THE NEWSLETTER OF THE WISCONSIN MYCOLOGICAL SOCIETY September 2001 Volume 18 Number 3

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MESSAGE FROM THE PRESIDENT

John Steinke is your new Wisconsin Mycological Society President and I, being that person, am obliged to submit a letter from the president to our most excellent newsletter. Many of you have known me for years, but for those new members and distant members I will give you a quick summary of who I am and how I got here. I find myself in good health at the age of 51; farming is still paying the bills and for the most part allowing me to enjoy a good life with my wife Diane, son Jesse in the Navy and my daughter Rhonda in college.

My only mushroom hunting for 35 years was in the spring in pursuit of the elusive morel. Then in 1984 my morel buddy and I attended the first "Mushroom Fair" in Milwaukee and I found out that mushrooms grew in the fall as well, or I should say, better than in the spring. In the fall of 1985, I signed up for Dr. Parker's short mushroom courses at the University of Wisconsin--Waukesha campus and have been under the supervision of my Myciatrist, Dr. Alan Parker, ever since. Also in the fall of 1985, I joined the Wisconsin Mycological Society. During the years that followed, I served the WMS on the Board of Directors, as Treasurer, then as the combined Secretary/Treasurer and finally held the big title of Assistant Secretary/Treasurer.

So you say, how does a farmer with basically no formal education beyond high school get to be President of the Wisconsin Mycological Society? The answer to this is the supporting cast. It is so good that they can plug anybody into this job. We have this great newsletter thanks to the people that put it together and those that contribute written material and photographs. The day to day business of the Society is completed in a timely and efficient manner, thanks to the officers that remain in place. And the guidance from the board of directors is strengthened by the diverse backgrounds they bring to the meetings. We should also thank the people who resurrected this society back in the 80's, and who designed the strong foundation that supports this society today. And, last but not least, do not forget all members past and present; they have funded this society and contribute in many ways not mentioned above.

I hope to meet all of you out there in newsletter land or at least hear from you during my reign. My email is jdirtstar@wi.rr.com. You can also reach me at my home and work address which follows. Happy hunting!

by John Steinke S92 W32460 Hwy NN Mukwonago, WI 53149

FALL FORAYS

August 31 -- September 3 (Fri--Mon) -- WMS Camping Foray near Phillips. September 15 (Saturday) -- Sami Saad Memorial Foray, Mauthe Lake Recreational Area, near New Fane. September 22 (Saturday) -- Bristol Woods County Park. September 29 (Saturday) -- Astico County Park, near Columbus. September 30 (Sunday) -- South Kettle Moraine State Forest near Eagle. October 6 (Saturday) -- Tula Erskine and Fred Hainer Memorial Foray, Point Beach State Forest, near Two Rivers.

Members should have received announcements with details and directions to each of the above events.

DUES REMINDER

This is a gentle reminder that your 2002 WMS dues are due on January 1. Early payments are appreciated by the secretary. Checks can be mailed to John Fetzer at 1309 S. 73rd St., West Allis, WI 53214. Note that WMS dues are \$15 and that NAMA (North American Mycological Association) dues are \$32. WHY WE ENJOY COLLECTING by Tula Erskine

Why We Enjoy Collecting: "In his attempt to refresh his spirit or escape his cares, man often turns for relaxation to a world he has not made. Through the ages he has been both awed and inspired by the other living things with which he shared this earth. He has both loved and feared the mushroom. Its seemingly sudden appearance adds to its mystery. Some folks like to watch birds and take pleasure adding to their list of identified specimens. Some of us prefer more stationary objectives, as well as the challenge of finding species not yet identified in North America. Aside from their culinary and medicinal value, fleshy fungi possess much beauty. We are fascinated by their variety of form and color -- many even have distinctive odors! It is in this vein, that we search for and study fleshy fungi... aesthetic appeal... fun of discovery...

The above quote was contributed by Moreau Parsons, a friend of Tula's, who found this quote written on a large poster board in Tula's attic. Moreau thought that it may have been prepared by Tula for the annual mushroom fair at the Milwaukee Public Museum.

ANNUAL PICNIC AND MEMBERSHIP MEETING 23 June 2001 by Peter Vachuska

Bill Blank did an excellent job, as usual, in providing eats and drinks for our annual picnic. He deserves a big "thank you" for all of his time and labor and the use of his equipment. The pot luck was excellent with a good mix -- We even let in a couple of morel dishes without questioning whether they violated our "no wild fungi" policy.

After refreshments and the meal, we had the general membership meeting followed by the board of directors meeting. Here are some of the highlights of those meetings:

Martyn Dibben was elected an Honorary Director of the WMS. Martyn was one of the founding members back in 1981 and has served as a director since that time. He was the driving force behind the Annual Mushroom Fair and has led numerous forays and given several winter lectures. The WMS now has five honorary directors.

> Hal Burdsall Martyn Dibben Tom and Marilyn Fifield Tom Volk

It was decided that the Point Beach foray should be renamed the Tula Erskine / Fred Hainer Memorial Foray and that the Mauthe Lake Foray should be named the Sami Saad Memorial Foray in honor of our recently departed foray leaders.

Fall forays and locations were decided. See "FALL FORAYS" in this Newsletter.

A slate of directors was elected with two new directors added to the list. The membership on the board of directors now is:

Bill Blank Kris Ciombor John Fetzer [New] Chuck Fonaas Dave Menke Alan Parker Sunny Rupnow Chuck Soden John Steinke [New] Peter Vachuska

A new slate of officers was elected. Your officers are now: President: John Steinke [New] Vice President: Dave Menke [New] Secretary/Treasurer: John Fetzer Assistant Secretary/Treasurer: Chuck Fonaas [New]

The financial report was given by John Fetzer. Our balance as of June 23rd was a healthy \$3,329.02. John gave a detailed account of incoming and outgoing funds over the last year. Our membership, however, has dropped 16% over the last year and stands at 116 (down from 138 last year). This is an area we need to work on.

Let me end by encouraging everyone to attend our annual meetings. It is always a good time and an excellent opportunity to observe and take part in the running of your WMS.

2001 NAMA FORAY by Colleen Vachuska

The North American Mycological Association Annual Foray was quite close to home this year. It was held July 5-8 at St. John's University in Collegeville, Minnesota, the site of several previous regional NAMA forays.

Like Wisconsin, early June around St. John's had been wet, but conditions had been dry in the couple of weeks before the foray, so no one expected an abundance of fleshy fungi. Nonetheless, I think about 210 species were found. Of course many of them were polypores. I have to admit -- I went on only one of the 12 arranged forays, and I brought back only one small branch full of specimens. It was a small crust-like polypore called Perenniporia ohiensis. It doesn't look like much without magnification, but its marvelous uniform round pores are really quite neat to look at when viewed with a hand lens. It's very difficult on these national forays to be the only or even the first person to find some species, but I was happy at least that one person at the foray wrote this species down on his list of fungi he had never seen before. Other fungi found at the foray that people thought were interesting included Cryptoporus vulvatus, a globose-shaped polypore that often grows on standing dead conifers. It is unusual because of the veil- or volval-like covering on its pore surface. Other fungi that attendees mentioned as being interesting finds included Microstoma floccosa, the shaggy scarlet cup, and Vararia investiens, an attractive yellow crust fungus.

The foray was called the Clyde Christensen Memorial Foray in honor of a mycologist (b.1905--d.1993) who was on the faculty of the University of Minnesota for many years. Christensen's professional research mostly involved pathogenic and destructive fungi, and he was internationally known for his work on fungi that spoil stored grain. Nonetheless, he also endeared himself to amateurs by writing several early popular books on mushrooms including Molds and Man and Common Edible Mushrooms. During the evening program, several people who had worked with Christensen gave some reminiscences about what he was like. These were very interesting to listen to and gave you some feeling for the man. Obviously, he was a man who inspired respect and he had a strong influence on the students that he worked with.

Christensen also popularized the expression "Foolproof Four" for 4 edible mushrooms he thought should be easy for beginners to identify: morels (Morchella esculenta and related species), shaggy manes (Coprinus comatus), sulfur shelf (species of Laetiporus), and puffballs (species of such genera as Calvatia and Lycoperdon). The final lecture of the foray was given by Tom Volk and was entitled "Clyde Christensen's Foolproof Four Revisted". Unfortunately, we had to leave early and were unable to attend the lecture -- but perhaps Tom could give it again for the club or we could watch the NAMA videotape of it.

NAMA forays, even though they are national, always have somewhat of a regional slant. Almost all of the speakers were from the upper Midwest, including several mycofolks from Wisconsin who have spoken to our club in recent years such as grad student Dan Czederpiltz and mushroom grower Joe Krawczyk. Since the foray was held in Minnesota, there were of course evening lectures on Minnesota fungi and the biogeography of the local area.

Anyway, NAMA forays are always fun and interesting and go by quickly, no matter what quantity of fungi that is found. I was surprised that not more Wisconsinites were there. For those of you that are members of NAMA, be on the lookout for other NAMA forays that are nearby and consider taking the opportunity to attend.

SUMMER FORAY 21 July 2001 by Peter Vachuska

About 15 die-hard WMS members showed up on a hot Saturday after weeks of drought to take part in the annual summer foray. John Steinke, our foray leader, caravaned us to the wettest site in the region, the Scuppernong Springs Nature Trail. The last time we were there, several years ago, we were escorted out by an armed DNR ranger who did not approve of disturbing fungi in the natural area. This year our foray leader, who is now the WMS President, spoke with a DNR naturalist who gave us permission to pick fungi in the area. Not that there were any fungi to pick. The total count for the foray was about 16, one for each forayer. This included four slime molds and a half dozen kinds of polypores. Still, we all had a good time; it was slightly cooler in the springs area than elsewhere and there was plenty of good conversation without the constant intrusion of finding new fungi.

MYCOBRIEFS by Colleen Vachuska

* Mushrooms it was: Historians have long suspected that the Roman emperor

Claudius I was poisoned by mushrooms served to him by his fourth wife Agrippina, who desired to see her son Nero ascend to the throne. Now this theory was "reaffirmed" by a medical researcher at the University of Maryland's annual Clinicopathologic Conference. Dr. William A. Valente, a clinical professor at the University of Maryland School of Medicine, was given a brief description of the emperor's death and medical history, but no information about who the subject was or when he lived. The long list of symptoms Claudius suffered before his death -- extreme abdominal pain, vomiting, diarrhea, excessive salivation, low blood pressure, and difficulty in breathing -- led Dr. Valente to conclude that Claudius was suffering from poisoning by muscarine, a toxin found in certain fungi. (Milwaukee Journal Sentinel, Feb. 11, 2001)

- Comments: There are problems with this theory that Claudius died from muscarine poisoning. For example, though muscarine, a toxin typically found in species of Inocybe or Clitocybe, causes the symptoms described above, it doesn't generally have a fatal prognosis. Other theories about Claudius' death have been suggested. The famous mycological historian R.G. Wasson, after carefully evaluating Claudius's death, came to the conclusion that Claudius died from a combination of Amanita phalloides poison and a toxic alkaloid called colocynth. In Denis Benjamin's Poisons and Panaceas, he describes a possible scenario using these 2 poisons: Claudius eats a dish of Amanita caesarea (a favorite Roman mushroom) that has been laced with the juice of Amanita phalloides, then becomes ill the following day; his physician is called in and he administers the colocynth to deliver the final blow. Other authors have speculated that Claudius simply died from actually eating Amanita phalloides mushrooms, whether intentionally or by accident.
- Undoubtedly, the diagnosis depends on what information is given, as there have been various and contradictory accounts given of the details surrounding Claudius' death, by at least 3 ancient authors. For instance, some accounts have Claudius dying the same night after eating a meal which included mushrooms, others that his death took place over several days. It seems likely the truth will never be known, and there are problems with any explanation, but it makes for fun speculation. I'll always remember the scene near the end of that wonderful miniseries "I Claudius" where Agrippina feeds Claudius a forkful of mushrooms and he eats them with a knowing look that this may be the end for him.
- * They keep getting older: Biologists have long wondered what the first terrestrial pioneers were, and many suspect that they were fungi living in association with green algae or cyanobacteria. Recently, some research work done by S. Blair Hedges at Penn State and his colleagues suggests that fungi may have been around more than 1 billion years ago. Previous work had placed the origin of modern fungi at about 600 million years ago. What Hedges and his colleagues did was compare sequences for 119 proteins from a wide variety of fungi, comparing the same protein from pairs of species. The fewer sequence differences found, the more closely related the species are. They used this information to come up with a fungal family tree. Most of the fungal branches split off between 1.5 billion and 966 million years ago, more than 300 million years earlier than was previously thought. This hypothesis was supported by analysis of other plants to see where they fit into the timeline. (Science, August 10, 2001)
- * More on fungus evolution: Most of us are familiar with the sight of lichen growing on trees or rocks. A lichen is a symbiotic relationship between a fungus and a photosynthetic partner such as algae, cyanobacteria, or both. The fungus provides shelter for its partner, and the partner provides carbohydrates to nourish the fungus. Up to 20% of fungal species are thought to live as lichens. Up until recently, scientists had assumed that lichenization had arisen independently many times throughout fungal evolution, because of the diversity of fungi that form lichen and because many branches of the fungus family tree contain both lichenized and nonlichenized species. However, a recent genetic analysis by researchers from the Field Museum of Natural History in Chicago and the University of Reading in the United Kingdom has changed that view. After analyzing the RNA from 52 species from the Ascomycota phylum, researchers determined that actually lichenized fungi arose only a few times in the history of the group. Also, on many occasions the fungi ditched their symbiotic partner to go it alone. Evolutionary biologists are excited because this is the first solid study to show that lichen symbiosis is reversible. Speculation is that symbiotic partnerships are evolutionarily unstable, as one partner is likely to end up being too sorely taken advantage of to continue the relationship. (Science Now website, originally Nature, June 20, 2001)
- * Mushrooms as anticoagulants: Researchers in Slovenia report that a number of mushrooms contain substances that potentially could be isolated and developed into anticoagulant drugs. Researchers at the University of Ljubljana examined 95 species of mushrooms for their inhibition of thrombin, the key enzyme in the coagulation process. Extracts from seven of these species were found to produce considerable thrombin inhibition. One of these

was Clitocybe gibba, a common species of funnel-cap mushrooms, which inhibited thrombin activity by up to 49%. One of the species, Gleophyllum odoratum, a common wood-rotter, exhibited a high degree of inhibition of both thrombin (72%) and another important enzyme trypsin (60%). (Blood Weekly, June 14, 2001)

ASCOS by Steve Nelsen

What does Helvella mean (to whom)?

Treatments of cup fungi in American manuals were dominated for decades by that of Fred Jay Seaver, who published his monograph on Operculates in 1928 and an addendum in 1942. Both were reprinted by Lubrecht and Cramer in 1978. Seaver pioneered systematically applying the microscopic character of whether the ascus (the sac in which the spores of Ascomycetes develop) has a lid (and is thus Operculate) or not (Inoperculate), although he points out that this feature was suggested to be important by Boudier in 1879. Seaver still made his first cut in Operculates based upon general shape of the fruiting body. As pointed out below, this is now considered hopelessly old-fashioned. Any character that can be seen with the naked eye is considered far less important than are microscopic characters, because the latter indicate true relationships between plants far better. In Fries's and Peck's day, virtually all cup fungi were in Peziza, and a large fraction of Seaver's books concern "synonomy", straightening out the many parallel names that had piled up in the literature for most species. Seaver had only two Families of Operculates, which may be summarized as cup-shaped (Pezizaceae) and "others" (Elvelaceae). He dressed up the distinctions a bit, but not that much. His Elvelaceae had five genera, of which the ones still used are Morchella, Verpa, Elvella, and Underwoodia. Seaver used Linneus's 1753 spelling instead of Helvella, and discussed at length why he thought people ought to use the earliest name even if it differed from Fries's, which was the starting point for mushroom nomenclature then. Linneus is indeed now used as the starting date for mushroom nomenclature, but apparently no one thinks that this requires going back to the original spelling. Seaver tried to introduce a fifth Elvelaceae genus, Durandiomyces, in honor of the principal American cup-fungus expert of Seaver's younger days, Durand, who Seaver laments passing away before he published his book on the subject. The genus was erected for a single taxon that has the shape of a multi-convoluted cluster of fused cups (the photo Seaver included was taken by Durand). Seaver noted that this "species" microscopically resembles Peziza proteana, but argues that a new genus is justified because he had not ever seen intermediate forms. Modern mycologists (who also have not mentioned seeing intermediate forms) place minimal importance on macroscopic features, and Seaver's new genus is not used. Its taxon has been demoted back to being a variety of Peziza proteana.

There has been a lot of taxonomic water under the bridge since Seaver's day, and what may be the most widely used more modern Ascomycetes book [that means I bought a copy] Fungi of Switzerland (Vol. 1 Ascomycetes) by J. Breitenbach and F. Kranzlin (1984) says it uses the nomenclature of Dennis (1978) [I do not have it]. Morchella is promoted into its own Family (everybody now thinks Morels, Verpas, and Disciotis deserve their own family), and Helvellaceae now contains, besides Rhizina, Gyromitra, and Discina, five genera that Americans lump as Helvella: Helvella, Leptopodia, Macroscypha, Cyathopodia, and Paxina. Seaver included the latter three genera all in Paxina, in his family Pezizaceae because they are all "stemmed cups", so he had what is now Helvella split between the only two families he recognized. This is an excellent illustration of the fact that higher groupings of fungi than species have been remarkably variable, and respected mycologists have twisted and re-sorted them quite alarmingly, to suit current taste. For Dennis, Helvella only includes lacunosa, crispa, lactea and their close relatives. Because Dennis's genera are not used in the U.S., and Breitenbach and Kranzlin never define any genera, I have little idea how they are actually supposed to be distinguished. Of course the only difference is in whether you want these divisions to be "sections" or raised to genera, but it is out of fashion for "popular" books to tell you about sections of genera anyway; they haven't since about 1950. In my opinion, when color pictures came in, making it too expensive to say much, books were quite generally "dumbed down" to fit the medium. Donald H. Pfister performed the service of up-dating Seaver's nomenclature for Operculates in a 1982 Farlow Herbarium pamphlet, kindly made available by Lubrecht and Cramer along with the Seaver reprint. Pfister says in his introduction that he uses Dennis's species concepts (among others), but he lumps all five of the above genera into Helvella. He references, and I believe follows, Nancy Smith's treatment in Helvellas of Michigan (1972) and... Western U.S. (1975). This "lumper's" view is still prevalent in the U.S., currently residing on the web's "Preliminary Checklist of North American Pezizales" at www.bcc.orst.edu/mycology/pezweb/. I'm sure that daddy, Alexander H. Smith, the premier lumper of all, would be pleased. I cannot resist noting that this "bcc" list from Oregon has some odd omissions, including the unmistakable Eastern genera Underwoodia and Wynnea. They apparently get North America and the Northwest Coast confused, which is strange, even for unrefereed material

on the web.

Helvella costifera

There usually seems to be a hiatus in mushrooms between the spring rains and the start of the summer mushrooms. This year we had the wettest May in a long time, and the drought didn't start till a couple of weeks into June (but it sure came then!). It made for a couple of nice collecting trips in early June, when there often is almost nothing. Adrienne and I found two patches of large, showy cup-fungi on June 9th this year at Mauthe Lake, on the Ice Age Trail segment that starts at the washrooms just behind the East entrance. They were on opposite sides of the trail, near the foot of the wooden steps leading down from the esker toward the crossing of the creek. On the left of the trail we found three large, lovely, and especially dark brown Helvella of the "stalked cup" type that was (or may still be, depending on who you follow) Paxina. They looked like unusually large Helvella (Paxina) acetabulums, with ribs on the stem that extend up onto the cup. However, a typical H. acetabulum was found a few hundred feet up the trail, and these "looked different" to us. They were bigger (to 9 cm. wide), and darker inside and out, making the nearly white ribs especially prominent. They also had somewhat smaller spores (15-18microns) than the range of 18-22microns given for H. acetabulum (within which the smaller, lighter one found up the hill fell). Tracking down the name for this stuff took a while. Most American authors just copied out of Seaver for cup-fungi, and the species is relatively new (published only 48 years ago! But "everything" this big and pretty was of course published a century earlier), and I have only four books that even include what I now think it is, Helvella costifera Nannfeldt (1953). Costa is Latin for rib, and fera is an adjective referring to "wild"; both are certainly appropriate; this stuff has about the wildest ribs imaginable. There is a fine description in H.V. and A.H. Smith's How to Know the Non-Gilled Fleshy Fungi (1973) on p. 38, but this book has only a few drawings, and there is one of H. acetabulum but not of costifera. The crude drawings they have would not distinguish between these two species anyway. I am of the picture-matching school of amateurs, which is where I was led astray for days. The wonderfully illustrated Fungi of Switzerland (Vol. 1, Ascomycetes) shows Paxina costifera (Nannf.) Stangl (species 26), which obviously had nothing to do with what we had, so I could rule it out immediately. Their picture is of a very yellowish, shorter stemmed raggedy-looking cup. However, as I returned to it days later, in the text they note that their illustration is not the typical form but a special one that grows under spruces in the mountains (the typical one grows under hardwoods in the valleys, in shorter supply in the Canton of Luzern, but a good description of where we found ours). They also give Acetabula ancilis ss. Boud. and ss. Bres. as synonyms. Seaver (and others) have Acetabula ancilis equated with Discina (or Gyromitra according to Harmaja's scheme) perlata. Breitenbach and Kranzlin do not mention this, but when I found it, it threw me further off the track. Although D. perlata is indeed more like the Swiss picture, it certainly has nothing to do with what we found. However, the illustration in the Italian series by Bruno Cetto, I funghi dal vero (Vol.5 sp. 2089) and one in a Spanish book by F. de Diego Calonge, Setas (Hongos) Guia Ilustrada (sp. 39; Calonge likes Helvella, illustrating ten species) both could be what we had. I was further convinced by going to the web and typing the name into the search engine "Google", recommended by Alan Parker. This turned up several pictures, making it appear clear that what we had is currently being called " costifera" on the web (which is not necessarily the same as it being the right name, of course, because no information is given with the pictures which would in fact allow one to tell). The prettiest images, even more impressively ribbed than ours, are by a Belgian named Yves Deneyer, and dated May 2000; check //users.skynet.be/deneyer.mycology/.

Sarcosphaera coronata

While I was fooling around photographing the Helvella on June 9th, Adrienne found an even more spectacular pile of cups with violet interiors directly across the trail. (See cover photo.) It gave no identification problem, being excessively illustrated and far-overnamed in many books that I have. (I enlarge the attributions below over the abbreviations usually used, because I feel like it.) The three most common attributions are Sarcosphaera coronata (Nicolas Josef von Jacquin 1778 (Austrian) ex Mordecai Cubitt Cooke (English)) Joseph Schroeter 1893 (German) = S. crassa (Santi ex Steudl (Austrian)) Zd. Pouzar = S. exima (Durieu & Leville (French)) Rene C.J.E. Maire (French). It is pretty and uncommon enough that apparently hardly anyone who found it in Europe seems to have resisted publishing it as a new species. Seaver, who was really into synonyms, also reports Peziza macrocalyx Reiss (no date, meaning that he could not find the reference to include in his 26 page bibliography; I don't know who it is either), Sarcosphaera macrocalyx Bernard Auwerswald 1869 (who named Sarcosphaera), P. amplissima Elias Mangus Fries 1849 (Swedish), P. Geaster Gottlieb Ludwig Rabenhorst 1867 (German), Aleuria exima Claude Casimir Gillet 1879 (French), P. cissoni Jean Baptiste Marie Joseph Solange EugÊne Ripart 1876 (French), Pustularia gigantea Heinrich Rehm 1905 (German), P. gigantea Pier Andrea Saccardo (Italian) & Alessandro Trotter 1913, and (questionably) P. sicula Giuseppe Inzenga 1869 Sicily, at that time in

revolution. It appears frequently in American manuals because it is easily recognizable and is even said to be reasonably common in the northern Rockies and far West. It seems to be quite uncommon in the East and middle West, and I have been unable to find what Peck called it. Seaver lists it in coniferous woods, which is not where I have found it in Wisconsin. However, he says that the only fresh material he ever saw was sent to him from Washington Co., New York. He lists it from British Columbia, NY, and MI, and says in his 1942 appendix (p. 332) also CA and OR. It is described (mostly by people based on the west coast) as pink, but the only two times I have seen it in Wisconsin it lacked pink tones. We saw it three years ago at Governor Dodge State Park, but it has not turned up since.

Punching "sarcosphaera coronata" into Google on the internet produces a frightening "74+" hits in less than a second. There are also a number of photos (the best photographer appears to me to be Yves Deneyer). The lack of any actual information in these 74 hits is quite striking; one gets the name inserted in lists of various sorts (Finns and Croatians especially want to tell us what they call everything, Danes like to list their finds on forays, and it is in the middle of five categories on Red Lists for U.K., Norway, and Finland) and pictures attributed as that (completely without any description), but basically that is all. The pictures I saw from the web are single or a couple together, as are the illustrations in books I have seen. Seaver says it grows "solitary to gregarious or in clusters of 2-5 individuals", and is widely copied. The cluster of nine that we found is clearly exceptional. I wonder if the extremely wet May and early June this year caused the multiplication.

RECIPE: MUSHROOM CABBAGE CASSEROLE, RUSSIAN STYLE by Greta Menke

4 cups water 4 cups shredded cabbage 3 Tbsp. butter 1/2 tsp. salt 1/4 tsp. pepper 1 tsp. dill seed 1 cup (or more) sauteed Boletus or other mushrooms 1 8 ounce can tomato sauce 1 cup sour cream 1/3 cup onion, chopped 1 cup buttered bread crumbs

Bring 4 cups of water to a boil and add cabbage. Bring back to boiling and cook 2 minutes. Drain. Stir in butter, salt, pepper, dill seed, and mushrooms. Add tomato sauce, sour cream and chopped onion.

Place in 1 1/2 quart casserole. Top with bread crumbs.

Bake in 375 degree oven for 25 minutes. Enjoy!

END