

### MESSAGE FROM THE PRESIDENT

Well these below zero mornings in March tend to get one down after three or four months of winter, but take heart, we should be out picking morels in only a couple of months. No matter how cold it gets we're never too far away from mushroom hunting. (Witness Lenore Lee's fresh *Flammulina velutipes* that she brought to our January meeting.)

We shouldn't think of mushroom hunting as just a fall activity with a brief spring flush of morels. Lenore and others have pointed out that before becoming interested in mushrooms, they would never see any, but now they see them everywhere. Even so, many people who pick just for eating only bother looking during these two seasons, whereas those who are interested in photography or identification, etc., can find mushrooms almost any time of the year.

I used to think for example that summers here were bad for mushrooms, but our summer forays have been extremely successful. The same is true of spring. Once you free your mind of the idea that if it's not edible, it's not interesting, the fungal world becomes much bigger with slime molds and LBM's that mycophagists wouldn't look twice at.

A good game is trying to put anything that you find into a genus. This is not always easy and not always possible for most of us. But in doing so you're forced to ask a lot of questions and really look at the mushroom. What color spores will it have? How are the gills attached? Does it have a ring? A vulva? What's it growing on? Learning how to interpret these answers is the hard part. Books with keys help, but they're trying to identify the mushroom to species in most cases and there is usually a question somewhere in the splitting process that can't be answered. An easier, quicker method is using a picture key to genera. There are a few variations around, but most try to ID the mushroom to genus using spore color, gill attachment, and a few other characters. Such a key is a good reminder to carry with you whenever you go out. It won't tell you if what you have is edible or not; but it will tell you where to start to identify it and help you start to put some order in the world of mushrooms. If anyone would like such a sheet, ask me sometime and I'll see if I can come up with one.

I look forward to seeing everyone at the morel foray this year. The morel foray is usually led by Tom Volk and takes place in the the Madison area. This year, however, Tom couldn't make it. But since it's such a popular event, Colleen and I decided to step in for Tom this year (hopefully with a little help from our professionals). However, because of lack of familiarity with the Madison area, it will probably take place in the North Kettle Moraine area. Albeit this area in general doesn't compare well with the southwest or southcentral part of the state, and if you're living near Madison, you may not find it worth your while to come. Nonetheless, we've collected here quite successfully in the past and if the weather cooperates, we should have success this year. As we've traditionally done, we will meet at one site and caravan to the (undisclosed) picking area. (An announcement will be sent later.)

All for now.

Best Wishes, Peter L. Vachuska

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### UPCOMING WMS EVENTS

Tuesday, March 21 — "Early North American Mushroom Identification Books," slide lecture by Alan Parker, 7:30 p.m., Mitchell Park Pavilion.

Monday, April 10 — Mushroom Dinner, social hour 6:00 p.m., seating 7:00 p.m., Heaven City Restaurant.

Flyers are enclosed on these events.

Saturday, June 24 — Annual picnic and business meeting, 4:00 p.m., Falk Park.

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### **OTHER UPCOMING EVENTS**

#### **Course: May is for Morels — Spring Mushrooms in Wisconsin**

An introduction to the most highly sought-after wild spring mushroom in the Midwest. A slide lecture and display of Wisconsin morels with discussion on how to collect, identify, and cook these gourmet delicacies. Several other edible wild mushrooms that appear in Wisconsin from June through September will also be considered.

The course will be instructed by Dr. Alan Parker and will be given at UW-Waukesha on Wednesday, April 12, 7:00–9:00 p.m. There is a course fee of \$10. Call (414) 521-5460 for more information.

#### **Course: Fleshy Fungi of the Southern Appalachians**

Location: Highlands Biological Station, North Carolina

Instructor: Ron Petersen, University of Tennessee

A two-week romp through the mushrooms of the southern Appalachian Mountain forests. This region is one of the most beautiful and richest in the world – and one of the best-known. Hesler, Coker and others created a legacy and we will explore their favorite haunts. Special course features include use and creation of keys, microscopy, daily field trips and frequent lectures; mushroom cookery optional and extra-curricular. Former students have been pleased, and at least one marriage has resulted. Enrollment limited to ten; tuition scholarships available. The instructor, Ron Petersen, is past president of the Mycological Society of America, past editor of *Mycologia*, long-time teacher and mushroom researcher, and seminar speaker to many mushroom clubs.

For further information, contact Dr. Richard Bruce, Director, Highlands Biological Station, P. O. Drawer 580, Highlands, NC 28471.

#### **NAMA Foray**

The 1995 NAMA foray will be held August 24–27 at Bemidji State University in Bemidji, Minnesota, near the headwaters of the Mississippi. Collecting will be done in Chippewa National Forest (the nation's oldest national forest), in Itasca State Park and in Paul Bunyan, Buena Vista and Headwaters State Forests. The foray is sponsored by the Minnesota Mycological Society and is named the Mary S. Whetstone Foray to honor the founder of the Minnesota Mycological Society. The theme of the foray is "Women in Mycology" to honor all women who worked as amateurs or professionals to promote the cause of mycology. The principal mycologist will be Dr. Gro Gulden of Norway, the first time in the history of NAMA that a woman has served in this capacity. Other invited mycologists include Dr. Orson Miller, Dr. David McLaughlin and Dr. Richard Homola. Planned workshops include identification, toxicology, mushroom illustration, beginners' mushroom identification, and more. Also being planned are pre-foray workshops on *Lactarius*, *Myxomycetes*, and a comprehensive identification workshop.

Enclosed with this newsletter is a registration form and more detailed information on the foray, as well as an address and phone number if you want more information.

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## **SWEATSHIRTS AVAILABLE**

WMS sweatshirts are still available in Large and Extra-Large. They will be for sale at the March meeting and again at the June picnic. If you would like to buy one in-between those times, please call Tula Erskine at 964-0818.

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## **JANUARY MEETING**

As has been WMS tradition for a number of years, the first meeting of 1995 was a combination slide show and mixer. Members who brought slides this year were Chuck Fonaas, Del Holtz, Sabr Nooh, John Steinke, and Ray Llanas. Each did a good job of talking about his slides, and we invite any of you slide-takers out there to consider bringing some of yours next year. It can be instructive for both you and other members to try to figure out what mushroom species is on your slide. Several other members brought mushroom-related material such as statues and books to display. Also, with the mild weather we had in January, someone was even able to bring fresh specimens. Lenore Lee brought a nice clump of *Flammulina velutipes* that she had collected near her home.

The highlight of the evening was the presentation of the first ever Wisconsin Mycological Society's Distinguished Service Award to Tom and Marilyn Fifield (see article below). Also, a drawing was held among the correct quiz forms that renewing members sent in. Edward Klotzbuecher from Milwaukee was the lucky winner and will receive a free field guide. Dan Lindner from Madison suggested that we have the drawing from the people that got the quiz wrong, since they are the ones that really need the field guide. Seems like a good idea.

Wine and cheese refreshments for the mixer were provided by Sunny Rupnow, Kris Ciombor, and Chuck Soden. We thank any other members who also contributed food.

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## **FIFIELDS HONORED AT JANUARY MEETING**

Tom and Marilyn Fifield became the first recipients of the Wisconsin Mycological Society's Distinguished Service Award. The award has been created by the WMS Board of Directors to acknowledge exceptional contributions by long-standing members.

It is very appropriate that the Fifields are the first to receive this award, given their long association with the Society. On 25 May 1982, Tom and Marilyn hosted the first organizational meeting to reactivate the Wisconsin Mycological Society (which had gone into dormancy in the early 1970s). The meeting was a solid success, and everyone in attendance went away excited about a fresh start for the Society. Tom and Marilyn also hosted the first official membership meeting and foray at the Milwaukee County Zoo in August 1982. It was rather spooky for some to be collecting in a woods with ten-foot-high fences – hoping we were on the right side and wondering what was somewhere on the other side. As the Society began functioning, Marilyn served as first Secretary, and Tom was elected to multiple terms as Vice President. Both have been very active WMS Board of Directors members since 1982. Tom served as Editor of the WMS Newsletter through 36 issues over 9 years. Finally, both Tom and Marilyn have attended practically every meeting and foray held by WMS over the past 12 years.

It was with great pleasure that the Society was able to honor Tom and Marilyn at the January meeting. They were presented with a framed print of *Cantherellus cibarius*, one of their favorite wild mushrooms.

Alan Parker

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## PIG MUSHROOMS AND “WISCONSIN’S OWN” SUILLUS

by Steve Nelsen

John Steinke’s discussion of the genus *Suillus* (“The Pig Mushroom” in the June, 1992 Newsletter) got me to wondering where the name came from, and how old it might be. Little is said about such things in most mushroom books. S. F. Gray erected the genus *Suillus* in 1821, making it as old in the literature as Fries’s Systema Mycologicum, also published in 1821, which was selected as the starting date for mushroom nomenclature. But *Suillus* goes back at least to the early Roman Empire. R. F. and F. W. Rolfe in Romance of the Fungus World (1925, Dover reprint 1974) summarize classical citations to fungi, and say fungi suilli are mentioned both by Pliny (who died in the Vesuvius eruption in 79 A.D.) and by Martial (who died about 104 A.D.), and were ‘so called because pigs are very fond of them’. Fungi suilli is accepted as referring to boletes, possibly principally *Boletus edulis*, because this species is still the pig mushroom in modern Italian, porcino or bole porcino. How wide the suilli concept was to the Romans is not known, but the Rolfes note that the modern Italian name for *Leccinum scabrum* is porcellino (“lesser pig fungus”). So at least to modern Italians and possibly to the Romans also, pig fungi were dry boletes, not necessarily Gray’s viscid modern *Suillus*. Interestingly, pig references are lacking in German folknames for boletes, so the connection of boletes with pigs appears to be southern European, not northern.

Despite the world-wide distribution of many fungi, including many *Suillus*, *S. sphaerosporus* (Pk.) Smith Thiers is one worth knowing for WMS members, because it is only found in the western Great Lakes region and is one of the few mushrooms first described from Wisconsin material. Its limited distribution causes it to be ignored in most manuals, but it is one of the more unique boletes. It was first published by Peck in

### *Suillus Sphaerosporus*

1885. Charles Horton Peck (1833-1917) was employed as a natural historian and later botanist for the state of New York from 1867 to 1915, during which time he published annual reports on new fungi. He had a special interest in *Boletus* (and followed Fries in lumping almost all boletes into this genus), and in 1899 published the monograph on American boletes which was the standard work for over 40 years. *B.* (now *S.*) *sphaerosporus* was described from a single specimen found by a now nameless University of Wisconsin student near Madison and sent to Peck for identification by Prof. William Trelease. J. J. Newman in his thesis, published in 1914 as Polyporaceae of Wisconsin (Bulletin XXXIII of the Wis. Geol. and Natural History Survey), found it at Madison, Lake Wingra (now totally surrounded by Madison), Blue Mounds, Horicon, and Blanchardville. Smith and Thiers note that it is also rather common in Michigan, and seems to fruit best in the suburbs, when forest oaks are left as shade trees but the ground cover cleared out. The vigorous nomenclatural ‘splitter’ Singer assigned it in 1942 to its own genus, *Paragyron*, but Smith and Thiers put it back in *Suillus*, as the only Section *Paragyron* species, where it seems likely to stay. It is large (8-20 cm) and has a robust gelatinizing veil which does not break until very late, usually leaving remnants on the cap margin as well as on the stem as an annulus. The stem is sometimes eccentric instead of centrally located under the cap. The specific name refers to its nearly spherical spores, which are unique for boletes. Despite the fact that it is the fleshiest *Suillus*, *sphaerosporus* is exceptionally unappetizing in appearance, darkening from nearly yellow to dirty deep brown, and as Smith and Thiers note, it is “not recommended for the table.” Perhaps John’s pigs would like it?

Other *Suillus* species were put in two major sections by Smith and Thiers. Section *Boletinus* has no glandular dots on the stem, usually has an annulus, and typically a dry/fibrillose cap, but can be slimy (it includes genus *Boletinus* Kalch in Moser). It includes the beautifully reddish scaly *S. pictus*, the dry-textured, brown-capped, yellow-pored and delicious larch species *S. cavipes* and the slimy, large-ringed larch species *S. grevillei*. Section *Suillus* always has glandular dots and smears on the stem if there is an annulus, and often when there is not. It has the rest of the Wisconsin species, including the somewhat ugly but very common white pine yellow species with red markings on the cap when young, *S. americanus*, as well as *S. luteus*, *subluteus*, *brevipes*, *granulatus*, *collinitus*, *tomentosus*, and many others. *Suillus* species are among the most popular edibles, but many have a soft texture some people don’t prefer.

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## CUTTING UP BOLETUS

by Steve Nelsen

Americans used the very broad Friesian concept of *Boletus*, adopted by Peck and by Coker and Beer (1943 monograph) well into the 1940's, although Smith and Thiers (1971, The Boletes of Michigan) recognized *Suillus*, *Leccinum*, and *Gyroporus* as separate genera. ST's *Boletus* is still far broader than the European concept of Singer and of Moser, because they retain *Boletellus*, most of *Pulveroboletus*, *Xerocomus*, and *Chalcoporus* within their *Boletus*.

Below is a list of the sections and subsections of genus *Boletus* (of ST, with a few species shown in brackets), showing their "more modern" names.

- Sect. *Subtomentosi*: cap unpolished to velvety or subtomentose.
  - Ss. *Sulphurei* [ *spaerocephalus* ] → *Pulveroboletus*
  - Ss. *Versicolores* [ *auriporus*, *illudens*, *nancyea* ] → *Pulveroboletus*
  - Ss. *Mirabiles* [ *projectellus*, *mirabilis* ] → *Boletellus*
  - Ss. *Parasitici* [ *parasiticus* ] → *Xerocomus*
  - Ss. *Subtomentosi* [ *chrysenteron*, *spadiceus*, *subtomentosus* ] → *Xerocomus*
  - Ss. *Fraterni* [ *bicolor*, *sensibilis*, *pseudosensibilis*, *miniato-olivaceus*, etc. ] → *Xerocomus*
- Sect. *Truncati*: spores notched/truncate. [ *truncatus* ] → *Xerocomus*
- Sect. *Pseudoboletus*: moist to viscid smoothish cap, stem pruinose to smooth [ *badius* → *Xerocomus*, *pulveroboletus* → *Boletellus* ]
- Sect. *Piperati*: cap subviscid/slimy to soft, reddens in age [ *piperatus* → *Chalcoporus* ]
- Sect. *Pseudoleccinum*: Stem with scabers which do not darken in age. [ *longicurvipes* ]
- Sect. *Boletus*: stipe typically reticulate, at least at top.
  - Ss. *Calopodes*: tubes yellow, when young, unstuffed. [ *calopus*, *inedulis*, *speciosus* ]
  - Ss. *Luridi*: pores orange-red-brown when young. [ *frostii*, *vermiculosus*, *luridus* ]
  - Ss. *Reticulati*: stipe strongly reticulate. [ *ornatipes* ( → *Pulveroboletus* ), *griseus* ]
  - Ss. *Boleti*: stipe reticulate at least upper third. [ *edulis*, *variipes* ]
- Sect. *Allospori*: spores ornamented, stem ± lacerate-reticulate. [ *betula* ] → *Boletellus*

I have not seen Sect. *Subtomentosi* Ss. *Sulphurei*, *Versicolores*, or *Mirabiles* species (so that I knew what they were), and also have never seen the easily recognized *B. parasiticus*, which is apparently rare this far north, but does occur in Wisconsin, nor Sect. *Pseudoleccinum*. The Ss. *Subtomentosi* (initially brown), and *Fraterni* (initially red) species, which at least slowly turn bluish upon injury, are common, but the species are divided so finely that I despair of being able to actually identify most of them securely. They are so often attacked by the white *Verticillium* mold that in damp weather sometimes only the ones growing in open locations are not infected. It seems odd to put *truncatus*, which cannot be told macroscopically from *chrysenteron*, and three close relatives in a separate Section, although the spores look quite different under a microscope. *B. pulverulentus* is one of the commoner boletes in Wisconsin, a rather ugly dirty brown yellow-pored one, which is pretty easy to identify from its rapid discoloration of both flesh and bruised pores to especially dark blue. *B. piperatus* is also common and fairly easy to recognize from its reddish brown pores and softening and reddening in age. The species of everyone's *Boletus*, those in Sect. *Boletus*, are relatively easy to assign to subsection from appearance and pore color. I have unfortunately never found enough of the best one, *B. edulis* ( c epe, porcini, steinpilz) to have any idea how many of the seven varieties named in Moses occur in Wisconsin.

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## MUSHROOMS IN OUTER SPACE?

Mycological Humor by Wayne Harrison

NASA scientists at the Jet Propulsion Laboratory announced recently they may have found the key to extended space travel: mushrooms that produce rocket fuel. The mushrooms are of the *Gyromitra* family. Scientists have discovered

what mushroomers have known for years: that this particular fungi produces hydrazine, a key component of modern rocket fuel. NASA scientist Onley Kidding says he's working on producing the *Gyromitra* mushrooms in vast quantities in a small area. If successful, they could be carried aboard spacecraft. "If we can get them to produce a large enough quantity of hydrazine, we may have solved the problem of re-fueling our spacecraft," he told reporters. He says astronauts could "farm" the mushrooms in space producing all the rocket fuel they need to travel from planet to planet. Kidding said he discovered the flammable properties of *Gyromitras* when he built a campfire too close to a patch of them while camping. After he was able to extinguish his tent and sleeping bag, he collected some undamaged specimens and took them back to his laboratory for analysis. He was amazed to find *Gyromitra gigas* contained raw hydrazine. Till now, hydrazine used in rocket fuel had to be produced in the laboratory. Planetary biologist I.M. Joking confirmed the discovery and said he'd like to see giant mushroom farms on the moon and nearby planets allowing technicians to produce hydrazine fuel on demand. "Just think of it", he said. "The lowly mushroom may be the key to interplanetary space travel". It might require that a mycologist be aboard every space flight, tending the "fuel farm" on board the spacecraft. Even the automotive industry is showing an interest. Detroit automotive designer Gollee G. Whizz says he's now working on a rocket-propelled car fueled by mushroom-produced hydrazine. "It may be the key to fossil fuel independence for our planet," Whizz explained. "Some day you may see highway signs that say 'Next mushrooms 100 miles ahead' ". He speculated that today's large automobile companies may even have to jump on the bandwagon if the mushroom craze takes off. Says Whizz, "In the future you may be driving a Chevrolet Chanterelle, or a Ford Fistulina".

Note: *Gyromitras* actually do contain hydrazine, and they can be deadly poisonous.

From: Spores Afield, June 1992, The Newsletter of the Colorado Mycological Society, Wayne Harrison, Editor.

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## PHARMACEUTICAL TESTING OF FUNGI

by Douglas Holt

Maybe the cure for Alzheimer's, heart disease or arthritis is locked in a rare Siberian pine tree from the Altai Mountains, now growing at the Chicago Botanic Garden. Or maybe a clue to the next wonder drug is contained in an even more unlikely biological hideaway: African elephant dung at the Milwaukee County Zoo. While these scenarios might sound like the stuff of science-fiction B-movies, scientists are taking them for real. They are the premise behind groundbreaking partnerships between the garden, the zoo, and North Chicago-based health-product giant Abbott Laboratories. The partnerships are a first for the zoo and the botanic garden, officials said. But Abbott is just one of dozens of pharmaceutical companies, research groups and academic institutions worldwide in a race to develop new medicines from nature. At stake are billions of dollars in potential revenues and new treatments for some of humankind's most intractable illnesses. By year's end, plant experts at the Glencoe, Ill. garden will send Abbott scientists about 1,000 clippings from some 200 exotic woody shrubs, trees and grasses, reaped from collecting expeditions in Japan, South Korea, Siberia and elsewhere. At the same time, zoo officials have donated samples—small samples in plastic bags—of animal dung, starting with American elk indigenous to the Dakotas, Dall sheep from Alaska, and African elephants. Although Abbott collects samples from around the world for testing, using local resources such as the zoo and the botanic garden is a convenient and economical way to enhance that research.

Even though other drug research programs have formed partnerships to get rare plants they hope will yield undiscovered chemical compounds, the Abbott partnership is looking for something more unusual: a class of microscopic fungi that live benignly inside healthy plants and plant-eating animals. Such harmless fungi only came under serious study in the last 15 years, according to James McAlpine, an Abbott senior researcher. The word fungi refers to a large group of organisms from mushrooms to mold in the basement to invisible organisms that permeate plants and soil. In addition to medicines, fungi have given the world beer, wine, bread and soy sauce by carrying out fermentation. Most plant fungi research previously centered on those species that cause plant diseases or soil fungi such as *Penicillium notatum*, the microbe that produces the most famous antibiotic, penicillin. In the Milwaukee Zoo animals, Abbot scientists hope to find novel species of fungi that originally came from plants eaten in their native lands. Even though many of the

animals may have been born in captivity, officials hope that the fungi would be passed along from generation to generation. Abbot scientists cultivate the fungi in the lab, a painstaking procedure that starts in a petri dish and ends on a sterilized piece of Shredded Wheat. Abbot scientists have found the fibrous, airy breakfast cereal ideal for fungi growing. Then the incredibly complex compounds produced by fungi are tested for their disease-fighting ability. Examining plant-based fungi for such compounds is a very interesting approach, said Paul Armond, a scientist at Connecticut-based Pfizer, Inc., a drug company, currently examining plants—but not fungi—from the New York Botanical Garden. They're going to see classes of organisms which probably have not been looked at to any great extent, Armond said of the Abbott project. And that's what this whole thing is about, to look at diverse organisms that have not been explored previously as a source of new leads for drugs. Although a quarter of the drugs prescribed in the United States are extracted or derived from plants, interest in natural products had waned by the 1970s as drug companies focused on synthesizing compounds. Even the National Cancer Institute stopped exploring plants for a few years in the early 1980s. Yet plants are a barely tapped resource for medicine. Out of at least 250,000 species of plants, no more than 5 percent have been screened for drug-producing potential, according to a 1994 report of the American Society of Plant Taxonomists. And for every species of plant, there are three or four species of fungi living, inside of it. Probably fewer than 1 percent of the world's fungi have been pharmaceutically tested, experts said.

The preceding article is reprinted from the *SPORE PRINT*, The Journal of the Los Angeles Mycological Society, November 1994, under a different title.

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## BOOK REVIEW

Mordecai Cubitt Cooke:

Victorian Naturalist, Mycologist, Teacher Eccentric

Author: Mary P. English

It was my good fortune to be introduced to an East Anglican gentleman, who resided in a small agricultural village not ten miles from Norwich. I had been invited to give a gossiping lecture to the rustics in the schoolroom, and was asked to take a preliminary tea with the squire. It soon became manifest that the hobby of my host was 'edible fungi', a subject of which I was then profoundly ignorant, but I became greatly interested in the discovery that there were other fungi beside the mushroom which might be eaten, and I had the pleasure of looking over his portfolio of colored drawings, and hearing his explanation and enconiums. This was my first inspiration to turn my attention to 'toad-stools.' I had never seen them before, or at least with an appreciative eye, and the subject came upon me as a revelation. At first I did as so many others have done, restricted my interest to their edible qualities, and had no ambition beyond being able to recognize, collect, and devour some half-dozen different kinds of 'toad-stools' which, in all my surroundings, I had been taught to regard as 'rank p'isen'. Since that eventful evening I have never abandoned the pursuit and it has been my solace." *M. C. Cooke*

This is not a book that is likely to help you identify mushrooms in any way. However, the title intrigued me because it's rare to see a book related to mycology that is neither a field guide nor a technical monograph, and so I purchased it from Lubrecht and Cramer. This book is a biography of one of nineteenth century Britain's leading mycologists, Mordecai Cubitt Cooke (1825–1914). Though many of us may not have heard of Cooke (see photo), nonetheless, he was a man of wide interest and accomplishment in the field. He compiled the most extensive compendium on British fungi ever written, The Handbook of British Fungi, which covered nearly 3000 species, and he published over 300 other papers and books on the subject, as well as other natural history topics. Some critics considered him to be second only to Rev. M. J. Berkeley, generally considered the "father" of British mycology.

The nineteenth century was the heyday of natural history. The five-and-a-half day workweek was becoming more common, and many persons, particularly among the middle class, were finding time for being outdoors and studying nature. The Woolhope Naturalists' Field Club held the first "foray a-mongst the funguses" in 1868. Cooke was something of a missionary in this natural history/field club movement. This may even have been his most important contribution. He founded clubs for amateur scientists, and was an active member of others, including conducting many

forays and lecturing at meetings. He also edited both popular and scientific journals, such as Science Gossip (the forerunner of Nature) and Grevillea. Many of his books were popularizations of science for the layperson, with titles such as Freaks and Marvels of Plant Life and Ponds and Ditches. At least in his youth, Cooke had a great feeling for amateurs, due in part, no doubt, to his own struggles to become an accepted scientist. He came from a humble background (he was the son of a grocer) and always was somewhat of an outsider amongst the genteel scientists of the day.

Mycologically, Cooke was a prodigious collector, compiler, and classifier. When he finally sold his herbarium, it contained 43,500 specimens. Many of his books and articles were compilations of the existing mycological literature. Taxonomically, his strongest interest was in parasitic and plant pathogenic fungi. It was interesting to learn in the book that at this point there was already a conflict between `lumpers' and `splitters'. Cooke was a lumper and he was also an advocate of natural classification of fungi, that is, classification by evolutionary relationships, rather than gross characteristics, such as spore color.

M. C. Cooke was a man of considerable talent and energy. Besides writing them, he also illustrated many of his own books and articles. As has often been the case, mycology was more his avocation than his vocation. He worked at a variety of occupations, including being a schoolteacher, and then later a curator of economic products at the India Museum in England. It was only in the latter years of his working life that he worked as a professional mycologist, when he was appointed the first cryptogamic botanist at the Royal Botanic Gardens, Kew. Thus, most of his mycology was done in his spare time. Also, his accomplishments are all the more remarkable given that he had little formal education.

Cooke's dedication to his mycological work and inner drive probably encouraged the term "eccentric" in the title. He was the proverbial workaholic who wouldn't let anybody into his study, and everything else in his life was secondary to his mycological, or more generally, his natural history interests. Undoubtedly though, some small part of his eccentricity concerns his complicated personal life. He and his stepdaughter had six children together, all the while both were living with his wife Sophia. (This information rather changed my impression of Victorians.) This led to many confusing situations, at least as far as official records were concerned.

The author, a distant relative of Cooke's and also a professional mycologist in her own right, did a great deal of research and detective work in order to write this book, and she has done an excellent job with the materials she had to work with. It is perhaps unfortunate that the sense of humor which Cooke undoubtedly had couldn't be made more apparent, as he sometimes seems rather a tragic figure. It is also unfortunate that more information was not available about his complex personal life.

Overall, I found the book to be of interest for the glimpses it gives into Victorian life and science. I especially appreciated the discussions on education and the various scientific controversies of the times.

The hardcover book is available from Lubrecht Cramer for \$45, according to my most recent information.

Colleen Vachuska

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**RECIPE:**  
**OVERNIGHT PICKLED MUSHROOMS**  
by Joanne Pasek

- 6 cups sliced cooked mushrooms
- 1 cup sliced or diced onions
- 1 cup sliced or diced green pepper (optional)
- 1 cup vinegar
- 2 cups sugar
- 1 Tbsp. canning salt



In a bowl place the vegetables and toss to mix. Combine and mix well the vinegar, sugar and canning salt. Make sure that the sugar and salt are completely dissolved. There is no need to heat the brine. Pour over vegetables, cover, and refrigerate overnight.