



SPORE PRINT

The Alberta Mycological Society Newsletter

Summer 2013



The mushroom known as *Leccinum*



Photos and article by Martin Osis

Leccinum belongs in the *Boletaceae* family. These are a family of medium-to-large mushrooms with cap, central stalks, and pores or tubes instead of gills. These mushrooms are mycorrhizal which means they establish relationships with trees; so while they can be found in urban areas, there will need to be some living tree roots near by. In comparison to *Boletes* whose flesh does not darken to a grey black, all the *Leccinum* will stain, though some stain more slowly than others.

In Alberta we have three genera of *Boletes*.

Boletus have some sort of embossed network or reticulation on the stalk. *Suillus* often have slimy caps and may also have veils, but they never have

reticulation or scabers on the stalks. These mushrooms are most often encountered in relation with conifers. *Leccinum* have white stalks with a rough ornamentation or scabers on them.

Leccinum are generally called either red tops or roughstems. "Roughstem" is more accurate as that is what they all have in common. *Leccinum* come in a variety of colours. You can find them most often with an orange top (*L. insigne*, *L. boreale*, *L. ochraceum*, *L. fibrillosum*), but they also come with black caps (*L. snelli*), brown caps (*L. scabrum*), white caps (*L. holopus*, *L. niveum*) and even green caps (*L. holopus* var. *americanum*).

(Continued on page 3)

President's Message

Rosemarie O'Bertos



Summer greetings to all our members.

When I first became involved with the Alberta Mycological Society, it was to find friends with whom I could have fun picking morels in the spring, redtops in the summer and honey mushrooms in the fall. My foraging repertoire was very limited. Little did I know how little I really knew! Thankfully, there are lots of opportunities to learn.

Traditionally, the AMS celebrates the Summer Solstice at New Moose Hill Hall. Once again the event was a huge success and the weather even co-operated! The weekend began with eager campers arriving Friday evening. In the morning, the movers and shakers followed Pieter (who tends to strike up a fairly steady pace while covering a lot of ground). Another group went on a trek with Bill. The mission: to find edibles in quantities sufficient for the evening's feast (and to take home of course). Participants learned to harvest Cow Parsnip by the number, and by the time the afternoon forays were complete, we had collected enough for the chef to create a new taste experience for everyone. As well, more oyster mushrooms were harvested than the chefs could even use (to smoke, to add to sauces and create the chowder).

Pot-luck dishes including fantastic homemade sauerkraut, delectable pickled vegetables / mushrooms, several delightful salads, close to a dozen cheeses and breads, a showcase of fresh fruits, assortments of pies and desserts generously accompanied the wild salmon, which was prepared in so many ways by Chad and Martin, and savored by all in attendance. You just had to be there...see you at next year's Solstice!

Attending our forays and seeing the relationship between the forest and the fungi has been a simply wonderful learning experience. I have especially enjoyed learning from the veterans and veritable experts we have in our Society. Come on board and share your stories and photos by submitting to Forum on our website, or to "Spore Print" at newslettersubmission@wildmushrooms.ws.

Whatever your reason for becoming a member of the AMS, you can truly expand your experience by simply attending more of our events.

Happy Foraging!

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The mushroom known as *Leccinum* (cont.)

Martin Osis

Pay attention to the type of habitat in which you find *Leccinum* growing. *Leccinum scabrum*, the brown-capped *Leccinum*, is often found in the presence of birch trees. *Leccinum fibrillosum* is the only *Leccinum* in Alberta that you will find growing with conifers. The caps are a dark orangey-brown; these can be very meaty mushrooms and are often gathered for the table. One of the other orange-capped mushrooms is called *L. boreale*, our



Leccinum holopus (Button stage)

provincial mushroom, which grows in with Poplar / Aspen trees. Again, it is a large mushroom that usually comes earlier in the season and the flesh stains pink and then slowly turns grey. The *Leccinum* that is most like *L. boreale* is *L. insigne*. The easiest way to tell these apart is by the green stains at the base of the stalk and sometimes around the cap edge on *L. insigne*. The *L. insigne* stalk typically is more densely covered with finer scabers than *L. boreale*, whose scabers are more coarse. *Leccinum ochraceum* has a smaller and finer stature and the orange colour is much more muted, along with a cap that is often cracked at the top.

While *Leccinum* is collected for the table in copious quantities, it is also responsible for 6% of all mushroom poisonings across North America. This usually comes as a great surprise to the many people who have eaten this mushroom all their

lives. All the gastrointestinal *Leccinum* poisonings which have been recorded are related to the overconsumption of this mushroom. Interestingly, it is only associated with the overconsumption of orange-coloured varieties. There are many theories why this occurs including:

- The mushroom acts as an antibiotic and knocks out natural gut flora.
- There is one cryptic, unnamed orange *Leccinum* species which is responsible. (Note: brown, black, grey, or white *Leccinum* that have never been associated with any poisonings. This may be because these usually fruit in small quantities and are usually smaller in size than many of the orange species.
- The mushroom contains unknown mild toxins

Many mushrooms are known to contain antibiotic properties such as our “Honey” mushrooms. These are also known to cause gastrointestinal poisonings when consumed in large quantities. Who knows—maybe there is a link!

Leccinum are also very popular edible mushrooms for many forest denizens. The larger ones you usually find are quickly bug-infested and should probably be left in the field for the mice, squirrels and insects.

Fungal Factoid

What’s the largest living organism on earth? You guessed right—a mushroom!! Concerned with tree die-off in the Malheur National Forest in Oregon, scientist Catherine Parks decided to get to the “bottom” of it all. She surveyed the area by air, then took samples of the mycelium from the base of 112 trees. Through DNA testing, it was established that almost half of the samples were from the same organism, none other than a lowly honey mushroom, *Armillaria ostoyae*. The organism stretches 3.5 miles across.

Alberta's Official Mushroom

Martin Osis

Northern rough stem, or redcap, was chosen as Alberta's provincial mushroom emblem by the Alberta public. Starting in 2003, the then Edmonton Mycological Society began nominations for a fungus to join Alberta's provincial emblems. After due process, three mushrooms were selected for the final vote: *Leccinum boreale* (redcap); *Pleurotus ostreatus* (oyster), and *Hericium ramosum* (comb's tooth). All were worthy nominees, but we are pleased that the regional and distinct **redcap was the overall winner.**

Official designation process is still underway, and has turned out to be a lengthy process; it requires a Bill in the Alberta Legislature.

We in the Alberta Mycological Society have discussed this issue with various MLAs, Ministers, Premiers, and government agencies for many years. Interestingly enough, even though the mushroom does not have "official" designation, we've seen the *Leccinum boreale* recognized in various documents and websites (some of these governmental) as the provincial mushroom.

So appreciate our "unofficial" Alberta mushroom emblem; someday we can really celebrate the official status of this well-known and well-loved mushroom!



Calgary Region Foray Report

The Calgary Region arm of the AMS held its first foray of the year at Water Valley on June 1, 2013. Ten members were present for the outing. It was a beautiful day, and we went through three leaseholds and one park. We found morels and verpas, in fact so many verpas that at the end of the pick they were being shared with the group that was left. It was a great chance to meet new members and get some mushrooms.

Our next foray was June 15, and with four adults and one helper, there were 60 morels, mostly *Morchella conica*. On June 21 there was Nosehill Park impromptu foray; the big find was a King

Bolete. June 23 was back at Water Valley again with oyster mushrooms being the big find. There were so many that we had to stop picking at 2 pm as we all had full baskets. Another impromptu foray at Big Hill Springs (*Conocybe*, *Inocybe*, *Psilocybin* species?). Some of our members attended the Ministik Foray on May 25.

Needless to say, the Calgary region is very busy, and we have another foray coming up July 4 in South Glenmore Park. I would write more but I have to go inspect another park for mushrooms. Have fun out there!

From the Culinary Committee

Chad and Thea Moss

Leccinum Muse

In pursuit of mycophagy prowess we have compiled a small list of flavors that lend themselves well to a Leccinum. The following is certainly not a recipe, but rather a muse. Go out on a limb, try, fail, succeed, keep learning, and share your experiences! These combinations can be used as hors d'oeuvres, appetizers or main courses.

The rest is up to you....

***leccinum* fried in a small amount of butter**

paired with:

Scotch whiskey. duck liver. whole-wheat toast

Blue cheese. mustard oil. puff pastry

Black tea cream. roasted lamb. mandarin zest

Cod. sherry vinegar. pecan

Camembert. honey. peppermint

Note from Martin: When Chef Chad cooked up Leccinum with black tea cream at our Bow Valley Parks Day EXPO, it was said that this was the best-tasting provincial emblem ever!

—Chad

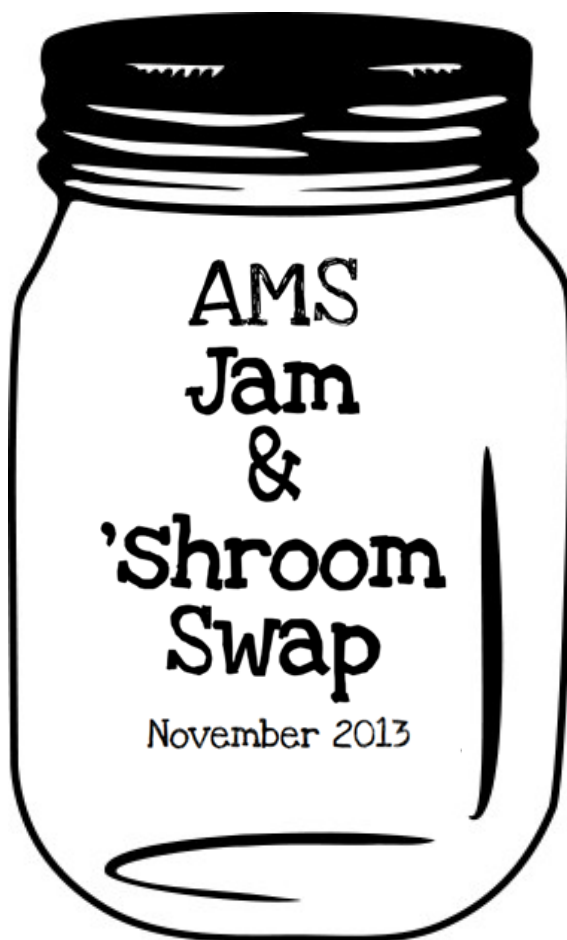


Above: Chad serving "the tastiest of all provincial emblems"

The Great Jam and 'Shroom Swap

An enthusiastic planning committee is creating a new Pre-Christmas Event for AMS members and their families. We will be holding a number of new activities at the party, and an "AMS Jam & 'Shroom Swap" is one of them. The swap is an opportunity to share your canning delights and foraging spoils. Details are still in the works, but start planning now—rhubarb is exploding, and summer mushrooms are fruiting! Swappers will bring along their jams and pickles to swap with other preserves. Dried mushrooms, with attention to identification of course, will be swapped for other types of dried mushrooms. More details will be posted on the website as they become available. For now, maybe you should double your jam recipe!

—Thea



The Great Alberta Mushroom Foray Castle Mountain

Martin Osis

It is getting closer—the best mushroom event of the year! This year we are especially excited. First, we have never surveyed this beautiful part of the province. When we search all records from Alberta there are very few collection records for any mushrooms from the area.

Second, southwest Alberta is a unique habitat. Please see Johann Harmisch's article for some of the fungi that can be found nowhere else in the province. With such a wide variety of foray sites, varying from the alpine to riparian areas along the Westcastle Wetland Ecological Reserve, there will be excellent picking opportunities.

Meanwhile, we are very excited to have two experts from the United States. Dr. Tom Bruns of the University of California is leading the charge

The lodge facility will cater our meals and provide facilities for evening lectures and classes. Mushroom ID and display will be set up in the main lodge as well.

Four choices are available for accommodation:

Hostel: The on-site hostel has 58 beds and is included with Option 1 on the registration form. The lower bunks will be doled out on a first-come first-serve basis.

Hotel rooms: There are 10 hotel rooms available. Each modern room has two queen-sized beds and a washroom. To view and register go to www.castlerental.ca. If you register for three nights then they will offer special rate of \$99.00 per night.



to develop a North American Mycoflora, something the AMS is contributing to with our growing database of Alberta fungi. Dr. Bruns has advocated the confirmation of mushroom specimens with DNA sequences. As part of this foray he will be doing a workshop on DNA collection.

Dr. Patrick Leacock from the Field Museum in Chicago will be giving a workshop on how to describe mushrooms you cannot quickly identify. Joining Drs. Bruns and Leacock will be Dr. Roland Treu and our regular attending Master mycologists Paul Kroeger and Mike Schulz.

This year our foray will be hosted at the Castle Mountain Ski Resort. It is a ski lodge in the winter and has all the services we require including a licensed bar.

Vacation rental: Being right on the ski hill there are many private homes and condos for rent for the weekend as well. These can also be viewed at www.castlerental.ca. Consider getting a group of friends and family together and rent one with a hot tub.

Camping: Camping for both RVs and tents is available on site. There are no services but showers and washrooms are available in the Hostel. The Hostel has washroom facilities, which can be shared by any campers/RVers as well.

Don't forget the mushrooms! This area has seen lots of rain so we can expect to find a bounty of fungi, both the old favorites and the many new ones which will put our identification skills to the test.

The Great Alberta Mushroom Foray 2013 Registration

Name(s): 1) _____
2) _____

Please add any extra names on a second registration

Address: _____ City: _____

Province / State: _____ Postal Code: _____

Phone: _____ Cell: _____

Email: _____

Option 1: includes all foray events, all meals, hostel accommodation at the Resort.

\$285.00 per person x _____ persons = \$ _____

Option 2: includes all foray events, all meals. See below for camping and other accommodations.

\$225.00 per person x _____ persons = \$ _____

Option 3: includes all foray events including Mushroom ID course, no meals or accommodations.

\$165.00 per person x _____ persons = \$ _____

For insurance purposes this event is only open to Members of the Alberta Mycological Society. If you are not a member please add your membership dues as listed here below.

AMS Membership

\$30.00 per individual x _____ persons = \$ _____

\$40.00 per family x _____ families = \$ _____

Total enclosed: \$ _____ **Visa or Mastercard:** _____.

For security please do not include expiry date & your 3 digit code, you will be contacted to confirm that information.

Accommodations:

- **Hostel accommodations.** There are 58 bunk beds available. We will book the lower one on a first come first serve basis. This is included in option one.

- **Hotel accommodations.** The Resort has 10 rooms available with 2 Queen sized beds. The rate is \$99.00 per night if you book for all 3 nights. www.castlerental.ca

On site Vacation Rentals. There are many vacation condos for rent on site. These can be viewed at www.castlerental.ca

- **Camping.** RV and tent sites are available close to the foray venues at no extra cost

Please send your registration form(s) and payment no later than August 20 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.

The Southwest Report

Johann Harnisch

Having collected for some years in a predominately aspen woodland in northern BC, I found relocating to southern Alberta with its Douglas-fir covered terrain and extensive fungal flora a most exciting move. Canada's North West contains some of the most extensive array of mycorrhizal fungi species on this continent. The Crow's Nest Pass is no exception.

As the snow begins to melt in the beginning of May, white mats of mycelium cover leaf litter giving rise to minute orange *Byssonectria* discs con-



Suillus lakei

trasted with emerging dark brown *Pseudombrophila* cup fungi; together they are moistened by the melting snow. The wind for which Southern Alberta is famous soon dries the forest floor. This marks the time when the Douglas-fir's great variety of mycorrhizal associates begin to announce their presence, and needle duff fill with fungi.

Suillus lakei, both plentiful and widely dispersed, make for delicious meals when they are young and firm. *S. lakei* fruits until fall frosts, and sometimes even after a frost in which case the flies don't get them. *S. lakei* is distinguished by a fibrillose felt-like cuticle that runs a gamut of yellow, brown, and brick red colors with pink, yellow or orange overtones. When young the fibrillose scales are dark brick-red or brown on a yellow background, and are tinged orange before fading.

Another species of culinary interest is the *Lactarius rubrilacteus* which resembles the better-known *L. deliciosus*. This species exudes blood-like latex and stains an exotic green color on its orange gills. Conspicuous fairy rings of *Clitocybe gibba*, the Slim Funnel Mushroom, also fruit in quantity. *Hydnum repandum* and *Clavariadelphus* also can be found in Southern Alberta.

Last fall while hiking to a lake in the area, we chanced upon the most extensive network of *Catathelasma ventricosus* I have ever seen; the mushrooms would have filled the trunk of a car.

Camping in the summer of 2009 in the Crow's Nest pass afforded me many hours in the woods. It was a cool rainy year, which was not so great for camping. However, there were mushrooms galore. I came across a *Melanoleuca* species, Earth Stars, a *Geastrum* species, *Lepiotas* and *Russula aeruginea*. I was also fascinated with the dark contorted forms of *Helvella lacunosa* with its intricately fluted stalk. One of the most intriguing mushrooms of all was the brilliant *Floccularia* sp.: a stunning yellow fungus often studded with white granules. Its pale lemon flesh was free of insects so I ate some without ill effects. This double-faced fungus comes in two forms: the typical yellow and a pure white (or a lemon-tinted form). There is still some confusion on the naming of these two forms.



Floccularia sp.

Johann Harnisch Photography

This year shows great promise with the frequent rainfalls in the southwest. See you in the woods!

The Peace Report

Ken Dies

Worsley Foray

The Peace River Region section of the AMS held its first foray of the year on June 9, 2013 at a burn site northeast of Worsley.

Rain scared some of us off. There had been torrential rain for two days prior to the foray date and the members that did come traveled in pouring rain to Fairview! We were lucky to get five members to participate in the outing. In the end, Fairview was overcast but not raining. When we arrived at the burn site it was sunny skies with a few fluffy clouds here and there—overall just a beautiful day. This just goes to show...don't let rain dampen your mushroom foray plans.

There were plenty of mushrooms present at the burn site, with the exception of morels. We only found one morel specimen. The lack of morels surprised everyone as the fire had burned hot into the ground, and very little vegetation had started to grow back.

We were convinced we had ideal morel growing conditions. We could only wonder if the soil type was not suitable to morel growth.



After about three hours of hard foraging in the burn we decided to try another area where I had harvested morels in the past.

When we arrived at George Lake it did not take long before we found morels—unfortunately, they were not in great shape. The big find of the day occurred shortly thereafter. We found many Smooth Thimble Caps, *Verpa conica*. We do not see these mushrooms in our area on a regular basis; *Verpa bohemica* is much more common. The Smooth Thimble is generally found at the end of the morel season in damp spots where the weather remains cool. *V. bohemica* can be distinguished by its wrinkled, thimble-like cap.

We also collected a couple of large fruitings of *Pleurotus populinus* before heading home for the day. You may not find *P. populinus* in your guide—it is morphologically similar to *P. ostreatus*, the “Oyster Mushroom”, but it is thought to be native to North America.



Verpa conica

Verpa conica
Morchella elata
Hygrocybe conica
Pleurotus populinus
Phellinus tremulae

Polyporus melanopus
Peziza repanda
Geopyxis carbonaria
Hypholoma fasciculare
Agaricus sp.

Summer Solstice Foray & Feast

Melanie Fjoser and Bill Richards



On June 21 - 23 we held our annual Summer Solstice Pot Luck at New Moose Hill Hall; we had fabulous weather and fabulous food!

For the Saturday dinner, Chef Chad Moss and Martin Osis did much preparation; this year was all about salmon and the many ways to prepare it (planked salmon, smoked salmon and morel chowder, gravelox with specialty cream cheeses, portobello mushrooms stuffed with salmon cream cheese, mushroom pilaf, fresh smoked oyster mushrooms, salmon & tomato cream sauce over fresh cow parsnip buds), as well as the wonderful potluck dishes that everyone brought.

Others assisted with food preparation, setting up tables, distributing pot-luck dishes and helping out as needed to make this a very memorable experience. Truly a gourmet meal that was appreciated by all—kudos to Chad, Martin and everyone else who pitched in. Thanks to you all! (MF)

The Solstice Foray is always well attended. There were 32 participants registered for the two forays, and more who showed up for the feast afterwards. The first foray of the day was lead by Pieter van der Schoot who guided a group of 20 along the trails of some of his fantastic property. This group soon spread out so much that there were eventually two groups.

I had been trailing behind to ensure that all followed Pieter but I ended up with a troupe of my own and we managed to find a meal of oyster mushrooms on some beaver-felled poplars. There was, as always, a great variety of fungi .



This foray is both a chance and obligation to note changes occurring within the Poplar Creek Natural Area and report them to the Parks and Protected Areas Program. For the past 21 years, the AMS has been visiting this natural area as co-stewards with Pieter. The second foray took us into the sections of natural area. Some of us observed white-tailed deer fawns and a covey of fledgling ruffed grouse with their oversized wings take to trees for cover as the hen led me away. (BR)



Bow Valley Foray and EXPO

Martin Osis

Please join us on the **Bow Valley Foray and Mushroom EXPO** on **July 20-21, 2013**.

One of the best ways to learn about mushrooms is to see a variety of them side-by-side. This way you can see both obvious and subtle differences between specimens which help you decide which



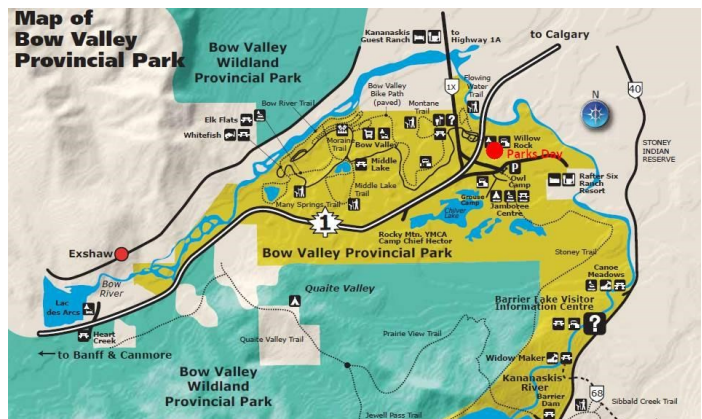
mushroom you actually have.

We will have several forays going out on Saturday both in the Cochrane area and the Bow Valley Provincial Park. AMS will have a special permit to pick in the Park, since usually one cannot pick anything in this Park.

On Sunday we will be setting up a display of the mushrooms picked on Saturday.

Come out and look at the many displays, and help us at our mushroom tables. We want to see as many members as possible from Calgary and S. Alberta--this weekend is an event for you! As an added bonus, free hot dogs and drinks are available to attendees.

Parks Day is meant to celebrate and demonstrate everything that Kananaskis has to offer, and it is an opportunity to educate/inform/entertain the public on a wide range of topics.



The Willow Rock Campground will feature many participating organizations so this day is about more than just mushrooms. See map above.

NAMA 2013 Foray, Harriet, Arkansas October 24-27, 2013

Do something different! The Ozark Mountains have long been recognized as an ecologically, geographically, and culturally unique region of North America. Come explore the deep valleys and gentle mountains with some of North America's expert mycologists.

Do you know what the Ozarks are? The Ozarks encompass 34.3 million acres and traverse five states, with the majority of the region occurring within Missouri (67%) and Arkansas (24%) and smaller portions in Oklahoma (17%), Illinois (2%) and Kansas (0.1%).

The prevailing tree community is dominated by various species of oaks, such as white oak (*Quercus alba*), scarlet oak (*Q. coccinea*), black-jack oak (*Q. marilandica*), post oak (*Q. stellata*), and Eastern black oak (*Q. velutina*).

Although books and articles have been written about much of the biota that occurs within this region, there has not been any extensive inventory of macrofungi in this area. So the potential for finding interesting and unusual mushrooms during the course of this foray is indeed great.

For more information on the event, please see:

<http://www.namyc.org/events/NAMA2013/index2013.html>

AMS Events

*Members get details by email

July

Thurs., July 18

Foray in *Your*
Neighborhood

Sat.-Sun., July 20-21

Bow Valley Parks Day
Foray and Expo

Thurs., July 25

Foray in *Your*
Neighborhood

August

Thurs., August 1

Foray in *Your*
Neighborhood

Fri.-Mon., August 2-5

Waskahigan River PRA

Thurs., August 8

Foray in *Your*
Neighborhood

Thurs., August 15

Foray in *Your*
Neighborhood

Sat., August 17

Pre-Exposition Forays for
Devonian Garden Expo

Sun., August 18

"City of Champignons"
Mushroom Exposition

Thurs., August 22

Foray in *Your*
Neighborhood

Thurs., August 29

Foray in *Your*
Neighborhood

Fri.-Mon., August 30-Sept. 2

Great Alberta
Mushroom Foray 2013

September

Thurs., September 5

Foray in *Your*
Neighborhood

Fri.-Sun., September 6-8

Foothills Foray

Fri.-Sun., September 6-8

Newfoundland Labrador
Foray

Sun., September 15

Foray in *Your*
Neighborhood

Sat.-Mon., September 21-23

Fungi Festival
Shuswap Lake, BC

Sun., September 22

Foray in *Your*
Neighborhood

Wed., September 25

Indoor Meeting

October

Thurs., October 24

Indoor Meeting

Wed.-Sat., October 24-27

North American Mycological
Association (NAMA) Foray