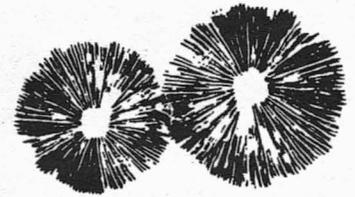


SPORE PRINTS

BULLETIN OF THE PUGET SOUND MYCOLOGICAL SOCIETY
Number 342 May 1998



THE MOREL STORY Kitsap Peninsula Myco. Soc.

May is Morel Month! A good time to dust off this local article, slightly updated and augmented, which has been languishing in my "someday" file for far too long. Unfortunately, I don't have an author.

Description

True morels have hollow caps and hollow stems. The stems are normally white but may be slightly yellowish. The stems connect to the bottom edge of the cap on all except *M. semilibera*, where the stem extends partly up into the cap. The caps have irregular indentations, which are characteristic of morels. *Gyromitra* mushrooms, sometimes called false morels, have caps with folds and wrinkles that differentiate them from the true morel.

Distribution

Morels are one of the most widely distributed mushrooms, flourishing in temperature regions around the world across Europe, Asia, and North America. In the U.S. they can be found from coast to coast and from the Canadian border south, petering out about halfway between Washington, D.C., and the Gulf of Mexico, although they are occasionally found as far south as Louisiana.

Season

In most of the United States, May is considered morel month, although the season advances from south to north, with April being the peak season in Maryland. In the Pacific Northwest, the season usually peaks in the last 2 weeks of May on the east side of the Cascades, although morels may begin showing up as early as the end of February in the lowlands. The season may shift a week or two depending on the temperature. It also varies with altitude and on different sides of a mountain.

Location

One location that most of us forget to remember is our own back yard. Since morels appear in the low lands first, this gives us an early start. Morels can grow in your lawn, in the wood mulch under the rhododendrons, along hedges, and in old fruit orchards. The quantities may not equal what we hope to find in the Cascades but it is a good pre-season location. The best picking areas are on the east side of the Cascade Mountains. Locations of forest fires can yield unbelievably large quantities the following spring. Morels seem to become adaptive to certain areas. They may be found by elm trees in one state and by oaks in another.

Here, morels may be found anywhere. They may grow near trees in conifer forests, in open flat grass land, in bare dirt areas, or out of needle duff. If the season is dry, it may pay to look in gullies and other areas of water runoff and under logs or little tree seedlings whose shade may have saved moisture for the mushroom. Yet, the most dense fruiting of morels that I have ever seen was in a large clear-cut area where the stumps were pulled and the weather was hot. This all leads me to believe that *morels grow anywhere they feel like growing*.

The Hunt

Morels tend to blend into the surrounding area. It is always hard to find the first mushroom each year. The eye has to get accustomed to separating the morel from its background. You have to learn to walk a few steps, then stop to look, and you may be surprised to see morels that seem to magically appear and grow before your eyes. Once you find a morel, stop and look around. Start walking around it a small circle, increasing the radius out to maybe 75 ft. Sometimes that will lead you right into a river of morels. Morels need moisture and warmth to grow, so early in the season look on south-facing slopes; later in the season, look on north-facing slopes.

Edibility

All fresh and prime morels are considered edible and very good, but a warning does exist. Never eat these mushrooms raw. Also, a few people have an allergy to this mushroom even after cooking, so eat only a little the first time and wait at least a day before eating more.

Preservation

The most convenient way to preserve morels is to cut each in half and dry. They can be threaded on a string to air dry and later stored in a sealed fruit jar. Dried morels are reduced to about one tenth of their fresh weight and will store for long periods of time if completely dry. In damp weather, this may require the use of an electric food dryer that can keep the temperature at 100–125°F and has a small fan to circulate air. Some people add a bay leaf to each sealed jar. Morels can also be sautéed just long enough to stop enzyme action and then placed in sealed freezer bags before freezing. Larger quantities can be processed more quickly by par-boiling whole morels to stop the enzyme action and sealing them in bags or jars for freezing. These mushrooms can then be stuffed and baked later. Whole mushrooms will not keep over long periods without deterioration and should be used within a year.



AN ODDBALL FUNGUS

Duff (9/97)
via *Mycolog* (11/97)

In the salt marshes of the North Carolina coast lies a fungus capable of propagating itself by shooting a "blob of jelly" when moistened. While it is nothing new for a fungus to fire off spores mechanically, this fungus, *Clomerobalus gelineus*, is not firing off spores, but rather a vegetative piece of itself called a propagule. The propagule is surrounded by three or four knobs which swell when moistened, causing the center propagule to pop out. It can fly out at least a foot. If it lands on dead plant tissue, it sinks in mycelium and continues to grow. This "splitting fungus" was discovered by Jan and Brigitte Kohlmeyer of the University of North Carolina and represents a new genus.

Spore Prints

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PUGET SOUND MYCOLOGICAL SOCIETY

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Annual dues \$20; full-time students \$15

CALENDAR

- May 9 Field trip, Twenty-Nine Pines
- May 11 Basic ID class, 7:00–9:00 PM, Isaacson Classroom, CUH
- May 12 Membership meeting, 7:30 PM, CUH
- May 15 *Spore Prints* deadline (a week early)
- May 16–17 Field trip, Tumwater campground
- May 18 Board meeting, 7:30 PM, CUH boardroom
- May 23 Field trip, Swauk Creek
- May 29–June 1 Field trip, American River Lodge
- June 5–6 Field trip, Bridge Creek
- June 9 Membership meeting, 7:30 PM, CUH

BOARD NEWS

Agnes Sieger

Lisa Bellefond is replacing Brandon Matheny as Education Chair. Ron Pyeatt will host the 29 Pines field trip from his cabin about a mile away. Direction signs will be posted. Dick Sieger demonstrated what he has on his laptop computer. Steve Bell will put together a price package for a laptop to go out of the office and into the field. Jim Berlstein will price a computer housekeeping combination for the office. More rosters will be available at the May meeting. After that they will be mailed. There are no volunteers as yet to chair the picnic. Lynne Elwell and Lynn Phillips will take over video-taping the programs after taking lessons from Corey.

OOPS: Mushroom kits distributed at the LA Myco. Soc. mushroom fair began sprouting, not *Pleurotus*, but a species of *Hohenbuehelia*. The supplier of the mushroom spawn is being contacted.

MEMBERSHIP MEETING

Tuesday, May 12, at 7:30 PM at the Center for Urban Horticulture, 3501 NE 41st Street, Seattle.

Please join us for a presentation by botanist Dr. David Pilz from the USDA Forest Service's Pacific Northwest Research Station in Corvallis, Oregon, on "The MAB Chanterelle Study—Biological, Socio-Economic, and Managerial Aspects of Harvesting Chanterelles on the Olympic Peninsula"



During 1994 and 1995, members of the Puget Sound Mycological Society participated in the MAB chanterelle study by assisting with biological field inventories of chanterelle productivity and by answering questionnaires about recreational chanterelle harvesting. The principal investigators wish to acknowledge the society's help in the research project by presenting an award and results from the study. Principal investigators who may attend include David Pilz, a botanist (USDA Forest Service, Pacific Northwest Research Station) studying the productivity and sustainable harvest of wild edible mushrooms; Leon Liegel, a research forester (USDA Forest Service, Pacific Northwest Research Station), who organized and spearheaded the MAB study; and Tom Love, a professor (Linnfield College, McMinnville, OR) who coordinated the sociological portion of the MAB study.

Would persons with last names beginning with the letters W–Z or A–D, please bring refreshments for the social hour?

MEET JOY SPURR

Inga Wilcox



more than 700 species.

A charter member and the first recipient of the PSMS Golden Mushroom Award, Joy Spurr is a doer. As a professional nature photographer, she had no trouble including photography of fungi in her repertoire of wildflowers, birds, and plants. Together with Ben Woo, she started a photograph file for the Society which she recently reorganized together with an inventory list. Her own file contains

When Joy came out from Minnesota in the 1940s, she took classes with Dr. Stuntz and especially enjoyed the summer classes attended by members of PSMS where long-term friendships were formed. The original Stuntz/McKenny and Ammirati editions of *The Savory Wild Mushroom* include her photographs. She served on the PSMS Morel Committee and remembers field trips where ground temperatures were taken by pushing a thermometer 8 inches down into the ground and soil samples were taken for analysis.

Joy travels extensively, combining enjoyment with professional photography. She has been to all continents and most recently visited India, Peru, Western China, Central Asia, Syria, Jordan, and Ethiopia. She feels that animal life and photography are especially great in Africa and Antarctica. She uses Nikon cameras with three lenses (28–80 zoom, 75–300 zoom, and 60 macro) and Kodachrome film. Currently, she is working on photos for a new field guide for trees, shrubs, wildflowers, and geology to be issued by the National Audubon Society. Her nature photos appear in various media throughout the world.

She also does photography for the Arboretum Foundation, and two titles featuring her work have been published through that society. When *Pacific Search* magazine came out, it included her photos as well as articles. Naturally, Joy likes to pick mushrooms.

She especially enjoys the white chanterelle and *Boletus edulis*. She finds mushrooming an easier hobby than rockhounding. Rocks and crystals are heavy and take up space. Mushrooms disappear into the frying pan! You can meet Joy at forays, especially in the Taneum Creek and Teanaway River areas in the spring, when she might help at the identification table.

What pleases her most? "My happiest days are when I can just be outdoors looking for mushrooms, wildflowers, and wild animals and enjoying the natural treasures in our beautiful State."

Notice: *After eight years of interviewing members and writing their profiles, I am laying down my pen. I hope someone might pick it up and continue. A big "thank you" to all of you who shared a bit of your life with all of us at PSMS.* —Inga Wilcox

UPCOMING FIELD TRIPS

Mike Lovelady

May 5–19 **Twenty-Nine Pines Forest Camp**
(elev. 2500 ft, 102 miles east of Seattle)

Because of a tornado that damaged the campground, this year's field trip to Twenty-Nine Pines will be held at Ron Pyeatt's cabin about a mile away. Signs to the cabin will be posted at the Twenty-Nine Pines Campground. To reach the campground, take I-90 over Snoqualmie Pass to exit #85. Follow the road toward Wenatchee for 2½ miles. Turn left on Hwy. 970 and go 4½ miles. Turn left onto Teanaway River Road. Continue about 6 miles to the Bible Rock Children's Camp. Bear right on the Teanaway North Fork Road and continue to Twenty-Nine Pines on the left, just past Jack Creek Road.

May 17–18 **Tumwater Forest Camp**
(elev. 2050 ft, 95 miles east of Seattle)

From north of Seattle, drive east over State Hwy. 2. Tumwater Campground is about 23 miles east of the Stevens Pass summit, on the left. Watch for the sign.

May 24–25 **Swauk Creek Forest Camp**
(elev. 2500 ft, 110 miles east of Seattle)

Take I-5 over Snoqualmie Pass to exit #85. Follow the signs to Wenatchee. Turn left onto Hwy. 970. After 7 miles stay left on US Hwy. 97 (north) and continue another 16 miles. The camp is on the right. Swauk Pass is 4 miles beyond the camp.

May 29–June 1 **American River Lodge**
(elev. 300 ft, 130 miles southeast of Seattle)

From Enumclaw, southeast of Seattle, go east on Hwy. 410 over Chinook Pass; 17 miles past the summit, turn right onto Bumping Lake Road #174. Turn right after 1/4 mile and right again to go uphill and through the gate. Continue for about 1/2 mile to the lodge. Plan on camping overnight in your tent or trailer (the road is steep). The lodge is primitive but is good shelter for the potluck or in case of bad weather. A donation of \$10 for overnight use or \$5 for day use will be appreciated. Hosts are Irwin & Millie Kleinman.

June 7–8 **Bridge Creek Forest Camp**
(elev. 2400 ft, 150 miles east of Seattle)

Take Hwy. 2 over Stevens Pass and proceed 34 miles to Leavenworth. (You can also take I-90 over Snoqualmie Pass to exit #85, go over Swauk Pass to Hwy. 2, and proceed left for 6 miles.) Take Icicle Creek Road on the north edge of town and go 6½ miles to Bridge Creek Forest Camp.

STEELHEAD PARK FIELD TRIP

Doug Ward

We arrived at Steelhead Park at about 10:00 AM in the middle of a downpour. A little while later, we were joined by five new members at shelter A1. Needless to say, the weather remained horrible but we did venture out briefly between the torrents. The result of our all-to-short foray into the nearby cottonwoods was nothing to brag about, in fact, it was nothing! Apparently, a couple of members had arrived on the scene before we did and left one over-the-hill puffball (identity unknown) and one fairly soggy and mangled "LBM." But the day was not lost. We sighted one bald eagle, one Oregon junco, a group of pine siskins, one wren, and a bufflehead (a small black and white duck). In addition, we had a delightful potluck lunch and conversations about Fall and Spring mushrooms and the wisdom of only eating a small amount of mushrooms one has never tried before, which was verified by a couple of personal experiences that were not so good. Another good outcome was that one of the new members volunteered to help host the next field trip. Lets hope the weather is better on May 2!

DID A MUSHROOM TAIN YOUR WINE?

Jeff Long, *Potomac Sporophore* (3/98)
via *Mycelium*, Myco. Soc. of Toronto (3-4/98)

Armillaria mellea and *Quercus suber*? Yes, it's very possible that the last time you had a bottle of wine that was "corked," or afflicted with a musty odor and/or a woody, funky taste, a honey mushroom was the culprit. The world's cork production comes from a regenerative layer, the cambium, of the oak tree known as *Quercus suber*. About every decade or so, starting from the age of 30 to 40 years, the bark (also regenerative) of this species of oak tree is removed, and the cambium layer is stripped from the tree. These cork boards are then left outside approximately 6 months to season. Thereafter, the boards are processed, and most of the wine corks with which we are familiar are punched out, classified, washed, polished, and branded.

Although a cork can also be affected by off-odors picked up during later processing from products used to sterilize corks, many wine and cork experts believe that *Armillaria mellea*, the honey mushroom, is the main culprit. This fungus is prone to attack trees growing in soil with poor drainage, humidity being its preferred element, but it typically affects the bark and cambium layer only to a height of about a foot up from the ground. Although that part of the cork layer on the tree should not be used for making corks, the piece-workers who typically strip the cambium layer even go so far as to strip that layer underground in order to get more cork board.

Despite the seasoning and sterilizing that take place thereafter, a problem may occur when the finished cork is placed in the filled bottle of wine, as the cork then is normally in contact with the wine. Since the surface of the cork consists of an enormous number of cells that have been cut in the punch-out process, the cork's surface contact with its immediate environment is much greater than that of a perfectly smooth surface. Each microscopic cork cell is a microcontainer, and cork easily takes odors from its environment. Unfortunately, the wine in most bottles of wine is similarly susceptible to adulteration or contamination. To the bane of wine producers almost everywhere, all too frequently this results in "corked" wines. Although a dish containing honey mushrooms may be fine to consume with your favorite bottle of merlot or chardonnay, the same wine with its problematic cork may already have had an unhappy encounter with the same mushroom!

A LOOK BEHIND THE NAMES

Richard Aaron

Mycelium, Myco. Soc. of Toronto, April–June 1998

Spring is here, and most foragers' fancies turn to thoughts of morels. The true morels are in the genus *Morchella*, a name that first appeared in the scientific literature almost three centuries ago, in 1719. Given its vintage, it is not surprising that the name's origins have since been lost. However, many theories abound. One source claims it was derived from an old German word for morel. Another believes it was based on a name used for centuries for some mushroom found in central and northern Europe, identity unknown. Yet another theory has the name derived from the genus for mulberries, *Morus*, since morels resemble those fruits. While the issue may never be resolved, it is interesting to note how many European languages share a word similar to our English "morel." A polyglot dictionary of mushroom names I consulted revealed the following: *morchella* (Bulgarian), *morkel* (Danish), *motile* (French), *morchel* (German), *morielje* (Dutch), and *ekte morkel* (Norwegian).

We face one additional problem with the genus *Morchella*—exactly how many species are there? Over the years, more than 100 species have been described, but it is now generally believed there are less than a dozen bona fide ones. The problem is that no one has written a definitive monograph on the genus, and many authors stress that much work remains to be done. To keep things manageable, the list below has been limited to names common to many of the popular field guides.

M. angusticeps = *angustus* (narrow) + *ceps* (head)

M. conica = *conicus* (conical)

M. crassipes = *crassus* (thick, dense, fat, heavy) + *pes* (foot)

M. deliciosa = *deliciosus* (delicious)

M. elata = *elatus* (raised up, brought forth, spring up; extol)

M. esculenta = *esculentus* (edible)

M. semilibera = *semi* (half) + *liber* (free)

Most of the definitions are self-explanatory, with two exceptions. *Elatus* has numerous definitions, some of which have been pro-

vided above. Perhaps the mycologist who coined this name in the early 1800s was stressing that this species is one of the first things to "pop up" each spring. Or it could be he was praising this species as a fine edible. As with the meaning of *Morchella*, educated guessing is in order here. *Semilibera* (half-free) is much easier to decipher. The name refers to the unique attachment of the cap. In all other morels, the cap is fused to the stalk, but in *M. semilibera*, the bottom half of the cap drapes freely like a skirt.

The dictionary reveals some interesting connections to the root words above. For instance, from the Latin *crassus*, we get the word "crass," meaning "without refinement or sensitivity." Literally, a thick, dense person! And *elatus* is the basis for "elated," to be "in high spirits," in the sense of being raised up. From *esculentus*, we get a word less commonly used, but in the dictionary nonetheless. "Esculent," used as an adjective means "suitable for use as food" and as a noun means "something edible, especially a vegetable." Finally, starting with *liber* we get such words as "liberal," "liberty," and "libertarian." Don't confuse *liber* with another Latin word, *libra*, which means "pound," usually written as the abbreviated "lb."

So next time you go into the woods to fill your basket with these springtime lovelies, give a thought to the meanings behind their names. It may help you understand the mushrooms a bit more, and it will certainly expand your vocabulary. Who knows, instead of a field guide, you may start carrying a dictionary!

MUSHROOM ASTROLOGY

Bob Lehman, LAMS



Taurus (Apr. 20–May 20): You enjoy the aesthetic and sensual qualities of mushrooms—their forms, colors, textures, aromas, and flavors—and you can prepare tasty dishes from the edible ones. You insistently search for particular species that meet your qualifications, although you also may fill your basket with mushrooms that you never use. You like the idea of living off the land and not having to pay for your food. You are protective about your favorite hunting places.



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