say, some would even ransack once productive foray sites where they had learned their newfound skills leading the sites to become barren of fungi at the clubs next scheduled walk. In some cases landowners who had allowed/invited local clubs to collect on their property were shocked to find 'club members' returning to trespass on their property with apparent abandon. I know of a number of morel sites so affected.

How to deal with that? The most successful clubs I know have developed an ongoing in-club base of expertise in the identification of fungi, which goes beyond the mere foraging for edibles. This process serves two purposes. First, the club activities become more centripetal, pulling members into the club by collecting, photographing, identifying and sharing the joy of getting to know the thousands of species which fruit in their area. Secondarily, the interest in non-edibles as part of the natural ecosystem becomes more obvious, at times compelling. By its very nature this discourages the wanton collection of edibles from our forests and fields. Thirty years ago, when I founded this club we often would have trained biologists walk with us and the conservation ethic was paramount.

I recall Dr. Al Feldman's admonition to a group of enthusiastic young collectors way up on a side trail connecting Mt. Tremper with a remote trailhead near Shady. It took nearly two hours to get to this spot. On a clonal clump of Birch there was a stunning fruiting of *Pholiota squarrosoides* (which at that time was a complex considered a safe, if not choice, edible. For more, see the comment below*). A pair of members was about to have at it with their knives and collecting baskets. He halted the removal, called in those nearby who might want to photograph the specimen, discussed it, and then allowed those interested in collecting to remove only a portion of the clump, stressing the importance of conserving the remainder for various ecological reasons that he described. What the members in attendance gained from this experience was far, far greater than a few forks full of fungi!

As a model for club activities consider those who are birders: they don't just go out to hunt for edible species, such as ruffed grouse and woodcock; they find joy in seeing the diversity of species and are particularly thrilled in seeing a rare or even a completely new species. As for edibles consider a group like Trout Unlimited. Trout are wonderful eating but members of this group typically practice 'catch and release'. A trout they say is much too valuable to be caught only once. And the reason they fish, many will say, is because trout only live in beautiful places. In fact many fishermen restrict their 'collecting' to photographs and memories of the places they visit, and often spend little time actually fishing. When they do fish they restrict themselves to the most challenging of techniques like attempting to catch (and release) a 20" trout on a size 20 dry fly. As for myself, I do keep an occasional trout, and open it at streamside to learn more about what this particular fish was feeding on, before committing it to the creel and the evening meal.

This makes me a better fisherman and a keener observer of the natural processes, which surround the fish, the stream and the season. Aside from these few, however I release nearly every fish I catch even though they are edible, choice in fact.

If you have followed this line of reasoning it should come as no surprise to learn that I am opposed to commercial foraging for wild foods. There may have been a place for this in the past and perhaps in some parts of the world today, but certainly not in heavily populated areas such as surround us.

Having collected mushrooms in Southern France I have seen the complete destruction done to the forest as commercial truffle hunters ravaged the area with their rakes, disturbing hectares of duff, exposing the hillsides to the elements and consequent erosion, and rendering the area hostile to the fruiting of all other fungi. One might think that it would be in the long term financial interests of the collectors to conserve the area for future harvests, but as the areas become degraded/destroyed the total yield decreases, the price per ounce/pound rises and competition for the remain resources grows. In addition, the economic factors, which encourage commercialization, not only continue but also escalate as the investment in capital and demand from the markets increases and the need to feed and sustain one's own economic enterprise increases.

Close to home, I recall one particularly robust stand of black morels which had produced for decades suddenly collapsed after a collector/collectors ransacked the site scraping, raking and 'plowing' the area clean. When my co-leader and I arrived at the site we were shocked beyond belief. Because the damage was confined to the precise areas where we had led classes in the past we had to assume it was one of the class participants who ruined the area. It has not subsequently recovered, a loss shared by every student who has since followed.

Because fungi and other wild foods have suddenly become quite chic we have seen quite an interest in getting to know them; witness the recent increase in membership of Mycological Societies, the recent film which glamorizes foraging for wild crafted foods, and the increase in commercialization of these products.

I have seen hillsides in the mid-Hudson area where ramps once thrived. They stood for generations, yet within the past two years these sites have become almost completely denuded; only the potholes, trenches, and threadlike baby ramps remaining. If you have ever tried to grow ramps, you know that it takes a decade or more to get a harvestable crop, and scientists tell us that it takes about one hundred years for a recolonized area to become sustainable.

In a similar fashion I have sadly come to learn that there are a group of morel collectors in the Hudson Valley, young college-aged, middle-class children of privilege who collect morels for commercial market. Why? Well the family of one young fellow proudly said he uses the proceeds from his foraging to finance summers in the Mediterranean! I find this particularly troublesome. Coming from a well off family he simply has no need for the profits gained from exploiting our common wealth, and I am distressed and confounded by the failure of the educational process in his life. The collecting pressure in our crowded Northeast corridor is simple too great to provide sustainable commercial harvesting. In such a situation, history teaches us, the 'tragedy of the commons' appears with sudden collapse.

I see the same thing in Maine where my wife and I live in the summer. Young collectors take a class with one of the area's better known amateur mycologists and then go precisely to the spots where he trained them and collect there for markets both in the local and NYC area. Several have contacted me because of the mushroom articles I have written and offered to 'show me' their sites imploring that we 'collect

together'. I know some of the places they collect and have seen what remains of the black trumpets and chanterelle sites. Particularly striking are the neatly trimmed *Grifola* stumps, which show up on roadside Oaks as autumn approaches.

So, as you can imagine, I have questions about the mixed messages threaded throughout the movie local groups are choosing to sponsor. By all accounts it is a tender, romantic and well-made gem of a film. But I know it is in the nature of film making (or essay writing for that matter) to select, edit, surround and frame issues in ways that support the story. That is the essence of good story telling. It is the romanticizing of foraging, which troubles me. To the extent we encourage this activity we bear responsibility for the consequences which, logic, history, and analytical analysis tell us will likely follow.

The first order consequence will be a growing interest in collecting edible mushrooms and other wild products. This may be something which mushroom collectors would like to see happen. After all, most of us are foodies of one sort or another and most like a good tearjerker of a story so we often accept these emotionally clad promo pieces without hesitation. Once past the carefully crafted veneer however, various unanticipated consequences are likely to follow, among them, in this case, being the decreased abundance of 'choice' species on your walks and at your sites.

Commercial collectors have told me they constantly peruse the internet to locate sites where mushroom clubs go and follow the leads that other collectors post. They move around with the seasons. At times they 'purchase' or trade GPS locations. Being mobile, otherwise unemployed, unencumbered by domestic responsibilities, and often supported by others, they can cast a wide net and ply their trade twenty-four seven... Think about this for a while and see where it takes you. I doubt that many of us will see this as something we wish to encourage.

A third order of consequence is also likely to follow, namely the closing of collecting areas available to us. I wanted to share these concerns with you beforehand. In short, however natural, inviting, and satisfying foraging for wild foods might be for the individual collector, commercial exploitation of these forest products raises issues and poses problems of an entirely different scale, scope and magnitude. Local members who have been with the club for only a year or two will know of a nearby collecting area which the owner has posted because of post foray trespassing by collectors (whom she suspected to be club members).

I do systematic species identification/collection/cataloguing of vouchers in a few locations for conservation and educational institutions and have seen rapacious collectors in some of these posted and sensitive areas, their bags filled and the hillsides trimmed. Watch for the enforcement of environmental and property laws to be enforced once the voluntary self-enforced violations fail.

Some may look at the vast public land areas available in the Catskills and Adirondacks and think of them as limitless in potential. My discussions with State Officials while in the process of founding our local club led me to the unwritten understanding that limited collection of fungi for individual use would be tolerated, but heavy or commercial use (save perhaps in Multiple-Use Areas after permits were approved) would not. Once commercial pressure in these State Lands become obvious I suspect we are likely to see enforcement of the existing laws which prohibit the collection of even the 'fruits' (e.g. mushrooms) of forest products. This will become much more likely when a commercial harvester makes a mistake and includes a toxic mushroom in the collection basket. Working with the poison control networks in the Northeast I regularly consult on such cases where even experienced collectors make serious errors.

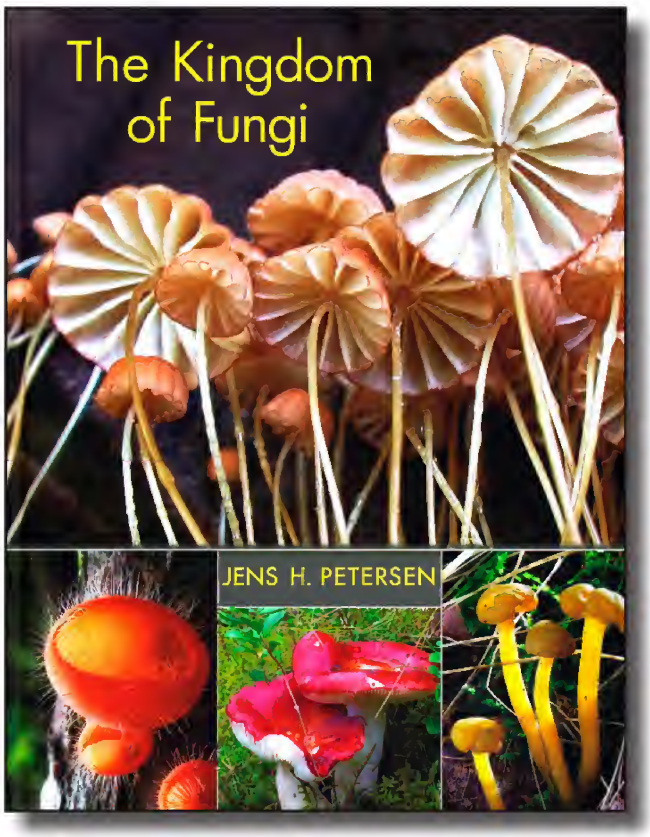
Recently I have been asked to comment on a comprehensive plan being considered by a nation-wide professional consortium involving both governmental and commercial groups. This consortium has an interest in product safety and commercially offered 'wild harvested' (e.g. foraged) foods. There is a great deal of interest, not only in the protection for consumers, but also in the liability issues involved. These include liability for the state, the purveyor, the restaurateur, the collector, the trainer of the collector, as well as the credentialing process itself. Given the complexity of the problem and the increasing commercial pressure to provide foraged products to an increasingly interested restaurant industry, the problem has led some states, including one here in the Northeast to completely prohibit the use of wild harvested foods in commercial establishments. (Having seen only summary reports of the laws I don't know if this includes the gathering and sale of such forest products.) This is not something being considered for the hazy distant future, but is already legally in force, some enactments taking place within the past year or two.wanted to share these concerns with you beforehand. In short, however natural, inviting, and satisfying foraging for wild foods might be for the individual collector, commercial exploitation of these forest products raises issues and poses problems of an entirely different scale, scope and magnitude.

You have my permission to share this with your memberships. I hope you do so, perhaps as an email to the membership. Perhaps it will be useful in framing your discussion of membership involvement and the issues related to commercial foraging. Hopefully some of these issues will be raised within the film itself.

Bill Bakitis

Stropharia rugosoannulata collected from the garden's woodchips, Photo by Bill Bakaitis

Editor's note: NAMA received two review copies of this book, so it seemed appropriate for us to prepare two independent reviews.



NAMA Book Reviews

The Kingdom of Fungi
Jens H. Petersen
Princeton University Press
Princeton and Oxford
2012
ISBN 978-0-691-15754-2
$29.95

This 265 page hardcover 8.5"x11" book is a visual feast that I keep on my coffee table and take to show off at lectures about fungi. The author, Jens H. Petersen, is a mycologist who has taught for over twenty years at Denmark's Aarhus University and has collected fungi in many parts of the world. He is a photographer who has mastered photography from the macro scale to the micro scale. Each page of the book is dominated by splendid photography with text taking up at most about 1/8 of each page.

After the preface, the book begins with an introduction to the fungal life cycle (2 pages), a section on the diversity of fungal spores (4 pages), and illustrations of hyphae (6 pages). The author then discusses kinship and classification within the fungal kingdom (6 pages), delves into "the perfect imperfects " (10 pages), and explores the diversity of fruiting bodies (12 pages). The Ascomycota are covered in a 56 page segment followed by a 90 page segment on the Basidiomycota and 2 pages on the Zygomycota and other groups. Each section is beautifully illustrates the diversity of both macroscopic features and microscopic features of the fungi.

Fungal ecology is covered in a 26 page segment followed by a 34 page segment on "fungi in the world" that describes where fungi are found and why fungi are important. The closing 6 pages reveals how much remains to be learned and why it is important to protect fungi.

This book would make an excellent addition to the NAMA school teaching kit. The pictures will enthrall young children and the text is both easy to understand and informative. Even after decades of studying mycology, I discovered new material and interesting material. When agreeing to review the book, I thought that I would be reviewing a college textbook on the fungi. Indeed, I would have college mycology students buy the book as part of their course – the text will give them a succinct over-view of the fungal kingdom and the pictures will give them the visuals that are so lacking in their college textbooks. However, I will also want to introduce anyone from 6 years old to 100 to this book. It contains both sound science and visual humor. At $29.95, it is a bargain.

Michael W. Beug

The Kingdom of Fungi
Jens H. Petersen
2012, 265 pages
Princeton University Press (www.press.princeton.edu)
$29.95 cloth (ISBN: 978-0-691-15754-2) or e-book (ISBN: 978-1-400-84687-0)

Jens Petersen is a Danish mycologist whom, until now, I had known only through his excellent field-guide photographs, which appear prominently in the identification software program, *MycoKey*, as well as in many European mushroom books and online sources. However, his new book has expanded and elevated my already high opinion of his work.

Given its heavy emphasis on the photographs, this is probably best categorized as a coffee table book. Nonetheless, the text, albeit sparse, is highly informative and furnishes something of a synopsis of a mycology textbook. The short snippets (one to three paragraphs each) provide an accurate overview of a wide range of topics and should lead many readers to seek out additional sources of information to flesh out their understanding. General coverage includes an introduction to fungal life, fungal spores, hyphae, taxonomic relationships ("kinship"), imperfect fungi, fruiting bodies, fungal ecology, where fungi occur (or don't), why we need them, and what the future holds. This comprises about one-quarter of the book. The remainder is devoted to an annotated pictorial tour of the ascomycetes, basidiomycetes, zygomycetes, and other groups with overwhelming emphasis on the first two. For overall quality and sheer beauty, most of these photos are as good as any I've seen. The treatment strikes a good balance between the traditional morphological classification scheme and the findings of recent molecular phylogenetic studies that attempt to produce a scheme that follows the evolutionary relationships of the organisms.

I am particularly impressed by the range of scale in Petersen's photography. Not just the usual field guide photos of decent-sized mushrooms, but everything from landscapes to tiny cups to microscopic features, all done in excellent fashion. And, not only are the photos beautiful but they are showcased in an equally attractive package created by the design team. No stodgy textbook this. The charts are colorful, clearly laid out, and integrated nicely with the photos.

With a very reasonable price, there is no reason for every mushroomer not to have his or her own copy and perhaps to buy additional ones for eye-opening gifts for friends who don't yet share our passion for the fungi.

Steve Trudell

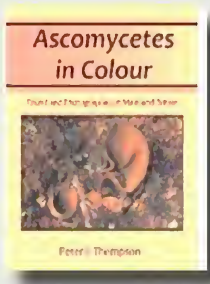
Editor: I encourage mycologists and clubs to send your articles, recipes, puzzles, etc. for possible inclusion in The Mycophile to dianna.smith@comcast.net. Please contact Steve Tudell before submitting book reviews. His e-mail address is mycecol[at]u.washington.edu. Guidelines for submitting articles are online at http://namyco.org/publications/mycophile/myco_instructions.html. The deadline for the next issue is Sept. 1st.

Guidelines for submitting manuscripts to Dr. Michael Beug for McIlvainea can be found at http://namyco.org/publications/mcilvainea/mcil_instructions.html. http://namyco.org/publications/mcilvainea/mcil_instructions.html.

Ascomycetes in Colour:

Found and Photographed in Mainland Britain by Peter Thompson

By John Plischke



Although the mushrooms in this book are from Britain, many of them can be found in North America. At first glance the book's size reminded me of a college textbook. It's big and covers a lot. Having the Fungi of Switzerland in my library I thought to do a little comparison. The books are about the same size but this one is a hair wider and a good bit thicker. It measures in at approximately 11 1/4 inches tall, 8 5/8 wide and about 1 1/4 inches thick. It has 408 pages. The book covers 700 Species each with its own color photograph vs. the Swiss book's 390 species.

The introduction discusses in detail some of the author's techniques, acknowledgments, a two page glossary, 17 pages of keys to species, a bibliography, and 7 pages of literature cross reference keys that are really useful. You can easily find out if a species included here is in any of 5 other asco books which are: *British Ascomycetes*, *Fungi of Switzerland Vol 1*, *Macrofungi on Land Plants, Macrofungi on Miscellaneous Substrates* and *Ascomiceti d'Italica* and gives the page numbers for the other books so doing some comparison becomes a simple matter. Next are the photos and descriptions, followed by an Index of Genera and Species.

In the main section on mushrooms, there are two species per page. The text, photo and drawings are together which most of us find convenient. On top is the mushroom's most recent Latin name at time of printing, followed by the author citation. Some of the mushrooms also have synonyms listed. The descriptions are broken down to the following parts, Macroscopic Description, Substrates, Size, Microscopic Data which includes things such as spores, asci, paraphyses, and hairs but lacks some details such as croziers, then followed by the date and location of the find. The photos and illustrations for the fungi are on the left side of the descriptions. Each photo is slightly larger than 2 inches tall by 3 ½ inches wide. I wish the photos were a little larger and more magnified; that is largely a publisher decision. I would also like to have seen more of the mushroom filling the frame. Below the photo is a simple black and white drawling of the spore(s) and sometimes a hair illustration is also included, a size scale is not included.

The list price of the paperback version of the book is $81.99 and Amazon has it for $69.35. It is a good value for the size of the book considering that the hardcover Swiss book is $174 or $127 at Amazon. ISBN: Softcover 978-1-4797-4755-9; Hardcover 978-1-4797-4755-6

The author's dedication to working with ascos is shown and with so many different species I recommend getting a copy. I felt the book had some wasted space, but all in all very well done.

If you are the editor of a NAMA associated club, please send copies of your newsletter to both David Rust at incredulis@yahoo.com and to me at dianna.smith@comcast.net.

2012 NAMA BOARD OF TRUSTEES MEETING MINUTES SUMMARY

Prepared by NAMA Secretary Linnea Gillman

Here is a summary of motions that were approved at the December 12, 2012 board meeting in Scotts Valley, CA:

- NAMA's newest educational programs (25) will be combined on one DVD and be sold for $25.
- The Arkansas site for the 2013 NAMA foray was approved.
- The NAMA foray guidelines will be expanded to include cultivation as a mandatory presentation (the others are education, toxicology, mycophagy and photography).
- Because there are few double-blind clinical trials, and because research reports carry varying scientific rigor, NAMA will categorize medicinal mushroom articles into four categories: 1) historical, (2) in vitro, (3) in vivo, and (4) human clinical trials.
- Regional trustees will report to the first vice president and get guidance and oversight.
- The nominating committee will put forward regional trustee nominations as well as officers.
- NAMA will waive the foray fee for the winner of the NAMA Memorial Fellowship.
- The NAMA Memorial Fellowship will be in honor of Ernst Both in 2013 and Patrice Benson in 2014.
- Dues will be reduced to $24 (electronic) and $30 (paper copies) for members of affiliated clubs; $29 for the electronic Mycophile and $35 for paper copies for non-affiliated members.

Other topics discussed at the meeting:
There was a moment of silence in memory of:

Farrow Beacham
Patrice Benson
Ernst Both
Coleman Leuthy
Richard Munger, MD
Tom Raque
Ruth Ristich

The method of balloting for regional trustees was discussed. The policy manual ad hoc committee will review suggestions and present recommendations before the next meeting.
David Rust reported on the North American Mycoflora Project. There was a meeting last July that can be viewed at wwww.northamericanmycoflora.org. It is estimated that 14-16 million dollars will be needed, mostly for DNA sequencing. We're still in the early stages of this project, which will be decades long. No action is required by NAMA at this stage.
We are looking into getting liability insurance for directors and officers – we will get some quotes and the executive committee will look at them.

Results of the election of officers:
President – David Rust
First Vice President – Martin Osis

North American Mycological Association
c/o Ann Bornstein
61 Devon Court
Watsonville, CA 95076

Change Service Requested

Newsletter of the North American Mycological Association

THE MYCOPHILE

Lactarius corrugis, Photo by Steve Rock

IN THIS ISSUE