



Ohio Mushroom Society

The Mushroom Log

Summer Foray at Hiram College

Return to northeast Ohio for our summer foray weekend. For the first time we will explore the J.H. Barrow Field Station is just east of Hiram, Ohio. It is the property of Hiram College with over 400 acres of varied habitat. There are many interesting student research projects carried on including aquatic and terrestrial ecology, agroecology and animal behavior to mention a few. There is interest in compiling a photo-journal of the species on the property. A student-created pamphlet on fungi has already been printed. Our foray may help add more species to their on-going project and those with digital cameras may assist with the photo-i.d. project?

Location: Hiram, OH, Portage County, is located at the junction of Ohio Rt. 82, Ohio Rt. 700 and Ohio Rt. 305. (*Ohio Atlas & Gazetteer* p. 42) [southeast of Cleveland, northeast of Akron-Canton, west of Warren, Ohio]

From the Ohio Turnpike take Exit 193 at Shalersville. Go north on Ohio Rt. 44 through Mantua and at Mantua Corners head east on Ohio Rt. 82 to Hiram. At the junction of Rt. 82,

Rt. 700 and Rt. 305 go straight. Approximately 3 miles east off Ohio Rt. 305 is Wheeler Road. Go south (turn right) and J.H. Barrow Field Station is on the westside of the road (right-side) about 1 mile. We will strive to have the OMS foray signs in full view!

Accommodations: Hiram, OH possibilities.....1) Least expensive first! Camping at the field station on Wheeler Road. You may arrive Friday after 5 PM for set-up! There are no facilities/no hook-ups other than the Observation Bldg restroom which does NOT include a shower! Tents can be pitched on the lawn near the building and campers can park in the parking area near the classroom building.

2) Dorm housing is available but you will need to call Anita Stocz and Teal Young at 330-569-5900. The cost is \$16.50 per night for doubles. Please make arrangements with them.

3). Positively the finest housing would be The Hiram Inn. It is in the heart of Hiram and offers elegant and charming accommodations. Mention the Ohio Mushroom Society to receive their special rate of \$69.00 + tax per night. Breakfast included. Call 888-447-2646 or 330-569-6000; www.hiraminn.com

5) Streetsboro, OH off Exit 187 of the Ohio Turnpike has a number of motels. It is the summer season at Geauga Lake so they may be full and have summer pricing. They are generally located on Route 14 East off this turnpike exit.

Microtel Inn & Suites- 330-422-1234 or 800-771-7171

Holiday Inn Express- 330-422-1888 or 800-HOLIDAY

Comfort Inn- 330-422-6446 or 888-422-6229

Econolodge- 330-626-5511

Schedule:

Friday, July 24, 2009—Social gathering will be in Garrettsville, OH on Rt. 82 approximately 3 miles south of Hiram. Meet 6:30 PM or later at Main Street Grill and Brewing Company, 8148 Main St.. We will start with homemade ice cream on their deck overlooking the beautiful Eagle Creek. Eventually we will head to the bar to continue our evening round-up. Parking is on Main St. and also 1 block behind the storefronts across the street. We will break-up our frivolity at about 9-9:30 PM.

Saturday, July 25, 2009 our foray will begin with the hospitality and sign-in from 9

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AM to 9:30 AM in the Observation Bldg at the field station.

The forays will be on the field station property with alternate opportunities at near-by Eagle Creek Nature Preserve, ODNR and possibly at Nelson Ledges State Park.

There will be a special tour of the classroom building and the unique programs for wildlife rehabilitation and the waterfowl facility.

Lunch will be provided. Potluck contributions are always WELCOME!!

Our featured speaker will be determined at a later date. Check the website for details.

Saturday evening dinner around 6:30 pm. Cal's Restaurant & Pizza Express, 8301 Windham St. Garrettsville. Take Rte. 82 southeast out of Garrettsville for 0.2-0.3 mi to the Sky Plaza mini-mall.

Sunday, July 26, 2009 will continue our mushroom hunting, a 'debriefing' and clean-up from 9 am to noon.

This description is subject to alteration as plans continue to develop. For questions call Pauline and Pete Munk 440-236-9222 or email them at pjmunk3@yahoo.com

Morels in 2009

From Walt Sturgeon (5/2/09): Derby Day is almost always morel day for me and this year was no exception. Sharon and I made the trek to Mingo Park where the PA Club's morel weekend was going on. We did our own thing but did visit briefly

with both John Plischkes. In the AM we got a couple of pounds each, mostly big *M. esculenta*. In the PM I got 000 while Sharon bagged another couple of pounds of some monster morels, as she put it.

From Jerry Pepera (5/3/09): We had a somewhat successful day at Salt Fork. Several people came up with morels including a large bag full from a new member. We searched Hosaks Cave area with about 2 dozen people. Some of us concentrated on the lowlands on East-facing slopes and came up empty in spite of it being prime dying elm habitat. All of the morels that were found were on south facing slopes or at the top of ridges in warmer areas. Most of the specimens found were quite large and in good condition, but not pristine.

Dick Doyle (5/4/09): A group of five of us came up empty handed at Salt Fork, but I partially redeemed my honor this morning at Dawes Arboretum where a group of seven of us who had signed up to hunt morels on Mon. at 8 AM were successful in bagging several morels, mostly yellows. I found the first one, a very large yellow one, and later found 4 more large yellows. Others found smaller yellows and a couple of black morels. All in all we had a good time and Lori Totman and Tim Mason, the group leaders, served up some delicious black morel cream sauce on puffed pastry prepared by the C-TEC Culinary Arts students. They were garnished with ramps (wild leeks) gathered fresh at Dawes.

Shrimp Shells, Fungal Cells, and Joint Pain

By Brian Luther

The cell walls of higher fungi are composed mostly of *chitin*, (along with glucans and other polymers) which is a polysaccharide (literally: "many sugars") molecule constructed of long chain polymers of *n-acetylglucosamine*, connected by what in chemistry is called a beta-1, 4 linkage, so they connect end to end. Arthropod and crustacean (insects, shrimp, crabs, etc.) skeletons are also made primarily of chitin, and it's found in a variety of other invertebrates, such as earthworms. It's structurally sound and provides protection from the environment; it is pretty much impervious and is not digestible by most creatures. In its pure state, it is flexible and somewhat leathery in consistency. Depending on the other materials that fungi, insects, and crustaceans add to it, it can remain flexible or become rigid. It is quite durable.

It's worth noting that two unrelated groups of organisms--fungi of the Kingdom Mycota and arthropods of the Kingdom Animalia (just to name a few)--would separately come to the evolutionary "conclusion," after hundreds of millions of years, that chitin was their best solution for a structurally sound material for cell walls (fungi) and for protective shells (arthropods).

Chemically chitin is very similar to cellulose, a related structural polysaccharide that's produced by plants, and differs by having

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only a few different atoms in the molecules.

Recognize the *glucosamine* in the n-acetylglucosamine? If you chemically break down the long chains in the *chitin* polymer into smaller units then you get *glucosamine*. Glucosamine is basically a glucose molecule (basic sugar or monosaccharide) that has one oxygen atom replaced with a nitrogen atom, making it into an *amino sugar*. Glucosamine has a mild sweet taste (if you chew the pills), indicative of how close it is chemically to glucose (one atom different). It is digestible and widely used as a supplement by humans and in veterinary medicine to help reduce joint pain and inflammation. I'm guessing there are a lot of you out there who take glucosamine, in some form. It's a huge industry, with large numbers of brands and suppliers. The three most common glucosamine compounds consumed by humans are *glucosamine sulfate*, *glucosamine hydrochloride*, and *n-acetylglucosamine*.

Glucosamine is a natural compound in the glycoaminoglycans found in the human joint cartilage matrix and connective tissues. It is produced by our bodies and is an important building block or precursor for the production of proteins necessary for cartilage formation.

So, taking it as a supplement in some way encourages the natural cartilage-formation or development process, giving the positive effects that many people have experienced.

Most glucosamine produced for human consumption is processed from shrimp, crab,

and lobster shells discarded from seafood processing plants, which is a cheap, abundant, and readily available source of chitin. The manufacturing process, simplified, takes raw crustacean shells and treats them with concentrated acids like HCl (hydrochloric acid), which breaks the chitin polymers down yielding as much as 80 percent or more glucosamine, which is then purified and mostly put in the form of pills. Presumably, large cultures of fungi producing vast amounts of hyphae could be grown and harvested for the chitin and processed in a similar way, but would obviously be more costly because the shrimp shells are just discard material anyway.

The subject of whether or not glucosamine taken as a supplement has beneficial effects is controversial. The Mayo Clinic website gives a favorable rating for glucosamine, especially as used for knee and general osteoarthritis pain. There is, however, considerable disagreement on whether glucosamine is beneficial or not, based on numerous medical studies. To play the devil's advocate, refer, for example, to the Quackwatch website for an article by Dr. Stephen Barrett: "Glucosamine for Arthritis: Benefit is Unlikely." There have been medical studies both in favor of and against its use. An excellent website that discusses both the pros and cons of glucosamine usage in detail and provides a huge list of scientific- medical references is www.lifescrypt.com/Health/A-Z/AlternativeTherapies_A-Z/NaturalRemedies/G/Glucosamine.aspx. This is certainly not the "last word" on the subject,

as the references on this topic are virtually almost endless.

I wanted this article about the relationship between fungal cells, chitin, and glucosamine to be informational. It was not my intention to turn it into a testimonial about glucosamine as a supplement. However, I must tell you that both my wife and I discovered glucosamine several years ago and from our personal experience it's been a huge help for our "creaky" joints. It clearly relieves joint pain and discomfort for us (especially noticeable in the knees). We've found that you have to keep the stuff in your system, and this is corroborated by several references that indicate you have to take it for a while, and keep taking it, for any positive effects. If you have severe joint deterioration due to osteoarthritis, it may not be much or any help for you at all, but if your joints simply show signs of aging, with more mild symptoms, then you are most likely to derive some real benefits from its usage. It's very apparent to us when we've forgotten to take it on a daily basis and this is not hocus-pocus, because the relief we get is genuine, noticeable, and quantifiable. Some studies indicate that since the compound is found naturally in our system only as glucosamine sulfate, that's the only form that would do us any good. We have not found that to be the case at all. The kind we currently use is glucosamine hydrochloride, and we've not noticed any difference between its effect and that of the sulfate form, which we have also used in the past. There is also information that indicates that taking glucosamine as a supplement may actually help prevent further deterioration of a joint

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affected by osteoarthritis, in addition to relieving pain symptoms. The literature on this subject is unlimited on-line and if you spend days and days, as I have, searching and researching and reading about this subject, there is a lot of conflicting information and volumes of medical studies to consult, as I've already mentioned in the previous paragraph. You decide, but the "proof of the pudding" is if it does, in fact, have some beneficial effect for you personally.

In the oceans there are bacteria, one example being *Vibrio furnisii*, that break down chitin as their food source, mostly from cast off arthropod shells, but many marine animals have chitin decomposing bacteria in their digestive systems. There are also chitin decomposing bacteria in soil. These bacteria release enzymes (chitinases) that break the chitin polysaccharide chain down into basic sugars. Without chitin-eating bacteria like these, the oceans would be piled high with accumulated arthropod shells and other chitinaceous debris, the same way the forests of the world would be with woody debris if it weren't for white rot and brown rot fungi that break it all down and put it into a usable form.

Chitin has many commercial and industrial uses also, and we can thank the chemical engineers out there for figuring all this out. There's even a commercial or industrial trade society devoted exclusively to chitin: European Chitin Society (EUCHS) with an extensive website at www.euchis.org.

Another commercial substance that's produced from chitin is *chitosan*, which is n-deacetylated chitin that has many chemical, industrial, and medical uses but is insoluble in water. It is offered as a supplement consumed by humans also, but it's not known to have any beneficial effect on joints or joint pain, as glucosamine does. Chitosan as a supplement is even more controversial than glucosamine, because it's claimed to have almost miraculous weight loss benefits, but unlike glucosamine use, there is little valid medical support for this. It is also produced in quantity from chitin, but by using strong alkalis to deacetylate the chitin molecule rather than the strong acids used for the commercial production of glucosamine. There is a wealth of information about chitosan on the Web as well, so help yourself if you want to learn more.

With the bulk of fungal cell tissue being made of chitin, humans do not possess the digestive enzymes necessary to break the material down, just as with plant cells that are composed of cellulose. This means that raw fungal cells pass through our digestive systems as "roughage," just like any other uncooked vegetable matter. So it makes sense that cooking edible fungi prior to eating would be beneficial for more than one reason. (1) Cooking breaks open the fungal cells that are protected by a cell-wall shield of chitin, more fully releasing, in mass, the fungal protoplasm or cell contents for our digestive systems to utilize, thereby getting more nutritional benefit from the food. (2) There is a significant increase in culinary or gastronomic appeal because after cooking an edible

mushroom it is much more flavorful, compared to eating a raw or uncooked specimens. Compare, for example, the flavor of slices of raw *Agaricus bisporus* (button, Crimini, Portobello) to slices of the same mushroom sauteed. There is no comparison in flavor. The cooked specimens are much tastier and more appealing, even before adding butter, fresh garlic, olive oil, or herbs.

It is always advisable to cook mushrooms (or for that matter any food) not only for the two reasons given above, but for a third reason--cooking the mushrooms will kill any parasites (nematodes or pathogenic bacteria) that might be hiding there as well.

So, the next time you consume a dish with wild or cultivated mushrooms, remember the close connection between shrimp shells, fungal cells, and glucosamine. You'll be glad you did.

HEALING PROPERTIES OF *VOLVARIELLA* *VOLVACEA*

By Mediatrix P. Cristobal
Balita.ph/, Nov. 3, 2008

MANILA - An indigenous mushroom, found to contain properties that hasten the healing of a wound, has been successfully developed by Filipino scientists as a component in a woven bandage that would cater to the local medical industry.

Volvariella volvacea, locally known as kabuting saging or kabuting dayami, was found to be rich in chitin/chitosan which promotes the healing of

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wounds, Dr. Claro M. Santiago and Rhodora P. Flores from the Industrial Technology Development Institute of the Department of Science and Technology said.

Known to induce repair of tissues, chitin/chitosan is also present in the shells of crustaceans such as crabs, lobsters, and shrimps and in the exoskeletons of marine zooplankton. It is likewise found in the wings of certain insects, such as butterflies and ladybugs, and in the cell walls of yeast and other fungi.

In their study, Santiago and Flores found that using the mushrooms as a source of chitosan was reproducible and cheaper [than using synthetic materials]. And unlike synthetic materials, the thread derived from the mushroom could be knotted easily and was non-allergenic. The product was also non-toxic.

When bandages containing chitosan were used on patients' wounds, observers reported inhibition of microbial growth and re-epithelialization as early as day 1. In addition, the scientists also observed good oxygen permeability. The bandage was rated on a par with commercially available wound dressings treated with an antibiotic.

It is also relatively cheaper, being composed of about 50 percent agro-industrial wastes and 50 percent mushroom mycelium.

The innovation has been awarded the Utility Model certificate of registration by the Intellectual Property Philippines. This registration grants Santiago and Flores the

exclusive right throughout the Philippines to make, use, sell, or import the utility for a period of seven years from the date of filing unless sooner terminated as provided for by law and the regulations. (PNA)

Nature's Teflon for Your Arteries

<http://seattlepi.nwsourc.com/health/>. Dec. 10, 2008

Some people think ordinary grocery-store mushrooms are nutritional nothings. But enlivening soup, salads, sandwiches, and anything else you can think of with these flavorful fungi could mean something big for your heart.

Mushrooms may be the top source of a compound called ergothioneine. That turns out to be a big word for healthy. In the lab, the substance reigned supreme in inhibiting adhesion molecules—the bad boys responsible for helping plaque-forming cells latch onto blood vessel walls.

Ergothioneine is found in other foods, too, including wheat germ and chicken liver. But the amount in white button mushrooms is four to 12 times higher, and meaty Portobello mushrooms have even more. Add to that the fact that Portobello 'shrooms—just 22 calories per raw cupful—often can stand in for fatty meat (far more than 22 calories per cup!) and contain a lot of magnesium, too, and you have a tasty recipe for younger arteries and maybe a smaller waistline.

Other reasons to choose mushrooms: in another study, the white button variety boosted production of natural killer cells

in mice. If the same thing happens in humans, that's great news, because killer cells help defend against tumors and virus-infected cells. The biggest reason to pile them on wherever you can imagine: they taste great.

Ed. Note: It seems there's no end to the dietary/medical benefits to chemicals found in mushrooms! Am I (or are we) focusing too much on medical aspects here? Is this an early sign of the onset of hypochondrial tendencies? The next two articles focus on the darker pathogenic nature of fungi, in one case another devastating crop disease, in the second case how a pathogen is being used to control an invasive plant.

MADAGASCAR HIT BY DEADLY VANILLA- KILLING FUNGUS

mongabay.com Dec. 8, 2008

Madagascar, the world's largest producer and exporter of vanilla, has been hit by a deadly, incurable fungus that can kill vanilla plants before their pods reach maturity, reports The Associated Press. The development could have dire impacts for the country's vanilla industry which generates hundreds of millions of dollars per year for the impoverished Indian Ocean island nation.

"The situation is critical," Simeon Rakotomamonjy, a Malagasy government scientist and an author of a new assessment on the crop disease, told The Associated Press. "The disease now affects 80 percent of plantations around Sambava and Andapa,"

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major vanilla-producing areas in the northeastern part of the island. Madagascar accounts for nearly 60 percent of global vanilla production, according to the U.N. Food and Agriculture Organization. In 2006 the worldwide vanilla trade was worth \$422 million.

The researchers say a spike in vanilla prices ten years ago encouraged poor planting practices-including placing plants too close together-which have contributed to the spread of the fungus between plants. Vanilla prices tend to follow a boom-and-bust cycle, closely linked to crop production in Madagascar. Cyclones-which periodically affect the vanilla-producing region of Madagascar-and other disruptions drive prices higher.

Alain Paul Andrianaivo, a plant specialist, told the AP that fungal spores "attack a vanilla plant at the root, and a black rot spreads upward, often killing pods before they reach maturity." The disease is known only by its local name, *bekorontsana*, which means "falls to the ground often."

The researchers say that replanting affected areas with a fungus resistant variety of vanilla could help the situation. However due to the long life cycle of vanilla-it takes at least five years before a vanilla orchid will produce beans harvested for extract-relief will be far from immediate for growers.

Traditionally, vanilla is grown in the shade of large trees found in the warm, humid forests of northeastern Madagascar. Vanilla plantations are meticulously managed by growers who often cultivate

other crops including cloves, pepper, and rice on adjacent lands. So valuable are vanilla beans that some growers brand each bean with their mark to denote ownership.

Vanilla is a widely used flavoring in Europe and the United States. Best known for its use in ice cream, vanilla is also used in many deserts and beverages.

RUST FUNGUS USED TO ATTACK BLACKBERRIES

By Fiona Allan

<http://www.weeklytimesnow.com.au>, Dec. 10, 2008

EAST GIPPSLAND, VICTORIA - For the first time, a new strain of leaf rust fungus is being released at sites across a whole region of Australia as part of a biological war being waged to keep invasive blackberries under control on both public and private land.

The rust release is still an experiment, but early results are proving to be a success, with parallel programs running in NSW and Tasmania.

Earlier this year, a small number of rust vials were introduced to fire- and flood-affected areas of public land in the North East, prompting the Department of Sustainability and Environment to fund a similar program in Gippsland.

Bairnsdale DSE field officer Brian Gustus said the department had already begun spreading the rust fungus in forests, parks, along rivers, and on private land. "The aim is to

put it into the best places, not one category of land," he said.

"In remote areas we are targeting upstream of gorges and inaccessible or impractical country that is not able to be sprayed," Brian said. Other sites include areas where there is a danger that chemical sprays will drift onto adjacent crops and vineyards.

Blackberry leaf rust fungus is a defoliating disease that attacks the leaves, unripe fruit, and green parts of growing canes. The fungus is native to Europe where blackberries are the only known hosts. It has been fully evaluated as host specific and approved for release in Australia.

The rust appears as purple-brown blotches and yellow or black powder on the leaf. Heavily infected leaves turn brown, shrivel and fall from the canes. The fungus lives on actively growing blackberries, and over a life cycle of eight to 10 days, it produces fertile spores that are carried through the air to the next site.

Long-term monitoring shows steady reductions in the length of canes, reductions in biomass by more than 50 percent, and reductions in the number of daughter plants produced by up to 96 percent. It performs best in areas with a high rainfall or an average of more than 700 mm (28 inches) a year.

Brian said the rust would complement existing control techniques. The fungus weakens the plant over the long term, allowing other forms of control to be more effective, or the rate of spread considerably reduced.

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He said different strains of rust had been tried in the past, and blackberries had developed resistance. "Some species aren't affected at all and that is why we have to do careful identification."

"There has been a lot of new research into choosing strains that target our most invasive blackberry species," Brian said. Eight new strains of rust are now available, with some of these targeting blackberry species that had proven to be rust-resistant in the past.

The application process is quite precise.

The rust comes in a release kit that contains one vial of rust spores, two 500 ml spray bottles, and 12 plastic bags. The spore vial needs to be refrigerated until release, but for a maximum of only two days. The spores are released in the late afternoon to ensure the sun is off the site.

Spray bottles are filled with unchlorinated water and the rust vial emptied into one of them. The spores must be used within an hour of putting them into water.

The spray containing the rust spores should be sprayed on the underside of the first six to eight leaves on between 10 and 12 canes. The inside of a plastic bag should then be sprayed with the bottle containing only water and the bag placed over the sprayed blackberry cane and tied shut.

The bags are removed the following morning as early as possible before direct sunlight. Blue tags left on the cane act as markers.

Rust should appear two weeks after its release.

Brian said the rust vial was tiny and contained just 0.1 g of spores. Because it is so small (the spores) take several weeks to gain momentum," he said.

All four of the above articles were published in the Jan., 2009 issue of **Spore Prints**, the Bulletin of the Puget Sound Mycological Society.

Other Mushroom Newsletters to Giveaway

By Dave Miller

If anyone is interested in reading the newsletters of other mushroom clubs, let me know. I am accumulating stacks of them and need to get rid of them. Quality varies considerably. Some issues are very heavy on technical articles. Some newsletters are nothing more than a brief listing of club events. But, there are many interesting articles that we simply don't have room for in the Log. I would be happy to make available reasonably sized packets of some of the more interesting newsletters, which can be circulated among our members. Distribution would take place at forays.

Gamers Wage War with "Mushroom Men"

Whenever the mushroom season is slow (in droughts) or non-existent (in our long winters) you can waste some valuable time playing "Mushroom Men," a new computer game for the Wii or

Nintendo DS (don't ask!) You might be wondering what adventures await you in this fungi-inspired game.

"After a comet had passed the Earth, all the planet's researchers concluded its strange green dust had no effect on the world. None noticed that tiny plants and fungi were acting strangely. Mushrooms cacti, kudzu and other formerly-normal plants [sic] had awakened to full consciousness. Tribes quickly formed among the various mushroom species: the primitive Boletes, the aggressive Amanitas, and the inventive Morels. With nations formed, war inevitably followed. Unnoticed by humans, a war rages between the spore factions. As a brave Bolete Mushroom Man, players are given the opportunity to wreak havoc by transforming common household trinkets and trash into weapons and tools."

So grab your favorite game-crazy child or grandchild and wipe out your enemies with unique, spore-based powers. Curious? Check it out at <http://wii.ign.com/objects/884/884634.html#aboutThis%20Game> :

Re: the [sic] I hate to be so picky (it's like a very refined game of "Gotcha!"), but including mushrooms among other "plants" gets my pedantic dander up, since we fought that battle so often in biology staff meetings in years gone by. I'll have more to say about this in a future Log.

Articles for the next newsletter

Deadline –July 12

David Miller
352 West College St.
Oberlin, OH 44074
David.H.Miller@oberlin.

Calendar of Events

OMS Events

Email Jerry at jsp@pepera.net to receive notification of impromptu events. Check your most recent issue of the *Mushroom Log* for event updates and for more detailed information. Please plan to join us. All mini-and morel forays are subject to cancellation. Call first to confirm. Please bring a whistle and compass and RSVP the host so they have cancellation flexibility.

Other impromptu mini forays, as follows: details will follow in next Log.

June 28 (Sun.) Rocky River Nature Center-Cleveland Metroparks . Program and Talk by Walt Sturgeon.

July 11 (Sat.) Chanterelle Mini-Foray. Hocking Hills. Meet at 10 AM in Bob Evans parking lot. Shirley McClelland (740) 536-7448.

July 19 (Sun.) Scenic Vista Park – Lisbon. 2 PM. Walk and talk by Walt Sturgeon.

Aug. date tba. Gorman Nature Center. Richland Co. Pete and Pauline Munk. (440) 236-9222.

Aug. 29 or Sept. 5 Mini-foray. Chance Creek, Lorain Co.

Metroparks, date depends on weather! Call Dave Miller (440) 774-8143 for details.

Sept. 12 (Sat.) Beaver Creek State Park. Meet at Park Office



at 10 AM. Sharon Greenberg. (330) 457-2345.

Oct. 17 (Sat.) Hocking Hills Buckeye Trail. Winter Chanterelles (*Cantharellus tubaeformis*). Shirley McClelland. (740) 536-7448.

Jul. 24-26 Summer Foray. J. H. Barrows Biological Field Station of Hiram College. Pete and Pauline Munk. (440) 236-9222. See page 1 for details.

Sept. 11-13 Fall Foray. Hocking Co. at Clear Creek Metropark Nature Preserve. Leaders: Andrea Moore (740)

969-8049 & Shirley McClelland. (740) 536-7448.

Sat. Nov. 7. Annual Dick Grimm Banquet. Buckeye Lake Yacht Club. Details tba.

Ohio & Regional

Sept. 12 (Sat.) Gary Lincoff Mid-Atlantic Mushroom Foray in North Park. See their website at <http://www.wpamushroom.org> for details.

National & More

33rd Annual NEMF The Sam Ristich Foray. The Northeast Mycological Federation's Annual Sam Ristich Foray will be held in Cape Cod based at the Four Points Sheraton Hotel, Eastham, Massachusetts and hosted by the Boston Mycological Club. Oct. 15-18. See their website for details: <http://www.nemf.org/files/2009/2009>

Nov. 26-29. 2009 NAMA Foray Lafayette, LA. The North American Mycological ASSOCIATION'S 2009 Orson K. Miller Foray will be held at Lafayette, Louisiana. Check their website <http://www.namyc.org> for details.

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Membership Application for the Ohio Mushroom Society

NAME _____

ADDRESS _____

CITY _____ STATE _____ ZIP _____

TELEPHONE _____ FAX _____

EMAIL ADDRESS _____

Enclosed please find check or money order (check one):

- \$15.00 annual family membership without a paper copy of the newsletter
- \$20.00 annual family membership which includes a paper copy of the newsletter
- \$150.00 life membership which includes a paper copy of the newsletter

For existing 2008 members (on their 2009 renewals only):

- \$10.00 annual family membership which includes a paper copy of the newsletter
- \$125.00 life membership which includes a paper copy of the newsletter

My interests are:

Mushroom Eating/Cookery _____ Photography _____ Nature Study _____

Mushroom ID _____ Cultivation _____ Other (specify) _____

Would you like to be an OMS volunteer? In what way? _____

How did you hear about our group? _____

SIGNATURE _____

May OMS provide your name to other mushroom related businesses? Yes _____ No _____

Return form and check or money order to:

Ohio Mushroom Society
c/o Jerry Pepera
8915 Knotty Pine Ln.
Chardon, OH 44024

2008 Ohio Mushroom Society Volunteers

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Ohio Mushroom Society
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