

We often do not think about or realize how unique something is when it is sitting right in our back yard. Elk Island National Park is just such a place. With less than 3% of the Aspen Parkland protected, Elk Island is unique in North America as it is some of the last protected large blocks of Aspen Parkland. It has also been long known that the presence of large mammals also leave a significant impact on the landscape. Just look at downtown Edmonton or a typical feed lot. In Elk Island we have a historical presence both of Elk and of course Bison.



President's Message

What good fortune we have had this spring! The forays that I have been present at have been well attended with exuberant members. These events have given me the opportunity to meet a good number of our awesome AMS Members and each time, to learn a little more about our craft. It is my wish that everyone attend as many

forays as possible, filling their baskets several times over.

Our Foray Coordinator has done an incredible job! We are so fortunate to have the expertise of long standing members to get the proper permits for such interesting areas. As a child, I grew up near Elk Island, and it was just a given that you could not pick anything in the National Park, but not this year! We have already been out there, collecting fungi on 3 separate occasions. Even the wardens have expressed an interest in learning more and taking some instruction from some of our very knowledgeable members when they saw the diversity of what was found.

Ministik was a real eye opener for me as to what can be found! There were about 30 members in attendance, collecting an assortment of verpa, fresh oysters (not many mind you), and monster-size morels. The morels were collected by what appeared to be the youngest picker at the event (and he doesn't even like mushrooms). He said they were easy to spot around the edges of a pond. These mushrooms were the most perfect, freshest, juiciest humongous morels that I had ever seen with my own eyes; I was so impressed! They were about the size and shape of an adult fist!

The Summer Solstice at New Moose Hill Hall is a great event year after year. There was eager participation to go on many forays where a good number of edibles were located. The food was heavenly (I tried every dish and enjoyed it all thoroughly). The weather was so incredible that it totally made up for the pouring rain we endured last year. I think this is probably one of my favorite events!

Speaking of events, we are whole-heartedly promoting Alberta-wide activities with great anticipation this year. For members located any distance from Edmonton, this is a great opportunity for you to parti-

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Email Contact contactus@wildmushrooms.ws

MAILING ADDRESS:
Alberta Mycological Society
P.O. Box 1921, Standard Life Bldg.
10405 Jasper Avenue
Edmonton, AB T5J 3S2
WEBSITE ADDRESS:

www.wildmushrooms.ws



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The Genus Agaricus

By Paul Sinclair

Most of us in North America are a little familiar with Agaricus mushrooms. The Agaricus genus contains the most cultivated and consumed mushroom in North America, Agaricus bisporis, or the grocery store mushroom! If you are the average North American, you will consume a couple pounds of A. bisporis this year. Meanwhile, Agaricus is really the original mushroom genus; all gilled mushrooms were originally placed in the Agaricus genus back in the 19th century when mushrooms started getting identified. Back then if you knew what mushroom gills were, then you knew what an Agaricus mushroom looked like!

In 2012, Agaricus is a pretty clear-cut ge-

nus to recognize. The stalk generally has a ring, but lacks a volva, a sack at



the base of the stock. The gills of young specimens are generally pink, gradually turning to dark brown as the mushroom matures. Agaricus edibles tend to have that familiar "Agaricus taste". But despite the fact that Agaricus is a relatively easy genus to recognize and that Agaricus contains some of the world's choice edibles, Agaricus is not necessarily the "safe" genus it is sometimes described to be.

First of all, Agaricus can be a baffling genus to identify. Features we use to identify Agaricus such as odor, propensity to discolor yellow, type of ring, and size of the

fruiting body tend to be influenced by the environment—what grows in the open might even look different than what grows in the shade.

Agaricus mushrooms, even the grocery store mushroom, have been known to produce severe gastro-intestinal upsets in a small percentage of the population. We can all avoid the poisonous Agaricus xanthodermus because it stains yellow when its flesh is damaged. But well-known edible species like Agaricus arvensis also bruise or age slightly yellow. Even the grocery store mushroom can have a yellowish hue after it sits in the fridge for a week. None of this should discourage us from finding the delicious and ubiquitous meadow mushroom (A. campestris) of course!

Agaricus also contains one of the world's prized medicinal mushrooms. A native of Brazil, the almond-flavoured A. blazei (himematsutake in Japanese) is widely cultivated in Japan to treat cardiovascular disease, hepatitis, high blood pressure, diabetes, eczema--even immune disorders and cancer! (See page 6)

The adjacent photos show an Agaricus species growing under a conifer at the University of Alberta last August. The 12 cm cap, skirt-like ring, bulbous base, faint yellowing, and fact that mushroom is not fruiting in great numbers suggests that we have Agaricus silvicola, or the Woodland Agaricus.



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Great Alberta Mushroom Foray cont. from pg 1

Aspen parkland runs in a thin band across the Prairie Provinces and is a transition zone between the prairie grasslands and the Northern Boreal Forest. It stretches from southern Saskatchewan and winds its way up to the Peace River country including a thin band dropping down into southern Alberta touching the foothills west of Calgary. Aspen parkland has had major pressure from agriculture being a favourite habitat of eastern European settlers, where similar habitats existed and who valued the presence of an abundance of wood.

The forested, or woodlands area is dominated by trembling aspen Populus tremuloides, balsam poplar Populus balsamifera, other poplars and spruces, although species of other trees do occur. Large shrubs such as red-osier dogwood, beaked willow. saskatoon. chokecherry and pincherry, along with the smaller shrubs including prickly rose, snowberry, beaked ha-

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zelnut and low bush cranberry, form a dense entangled understory. Dense shrubbery is a typical feature in aspen-dominated forests. Common herbs found in the woodlands include: Lindley's aster (Aster ciliolatus), northern bedstraw (Galium boreale), pea vine, Western Canada violet (Viola canadensis), dewberry and bunchberry. Mosses appear at the base of trees and on the ground. Wetlands are very common in this biome, including lakes, shallow open water, marshes, and grassy wetlands. Glacial erosion has contributed to such features by creating depressions in which standing water can collect. In the larger depressions, permanent lakes or ponds of water remain.

Of course, the Alberta Mycological Society has a great interest in the fungal biodiversity of which little is documented. This makes our Great Alberta Mushroom Foray of special interest not only to us but also to Elk Island National Park.

Elk Island is also famous for its Bison and is the only habitat that has had relatively brief absence of Bison. Historic numbers claim the presence of over 60 million Bison across North America. By the early 1900's the Bison population was near extinction. In 1906 the Canadian Government bought a genetically pure Bison herd from some Montana ranchers. These Bison were destined for Buffalo Nation Park near Wainwright but were held in Elk Island due to the presence of a large fenced area. The herd was eventually moved to Wainwright where they interbred with cattle and were exposed to bovine diseases and eventually the herd was wiped out. Luckily, a few of the Bison, less than 50, that were brought to Elk Island, eluded capture and made up one of the genetically pure Bison herds.

This is very exciting from an ecological perspective. The once dominant Bison, formerly found across all of Alberta's biomes, are now absent except in Elk Island National Park and Wood Buffalo National Park. Does their absence affect the fungal biodiversity? This is a question we want to start to answer.

The management at Elk Island National Park had the same question and invited the Alberta Mycological Society to come and investigate. We see this as a longer term survey and have expanded our commitment to surveying the park throughout the whole summer culminating with our annual "Great Alberta Mushroom Foray". The foray will be held starting on the evening of Thursday August 23rd and wrapping up on Sunday August 26th.

Our members will be joined on the foray by several mycologists. Confirmed at this time are Dr. Roland Treu, Dr. Christine Roberts, Paul Kroeger, Mike Schulz, and several student mycologists.

On Friday morning the foray starts in earnest. The first of our 12 forays goes out Friday

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President's message, continued from Page 2

-cipate in, as well as create, many events in your area. Our Board is here to support you in any way necessary to truly put the "Alberta" in Alberta Mycological Society. If you want to see more educational programming in your region, talk to your Regional rep. or contactus@wildmushrooms.ws. The Society has lots of programming we can send out.

There is a foray and public display in Bow Valley Park on July 21-22 that we have participated in as a Society for years. It is a great opportunity for anyone in the area to experience how their membership can bring awareness, learning and enjoyment to the general public. The topic of "Fungi" has always had a "mystical" aura about it, and when you, as an individual, bring this topic to the general public to enjoy, THAT is a rewarding experience. Plan to be a part of it this year and FEEL GOOD!

Up through the duff!

Looking forward to seeing you at a foray real soon!

In the Bow Valley....

a few images.



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MEDICINAL MUSHROOM MATTERS

THE AGARICUS

To the respectable mushroom hunter, Agaricus bisporus is only a poor imitation of a real mushroom, as natural to mycophagists as refined sugar is to health food purists. SARA ANN FRIEDMAN

The well known, cultivated button mushroom (A. bisporus), and its variations of crimini and portobello are available in most supermarkets. Wild Agaricus species tend to be softer, more pliable and less chalky than domesticated counterparts, nuttier flavor when cooked, and free.

Both button and portobello mushrooms inhibit the enzyme aromatase, associated with breast cancer, and 5-alpha reductase activity associated with prostate cancer.

The button contains a polysaccharide that inhibits Helicobacter pylori bacterium associated with gastric and duodenal ulcers.

A study of 2,018 pre- and postmenopausal women, half diagnosed with breast cancer and half "healthy" looked at consumption of ten grams of fresh button mushrooms or four grams of dried. Results showed a 64% reduction of risk in mushroom group. When women also drank green tea the decreased risk went up to 90%.

Like all mushrooms, they should be cooked. Both button and portobello mushrooms contain the antioxidant ergothioneine in amounts twelve times that of wheat germ. Vitamin D and B12 content are other reasons to hunt for these in the wild or in your local store. Buy organic, as the use of malathione and other

fungicides defeats the health benefits otherwise obtained. - Robert Rogers

Robert Rogers is the author of The Fungal Pharmacy: <u>The Complete Guide to Medicinal Mushrooms and Lichens of North America</u> (available via AMS).

He is assistant clinical professor in family medicine at U of Alberta, chair of the medicinal mushroom committee of NAMA and on the editorial board of the International Journal of Medicinal Mushrooms.

Peace River Region Foray Report



The Peace River Region arm of the AMS held their first foray on May 26,2012 near Cadotte Lake. This site

was a large burn from May, 2011 which is located approximately 75 km north east of the town of Peace River. Seven members were present for this one day foray and all enjoyed their trek though the burnt forest in search of the hiding morels. Just over one hundred morels were harvested, not as many as we had hoped but enough for a few meals. Edible mushrooms harvested included Morchella elata, M.esulenta, Verpa bohemica and V. conica. The burnt forest floor was covered in eye- popping numbers of the cup fungi Geopyxis carbonaria. along with the gorgeous orchid, Calypso. - Ken Dies

AMS EXPOsed in plot to show off!

Found guilty!



"City of Champignons" Mushroom Ex-

POSITION is coming again this year to the Devonian Botanic Garden's Pine Pavilion on Sunday, August 19. We will definitely be guilty of exposing our fungi in a public place!

This is Alberta Mycological Society's showcase for the public and for our members. As mycological ambassadors, this is our opportunity to strut our stuff, and amaze visitors with edible and incredible displays of Fresh, Wild Mushrooms picked only the day before. This is a great learning experience for our members also, as most of the fungi displayed will have names put to them.

on Saturday, the day before the EXPO, all AMS members go to their favourite

'shrooming spots and gather all the fungi they can carry, complete with habitat features, such as moss, logs, pine cones, etc. If you're not sure where to go, Pieter van der Schoot would appreciate some pickers with him on his land; contact Pieter directly (780-542-0964) if you'd like to join him.

Saturday evening (5:30 – 7pm) – we will start to prepare our site at the Pine Pavilion – setting up tables, displays, begin initial mushroom identification, etc. Members may deliver mushrooms during this time.

On Sunday the organized chaos begins at around 8:00am – members arrive with mushrooms and to help out with various tasks: sorting / labeling mushrooms, completing displays, setting up and manning sales tables, kitchen, etc.

Our wildly successful "Wild Mushroom Café" will offer delicious mushroom dishes for sale. There will be slide presentations, and a scheduled "Walk in the Garden" among other events.

We need you to help us have everything ready

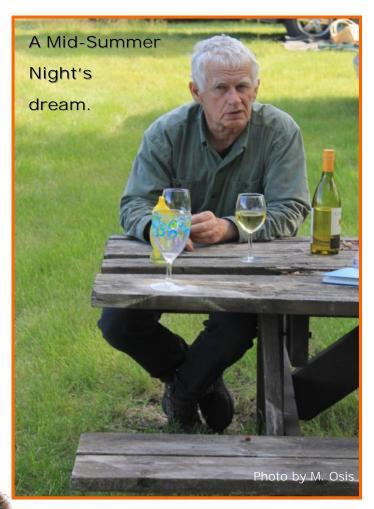
for 11:00am, so we need volunteers for set-up, throughout the day, and for take-down at 4:00pm. If you can help answer the never-ending question "Is this edible?", then you should volunteer! Note: we will have specialized displays with Edibles, Poisonous, Medicinal mushrooms to make answering this question easier for you. Or, help out at the Sales Desk, kitchen, display tables, etc.

And, we need a Volunteer Coordinator

for this day. If you are great with matching eager members with tasks and time slots, this job is for you. Interested persons please contactus@wildmushrooms.ws

We appreciate our volunteers! You will receive a meal & drink ticket for helping your Society on this special day – this in itself is well worth your time, as our Chef Chad will be preparing your meal. And, you will experience mushroom immersion and see fungi you've never seen before.

More info will be forthcoming before the EXPO, but for now, circle this date on your calendar and plan to be there! Melanie Fjoser



Identification tips

By Martin Osis

As Paul mentioned in his article, Agaricus mushrooms are usually fairly easy to identify to genus. They are dry capped mushrooms that always grow on the ground in a variety of settings. They always have free gills and a veil or skirt, and the mature ones have dark chocolate brown spores which colour the gills the same. There are a few look-alikes that could fool you if you are not paying attention. They are: Leucoagaricus naucina, the white agaricus, which looks similar but has white spores, so the gills never turn that deep chocolate brown. Typically mature specimens won't fool you but a young one might. Agrocybe species also

look similar but are much smaller and taller in stature with notched gills. The final one that could fool you might be a Stropharia, which do look similar but have notched gills instead of free gills. The spores are also more of a greyish brown than chocolate brown.



Small and tall agrocybe



Note: notched gills on this stropharia

When identifying Agaricus you have to especially watch for three things: the first is the staining reaction. You get this reaction by gently rubbing the cap or stalk with your thumb nail. You will get either no reaction, slight pink to aggressive red

dening reaction and slight to aggressive vellow staining. Be espe-



gressive yellow staining. This mean that it stains bright and yellow. This combined with a strong phenol smell means you have one of the poisonous Agaricus. Choice edible Agaricus can stain slightly yellow including the "meadow mushroom" Agaricus campestris and the woodland mushroom, Agaricus silvicola. Both of these have a pleasant mushroom or anise smell.

The second thing you need to watch out for is the ring or veil. Some have a thin hanging skirt like veil while others can have a thick felty or a double ring. Actually the double ring is usually one ring but has a top and bottom skirt. Sometime you see parts of the upper skirt clinging to the cap edges.

The third thing to watch out for is the smell. The smell ranges from none to pleasant, or almond, anise, mushroomy or phenol or chemical like, even like creosote and certainly unpleasant.



Note: prominent thick double ring. By the time it opens you do not see the veils, just where they attach.

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Great Alberta Mushroom Foray 2012 - Registration Name(s): 1)_____ Please add any extra names on a second registration _____City: _____ Address: Province / State: _____ Postal Code: _____ Phone: _____ Cell: ____ Email: _____ Option 1: includes all foray events, all meals (but not accommodation*), and foray T-shirt \$185.00 per person x _____ persons = \$ _____ * Camping for tent and RV is on site with costs included, no services. If you want services the main Campground is available with full services, but reserve early. Hotels/motels are available in nearby Fort Saskatchewan. Option 2: includes all foray events and foray T -Shirt, no meals or accommodations. \$125.00 per person x _____ persons = \$ _____ AMS Membership (due to liability reasons the foray is open to Society members only) www.wildmushrooms.ws and click on "Membership" - include form with this form. \$30.00 per individual x _____ persons = \$ _____ \$40.00 per family x _____ families = \$ _____ Total enclosed: \$ _____ T-shirt size(s): S ____, M____, L____, XL____, XXL____ for each individual Visa or Mastercard: For security please do not include expiry date & your 3 digit code, please send those on a follow up email. We must receive your registration form(s) and payment no later than August 20 Mail to: Alberta Mycological Society P.O. Box 1921, Standard Life Building 10405 Jasper Avenue. Edmonton, Alberta. T5J 3S2 Since this is a catered event, registrations after August 20 cannot be accepted.

Culinary Corner

By: Chad and Thea Moss

The Humble Agaricus



The agaricus to a chef is much like a readied canvas is to a painter. Agaricus mushrooms are subtle in flavors, versatile, delicate or meaty, big or small, and readily available. If you are lucky enough to find some wilds, even better, more especially if the gills are still on the pink side.

In keeping with the ongoing pursuit for exploration in mycophagy we won't be giving you a recipe as such, rather a set of tips and suggestions for painting your own culinary portrait with the agaricus as your canvas.

Tip: when using mature portabella for pasta sauce or a cream-based accompaniment, consider 'peeling' the cap and removing the gills with a spoon to keep the sauce from turning too dark.

Grilling: Portabella - 'peel' and marinade in oil, salt, pepper and minced garlic. Grill on low with the gills facing upward; pour any remaining marinade into the caps to help preserve moisture.

Tip: when stuffing smaller caps, slice a small piece off the top of the cap first, so the caps don't wobble and fall over before going into the oven. Stuff them with whatever is in season i.e. arugula pesto, fresh

lobster meat or minced and sautéed agaricus (a.k.a duxelle).

Tip: grilled portabella make a great effect when layered within a dish, for example: layer in lasagna, scalloped potatoes, hamburger or veggie burger, or stacked between slices of fresh heirloom tomatoes and rounds of goats cheese as a summer salad.

Marinating: Small button, crimini or wedges of young wild agaricus are great for marinating. Most recipes call to poach the mushrooms in a mild acidic liquid. Get creative here and boost the flavor by using seasonal fresh herbs like mint or thyme.

Once flavored by the poaching liquid, reintroduce the same herb or a complementary flavor in the marinating liquid.

Tip: trying to impress? Find rather large portabellas, grill them and use them as a 'tasting plate' of sorts. Serve separately cooked wilds in each corner, such as: sautéed chanterelles with thyme, morels cooked in marsala, a stuffed baked crimini, or duxelle of lobster mushroom with chervil.

Dessert: garnish 'candy cap' or honey ice cream with agaricus! Slice crosswise, give a light sprinkle of sugar and bake flat on a cookie sheet until they are dry, after cooling (remove excess moisture if necessary) drizzle with melted chocolate and place in freezer until service.

Enjoy!



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Great Alberta Mushroom Foray, continued from page 4

morning at 9:00 am. As well the Beginners Mushroom Identification course starts the Friday morning with in-class lectures. The ID instruction then goes out into the field to talk about proper collecting techniques for identification. The afternoon session is spent learning the identification techniques on the mushrooms previously picked. Friday evening will have two evening lectures after supper and then the mycologists, and those wanting to learn more about the mushrooms we have picked, go back to the labs to identify the mushrooms. Saturday the forays repeat with workshops in the late afternoon and lectures in the evening. On Sunday, we will have one lecture in the morning followed by a last walk around the tables with the mycologists answering any last question you may have.

Our foray usually includes accommodations but this year it will not as the Park does not have the facilities. We hope this does not pose too large a problem as the foray is close to hotels in Edmonton and Fort Saskatchewan though many of us may choose to head home. There will be a large camping area reserved for those of you want to RV or tent it. All meals will be catered in large tents erected on site. Please find the registration form (on page 9 or download it from our website) in this newsletter and get it sent in before we sell out as in past years.

Alberta Mycological Society Calendar of Events

Evening Foray in your Neighbourhood - Check with your Regional rep or on the website for location info.

All Day or Weekend forays

Special AMS events

Out of Province forage

Meetings - Check with your Regional rep or the website for meetings and programs in your area.

Dates / locations are subject to change

Day(s)	Date(s)	Туре	Info	Foray Location
Wed PM	July 18	Evening Foray	Foray in your Neighbourhood	TBA in your region
Saturday	July 21-22	Weekend Foray	Canada Parks Day fungi (see below)	Bow Valley Prov. Park
Sunday	July 22	EXPO for public	Canada Parks Day fungi	Bow Valley Prov. Park
Wed PM	July 25	Evening Foray	Foray in your Neighbourhood	TBA in your region
Saturday	July 28	Day Foray	Fungal bio-diversity survey	Elk Island National Park
Wed PM	Aug. 1	Evening Foray	Foray in your Neighbourhood	TBA in your region
Sat - Mon	Aug. 4-6	Long weekend Foray	Late summer fungi	Medicine Lake
Wed PM	Aug. 8	Evening Foray	Foray in your Neighbourhood	TBA in your region
Wed PM	Aug. 15	Evening Foray	Foray in your Neighbourhood	TBA in your region
Saturday	Aug. 18	Day Foray	Collect fungi for EXPO tomorrow	Your choice
Sunday	Aug. 19	EXPO for public	"City of Champignons" EXPO	Devonian Botanic Garden
Wed PM	Aug. 22	Evening Foray	Foray in your Neighbourhood	TBA in your region
Thurs-Sun	Aug 23-26	Weekend Foray	The Great Alberta Mushroom Foray	Elk Island National Park
Fri-Sun.	Sept 14-16	Weekend Foray	Foothills Foray	Weald Prov. Rec. Area
Fri-Sun.	Sept 21-23	Weekend Foray	Chanterelles, lobsters	Fungi Festival, Shuswap, BC
Wed PM	Sept. 26	Meeting	Program & discussion	Edmonton
Fri-Sun.	Sept 28-30	Weekend Foray	Foray Newfoundland Labrador	Terra Nova National Park
Wed PM	Oct. 24	Meeting	Program & discussion	Edmonton
Wed PM	Nov. 28	Meeting	Program & discussion	Edmonton
Thurs-Sun	Dec 13-16	Weekend Foray	North American Mycological Ass'n	Scotts Valley, California

Two "don't miss" events for your Calendar:

July 28th at Elk Island National Park, amongst others, Dr. Sean Abbott will be joining us. Sean is an expert mycologist specializing in Ascomycetes more commonly know as cup fungi. Elk Island Park staff also plan a luncheon barbeque for us. Remember to bring your cameras, the foray will go all day.

On the August long weekend, the Society has booked several sites at Medicine Lake campground just south of Rocky Mountain House. We thought something right between Edmonton and Calgary can get folks from both areas together. Come for the weekend or just come for the day. Some of our local members will guide!

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