



# Spore Print

2006 No. 3 Quarterly Newsletter of the Edmonton Mycological Society

## The many facets of *Armillaria*

The genus *Armillaria* contains about 40 species of important wood-rot fungi which are widely distributed across the world. Their basic behaviour is similar, because all the species invade plant roots and cause a progressive white rot. For this reason, all these fungi were at one time grouped into a single species, *Armillaria mellea*; however, they are now separated based on morphology, physiology, pathogenicity, and geographical distribution.

Since so many species of *Armillaria* look alike, mycologists have “mated” *Armillaria* species in the lab. They grow two species, in a single Petri dish and observe the resulting reaction once the two expanding colonies meet in the middle of the dish. They discovered that some Honey Mushrooms would take to one another, while others turned up their fungal noses at the idea of pairing up. Thus, using the “biological species concept” (in basic terms, if they cannot mate, they belong to separate species), we now define ten species of

*Armillaria* in North America. Fortunately, physical features do separate some of the species, and the fairly well documented geographical ranges of the mushrooms help to separate others

The classic Honey Mushroom, *Armillaria mellea*, turns out to be limited mostly to eastern North America, so the Honey Mushrooms we collect and eat in Alberta are not *Armillaria mellea*, but one or two other species of *Armillaria*.

### Morphology

**Cap:** 3-15 cm, convex to broadly convex or plane in age; the margin often arched at maturity; dry or tacky; color extremely variable, but typically honey yellow; smooth, or with a few tiny, dark scales concentrated near the centre and

vaguely radially arranged.

**Gills:** Attached or slightly decurrent, nearly distant; whitish, sometimes bruising or discolouring darker.

*Photo courtesy: Martin Osis*

*(Armillaria ...continued on page 3)*

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*Armillaria*  
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## Armillaria (continued from page 1)

**Stem:** 5-20 cm long; 0.5-3.5 cm thick; tapering to base; clustered growth pattern; tough and fibrous; smooth and pale near apex, darker and nearly hairy below; with a persistent hairy at maturity and a white partial veil covering the gills when young.

**Flesh:** Whitish to watery tan.

**Taste:** Mild to bitter; smell sweet.

**Spore print:** White.

**Microscopic features:** Basidiospores 7-9 x 6-7  $\mu\text{m}$ ; smooth; elliptical; inamyloid (no reaction to Melzer's reagent – a test for the presence of starch in fungal tissues); basidia lacking basal clamp connections.

### Edibility

"*Armillaria mellea*" is usually recommended as a good edible; however, its identification is obviously not nearly as easy as was once thought (though there is no evidence that any of the other species of *Armillaria* is poisonous). More importantly, the Honey Mushroom is one of those mushrooms that can cause minor gastric distress to some people. If you are eating *Armillaria* for the first time, you should eat only a few bites so you can judge your reaction.



Upper Right: One example of a Honey mushroom. Notice the stipe, veil and the gill structure. Photo courtesy: Loretta Puckrin

Bottom Left: Young *Armillaria* surrounding the base of its host. Photo courtesy: Martin Osis

### Pathology

Six species of *Armillaria* grow in western Canada and the northwestern United States. *Armillaria sinapina* is the most widespread and common species of these, occurring from 49° N to about 57° N. The hosts of this species are primarily broadleaved trees and shrubs. *Armillaria sinapina* often also colonizes conifer stumps.

*Armillaria nabsnona*, *Armillaria cepistipes* and *Armillaria gallica* have been collected only in the southern part of B.C.

The four species of *Armillaria* listed above are weakly pathogenic, and they spread slowly on their host's root system. Usually, only stressed hosts are killed.

A fifth species, *Armillaria ostoyae*, is the most pathogenic North American *Armillaria* species and occurs in western Canada from 49° N to about 53° N. Its principal hosts are conifers; however, it can also attack broadleaved trees, shrubs, and some herbs. Ponderosa pine (*Pinus ponderosa*), western larch (*Larix occidentalis*) aged 15 years and older, and paper birch (*Betula*



*papyrifera*) are species with the greatest tolerance to *A. ostoyae* infection. *Armillaria ostoyae* is a parasite, killing its hosts during the parasitic part of its life cycle and utilizing the host as a food source during its saprobic (decomposer) phase. At a point of infection on a root initiated by a rhizomorph or by root contact, the fungus initially spreads in the outer bark and then penetrates to the cambial zone within the root. The host responds to the infection by producing resin and new tissue (callus). Vigorous hosts or species more tolerant of the fungus may live for many years with dormant root infections, but their growth may be reduced. There are no cost-effective means of controlling *Armillaria* root disease.

The sixth species, an undescribed uncommon one

(*Armillaria* ...continued on page 9)



## Some of the programs and presentations that are tentatively scheduled for the NAMA Foray

*Workshop:* Introductory beginners foray and the associated identification session.

Presented by Dr. Walt Sundberg, University of Southern Illinois.

*Mycophagy:* The gourmet preparation of a selection of edible fungi found on the foray. This event includes tasting the various dishes.

Presented by Ursula Pohl

*Workshop:* Photography workshop and lecture.

Presented by John Plishke

*Fungi found in Sphagnum bogs and their ecological role*

Presented by Dr. Markus Thormann, Canadian Forest Service

*Rocky Mountain Alpine fungi*

Presented by Dr. Cathy Cripps, University of Montana

*Fungi, the strangest kingdom*

Presented by Dr. B. Kendrick, author of *The Fifth Kingdom*.

*Mushrooms of the Northern Rocky Mountains*

Presented by Dr. L. Hutchison, Lakehead University.

*Revelations from 30 years of mushroom poisoning*

Presented by Michael Beug, Evergreen State University

*Mushroom cultivation for Dummies*

Presented by Ron Spinosa.

*What's eating - mycophagous insects*

Presented by Britt Bunard,

*Unique Fungi*

Presented by Dr. Walter Sundberg, University of Southern Illinois

*Workshop:* Mushroom papermaking

Presented by Kim Plishke

*Mushrooms of the Gulf coast*

Presented by David Lewis

*Fungal pharmacy - Medicinal Mushrooms of Western Canada*

Presented by Robert Rogers

**NAMA photo contest prize winners.** This is a wonderful opportunity to get inspired and take your own photos for our EMS photo contest.

The biggest event in mushrooming to come to Alberta is almost here.

This is *a once in a lifetime opportunity* for most of us that belong to the Edmonton Mycological Society.

The NAMA Foray in the Hinton area will allow mushroom enthusiasts to gather and learn from each other as well as from some of the foremost experts in their fields. Whether you are a beginner, a budding mycologist or higher up the learning ladder, there will be sessions and forays available to allow everyone to learn. Forays will be going out to approximately 20 different locations and will yield a multitude of fungi, many species which we have never seen before and some familiar.

### ***What an opportunity to learn!***

The sessions and presentations (right) on a variety of topics will allow participants many options and who wouldn't love to taste some delicious morsels of edibles.

Registration form and info are on our website [www.wildmushrooms.ws](http://www.wildmushrooms.ws). If you need more details, contact Martin Osis [mosis@wildmushrooms.ws](mailto:mosis@wildmushrooms.ws) or at home 780-987-4412.

**See you in Hinton!!**



# EMS Annual Mushroom Photo Contest

Closing Date: September 30, 2006

Martin Osis

Name: \_\_\_\_\_

Address: \_\_\_\_\_

City: \_\_\_\_\_ Postal Code: \_\_\_\_\_

Phone Number: \_\_\_\_\_ Email: \_\_\_\_\_

## Competition Categories

1. Best overall mushroom photo.
2. Best edible mushroom photo.
3. Best mushroom identification series

Every entry should have a photo number (if you are submitting more than one) and the date taken.

### Entry Fees:

Registration fee:

covers the first photo \$ 5.00

Additional entries:

\_\_\_ x \$ 1.00 = \$ \_\_\_

Total: \$ \_\_\_

### Submit entry fee by mail to:

Edmonton Mycological Society,  
1921 - 10405 Jasper Avenue  
Standard Life Building,  
Edmonton, AB T5J 3S2

Payment should accompany entries.

Any entry not paid in full by the deadline date may be disqualified from the competition. Entries may be submitted by mail to the address above or emailed to [photocontest@wildmushrooms.ws](mailto:photocontest@wildmushrooms.ws)

You may also submit as many photos for the data base as you would like. Please indicate that they are for this purpose and NOT for the photo contest. There is NO fee for database photos. Your participation and entry automatically give the Edmonton Mycological Society permission to use your photos for EMS activities.

## Prizes

**Best Edible**

**Fungi Photo**

Sorrentinos Dinner

Party for 10

**Best Documentary**

**Photo or Series**

\$300.00 cash

**Best Overall Photo**

60% of the entry fees.



Christopher Kolacz



John Thompson

Martin Osis





# The Gill Structure

If you look in any mushroom identification book, you will find some symbols that represent the structure of the mushroom fruiting body. These terms and symbols are the basis of identification and it is important that you learn the various ways of describing fungi if you are to learn which ones are edible – or even to learn about mushrooms in more general terms.

The terms we will address in this issue are:

*Free (not attached)*

*Adnexed (narrowly attached)*

*Sinuate (notched)*

*Adnate (broadly attached)*

*Decurrent (running down the stalk).*

As you can see there can be some confusion as to the proper term to apply. For example what is a narrowly attached as opposed to a broadly attached. You can't judge by measurement as a small cap fungus might be broadly attached where the same physical measurement in a large cap species could be considered narrowly attached. This type of judgement comes with experience and constant attempts to identify unknown species (at least unknown to you) will prove to be the best tactic in getting identification under control.

## Free

This term is fairly self explanatory. Just be careful that you don't consider something narrowly attached because you haven't looked closely enough! When in doubt cut the mushroom in half

longitudinally (see photo – sideview). This often help you see the actual attachment. In free species the gills do not attach themselves to the stem (or stipe) but rather they stop with the cap of the mushroom. Examine

the photo of the underside of a Meadow Mushroom - *Agaricus campestris* (photo #1). In this example you can clearly see that the gills are free of the stipe with a slight indentation between the end of the gills and the stipe itself. This is not notched as the gills simply stop before the stipe. David Arora describes this gill as “close, free at maturity” which you can see does fit this example.



Sideview of mushroom - cutting the sample in half sometimes helps in determining the gill attachment.

## Adnexed

In this case the gills lightly touch the stipe. Because the gills are generally rounded at the ends, it can appear that they are free. A good hand-held magnifying lens helps to determine which is the case. When in doubt ask your foray partner what they see. A second opinion is always worth having when it come to identification. Photo #2 is of a *Rusulla* species. This entire family is described as



Photo #1 - *Agaricus campestris* is an example of a mushroom with free gills.



Note the gill attachment on the mushroom commonly know as the fairy ring mushroom.



“adnexed to adnate and sometimes free” as to the gills. The example show would be classified as adnexed. The same range of description is applied to the fairy ring mushroom. How would you describe the gill attachment in this species?



Photo #2 is an example of adnexed gill structure as shown here in a *Rusulla* specimen.

### Sinuate

The notched gills have a definite ‘step’ before they join the stipe. Whether they actually touch the stipe or not is of less importance than knowing there is a notch. In photo #3 you can clearly see the notched shape near the stipe of the sample mushroom. The gills do not continue down the stipe therefore they are NOT decurrent.

### Adnate

In many cases the adnate gills are broadly attached and they don’t have the rounded inside shape which makes it easy to see if they are attached. In this case it is important that the attachment does not go substantially down the strip



Phot #4. A honey mushroom showing slightly decurrent gills.



Photo #5: The shaggy parasol gills are easily broken.

broadly attached and adnate. In this example there is a ‘trailing edge’ of the gills that works its way down the stipe therefore the description of ‘slightly decurrent’.

### Decurrent

For this category the gills are not only attached to the stipe but they descend the stalk to

some degree. Chanterelle mushrooms are a good example of decurrent gills.

There are 2 other ways of describing the gill structure.

One deals with the spacing between the gills – so you can have close or widely spaced, and everything in between. Which of the species shown here would you

as that would be considered decurrent. Check out the gills structure of the honey mushroom (photo #4). You can see why the description in David Arora’s “Mushrooms Demystified” is “adnate to slightly decurrent or sometimes notched”. There is a definite ‘step’ in the gills before they attach to the stipe. There is no question but that they do attach their full depth – therefore



Photo #3

(Gill Structure ...continued on page 9)

The  
Edmonton Mycological Society  
presents

“City of Champignons”  
Mushroom Exposition 2006

Sunday, July 30 (11 am – 4 pm)

Devonian Botanic Garden  
Highway 60, North of Devon

**DISPLAY TABLES**

See specimens of WILD mushrooms – Would you like to know which are edible, poisonous, medicinal?

Check out the scientific displays, photographs, field guides, cookbooks, and more....

**ACTIVITIES**

B.Y.O.F.: “Bring Your Own Fungi” for identification

Slide Show: “Introduction to Mushrooms” (Noon & 2 pm)

Mushroom walk: On the Devonian Garden Trails (1 pm)

moss to preserve the moisture level. Also remember that different stages of the same mushroom species are also important, especially when showing the general public what to expect when they go out looking for mushrooms on their own. Of course we will all encourage them to join our club and learn more about the fungi family before they go on forays by themselves.

EMS will have display tables set up at the Pine Pavilion as well as tables with labelled mushrooms for all to see and enjoy. Some of the display tables will include - membership, Spore Print, mushroom books and a newly released book by one of our members - Robert Rogers.

Enjoy special, fresh-cooked mushroom dishes and check out the ones that are available to buy and take home.

Short forays will also be happening. This will be a chance for everyone go for a walk and experience a mini-foray.

Needless to say, volunteers are needed to help set up the display tables, assist at the various display areas, welcome and talk to the visitors that will be arriving. Please respond to a **Request for Volunteers** message that has been emailed out. Contact Melanie Fjoser [mfjoser@www.wildmushrooms.ws](mailto:mfjoser@www.wildmushrooms.ws) or at home 780-987-4412

With enough volunteers, everyone will have a chance to sample the mushroom recipes, check out the foray findings and learn a little bit more about some of the varieties of mushrooms. It is a fun, educational and interesting event that helps to promote our association.

*The display table at the Mushroom Exposition in 2005*

The City of Champignons Mushroom Exposition is fast approaching. The day before - July 29 -- members are asked to pick as many different types of mushrooms as are willing to be found. Simply go to the areas where you know there are mushrooms and pick samples. All species of mushrooms are accepted -- edible and non-edible. Please pick carefully and take the entire stalk with some of the surrounding natural area. It is great to display both the mushroom and where it was found (a small pine branch, grass, leaves). This adds to the visual display as well. To keep the specimens fresh pack them in







Another example of *Armillaria* at the base of its host tree. Notice the environment. Photo courtesy: Loretta Puckrin

termed NABS X, has so far only been collected in southeastern B.C., where it occurs primarily on conifers.

### Mycorrhizas

Some *Armillaria* species can act as mycorrhizal fungi to support the growth of orchids and other non-photosynthetic plants. Orchid seeds are so tiny, that they hold virtually no food reserves for the developing seedling. Consequently, without the presence of the appropriate *Armillaria* species in their developing root systems, these orchid seedlings would not survive and reach maturity. The fungus produces coils in the cells of the orchid tubers. Later, these coils are digested by the orchid as a source of nutrients. Also, *Armillaria* rhizomorphs that infect the orchid are also sometimes attached to roots of nearby trees. By doing so, the fungus essentially acts as a bridge between the tree and the orchid, shuttling nutrients from the tree to the orchid.

### Bioluminescence

Bioluminescence is defined as the production and emission of light

by a living organism as the result of a chemical reaction during which chemical energy is converted to light energy. The whole subject of bioluminescence is wanting for an explanation, especially as it pertains to mushrooms.

The greenish light, known as “foxfire”, is given out not only by the mushrooms themselves but also by the mycelium. The surface layers of the mycelium of such impregnated wood, which is called

“touchwood”, can be seen to glow fairly brightly for one or two weeks. This property has inspired fear and wonder since time immemorial. Legends describing such eerie encounters can be found in ancient Greek, Roman, and Indian texts. People from many parts of the world have found uses for these natural lanterns. In 1652 people in the far north of Scandinavia would place pieces of rotten oak bark at intervals when venturing into the forest. They could then find their way back by following the light. Similarly, during World War I, soldiers in the trenches placed touchwood on their helmets to keep from bumping into each other in the dark.

As you can see, the Honey Mushroom is a multifaceted basidiomycete. It is edible (with caution!), glows in the dark, assists orchids by supplying them with nutrients, and is the most significant tree pathogen in Canada. This diversity of characteristics makes *Armillaria* a truly amazing individual in a truly amazing kingdom.

 Markus Thormann

### Gill Structure

(continued from page 7)

describe as close? I am sure that the *Russula* sample was one. The fairy ring and honey mushrooms are examples of widely spaced gills.

The other method of identifying when applied to gills is whether all the gills are the same length or whether some go all the way to the stipe while others stop part way there. The fairy ring is a good example of a mushroom that has intermediate gills – gills that are not all the same length. You can also see this in the honey mushroom and the *Rusulla* while the meadow mushroom, as well as the shaggy parasol (photo 5 on page 7) have gills all the same length.

***How would you describe our mystery mushroom (below)? It certainly has specific characteristics.***

 Loretta Puckrin



# Rannach Provincial Grazing Reserve Foray - the Morel Hunt

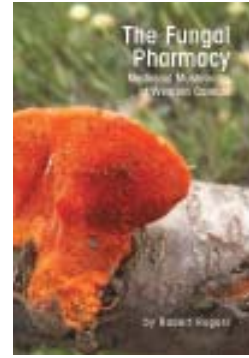


Our Annual Morel Foray on May 13, 2006 in Rannach Provincial Grazing Reserve, north of Two Hills, was well attended. After a somewhat confusing breakfast venue, we spent most of the next several hours under wet clouds and on the wrong side of the North Saskatchewan River. We did find a few morels and several other species (see below) but the soil temperature was just too cold for generous fruiting. The temperatures recorded averaged 8°C, which is nearly 5°C colder than it should be for optimum fruiting. After a group photo in the Rannach Reserve, most of the group crossed the river to try their luck on the south facing river valley within the St. Paul's Grazing Reserve. There was an immediate change in the increased flowering and of course in the quantity of morels.

 Bill Richards

## Species list from Spring foray at Rannach Provincial Grazing Reserve near Two Hills

<i>Bisporella citrina</i>	<i>Psathyrella hydrophila</i>
<i>Coprinus micaceus</i>	<i>Psathyrella</i> sp.
<i>Fomes fomentarius</i>	<i>Sarcoscypha coccinea</i>
<i>Lentinus</i> sp.	<i>Schizophyllum commune</i>
<i>Morchella elata</i>	<i>Stereum hirsutum</i>
<i>Nectria cinnabarina</i>	<i>Stereum purpureum</i>
<i>Phellinus punctatus</i>	<i>Trametes elegans</i>
<i>Pleurotus ostreatus</i> (last year's)	<i>Trametes hirsuta</i>
<i>Phyllotopsis nidulans</i>	<i>Trichaptum bififormis</i>
<i>Pluteus</i> sp.	<i>Trichaptum abietinum</i>
	<i>Verpa bohemica</i>



One of our executive members, Robert Rogers, has just completed a book about fungi that concentrates on those found in Western Canada. Entitled "*The Fungal Pharmacy, Medicinal Mushrooms of Western Canada*"

the book covers tradition and historical references as well as traditional medicinal uses and modern medicine research. The honey mushroom entry has this comment "Traditionally, it was boiled in milk or alcohol for inflammations of the throat." This refers to the use in China for thousands of years! Or "Lumberjacks from Bohemia consumed the mushroom believing it protected them against cancer. They were right!" I'll let you check out *The Fungal Pharmacy* to find out which mushroom was preferred in this case. For those who are having problems with the scientific names, you might find the derivatives of interest. For example, when talking of our featured mushroom in this Spore Print, the honey mushroom, you find that "*Armillaria* means "a ring" and *mellea* "honey coloured". That now makes sense and gives you clues as to how to identify the species and remember the scientific name. For anyone who likes mushrooms or believes in herbal therapy, this book makes for great reading and a useful resource. Copies of the book will be available at the "City of Champignons" exposition at the Devonian Gardens at the end of this month. See you there.



Sorrentino's  
Mushroom Festival  
will be happening  
September  
1-30, 2006

EMS participates in this event. Martin Osis will be interviewed at Sorrentino's on Global TV on September 13 by Lorraine Mansbridge.

# Poplar Creek Foray Report

Though the Annual Poplar Creek Foray is no longer an oyster mushroom foray, it is still well attended. Once again the New Moose Hill Hall was sold out for what was the Second Annual Pig Roast. Unlike previous years the weather was cooperative with pleasant sunshine. Fortunately it had been wet prior to our visit so there was a diversity of fungi (see side bar). This year information was also collected on the vascular plants - thanks to Janette Malton. This veg-list will be forwarded separately as part of the club's volunteer steward commitment to Alberta Parks & Protected Areas.

There has been a great change in the number of healthy trees in the Poplar Natural Area, resulting in fewer oyster mushrooms. During the first years of foraying in this area there were many standing dead aspen poplar. This standing dead forest was as the result of several repeated infestations of the forest tent caterpillars through the region. These weakened trees became home for oyster mushrooms in the spring and in the fall for innumerable honey mushrooms.



Bill Richards

## Dr. Bryce Kendrick Seminar

Topic: "Fungi - The Strangest Kingdom"

Date: August 23

Time: 7:00 pm

Location: Northern Forestry Centre

5320 - 122 Street, Edmonton, Ab

Bryce Kendrick hails from Liverpool, England and completed his Ph.D. in Mycology at the University of Liverpool. He sailed to Canada where he was awarded a Post-Doctoral Fellowship of the National Research Council. While working on moulds in Ottawa he was offered a position by the Federal Government and spent the next six years at the Biosystematics Research Centre where he continued to acquire more mycological knowledge. As Bryce stated in his biographical sketch "I soon learned that a Ph. D is only the beginning of one's professional education". Bryce eventually obtained a teaching position at the University of Waterloo. Here his interests broadened, research support grew and he continued with teaching, research, writing and environmental activism.

We are very fortunate to have a speaker of his calibre at our meeting so please mark August 23 on your calendar and plan to attend. **Please note that this is our general meeting with a location change.** Please check your email for more details. **Hope to see everyone there.**

## Species list Poplar Creek

June 17-18 2006

*Chondrostereum purpureum*  
*Clavicornia pyxidata*  
*Clitocybe gibba*  
*Coprinus micaceus*  
*Cortinarius* sp.  
*Cortinarius trivialis*  
*Crepidotus mollis*  
*Exidia glandulosa*  
*Fomes fomentarius*  
*Fomitopsis cajanderi*  
*Fomitopsis pinicola*  
*Fomitopsis rosea*  
*Gloeophyllum sepiarium*  
*Gymnopus dryophilus*  
*Gyromitra esculenta*  
*Gyromitra gigas*  
*Heliocybe sulcata*  
*Helvella lacunosa*  
*Hericium coralloides*  
*Inocybe* sp.  
*Irpex lacteus*  
*Leccinum boreale*  
*Lenzites elegans*  
*Lycogala epidendrum*  
*Lycoperdon nigrescens*  
*Marasmius pallidocephalus*  
*Marasmius* sp.  
*Melanoleuca* sp.  
*Mycena adonis* var. *adonis*  
*Mycena galericulata*  
*Mycena haematopus*  
*Mycena* sp.  
*Omphalina epichysium*  
*Peziza repanda*  
*Phellinus igniarius*  
*Phellinus tremulae*  
*Pholiota flammans*  
*Phyllotopsis nidulans*  
*Piptoporus betulinus*  
*Pleurotus ostreatus*  
*Plicaturopsis crispa*  
*Pluteus cervinus* var. *cervinus*  
*Pluteus romellii*  
*Polyporus alveolaris*  
*Polyporus leptocephalus*  
*Psathyrella* sp.  
*Pycnoporus cinnabarinus*  
*Russula* sp.  
*Schizophyllum commune*  
*Stropharia* sp.  
*Thelephora terrestris*  
*Tremella foliacea*  
*Trichaptum abietinum*  
*Trichaptum* sp.  
*Tricholoma saponaceum* var. *saponaceum*  
*Tricholomopsis rutilans*  
*Xeromphalina campanella*

# EMS Calendar of Events for 2006

**Please Join Us!!**

All forays are undertaken at your own risk. You are responsible for transportation and accommodation.

## March

**22** Meeting: *New member orientation* by Alan Fleming and *Introduction to Field Guides* by Martin Osis

## April

**26** Meeting: *Foray Fashion Show and some do's and don'ts* by Bill Richards

## May

**13** *Aspen Parkland / Boreal Forest Regions*  
**Mushrooms:** Morels, Verpas and Spring Agarics  
**Location:** Hammach Provincial Grazing Reserve

**24** Meeting: *Morels and other spring mushrooms* by Mike Schulz

## June

**17** *Volunteer Steward Commitment and Pig Roast*  
**Mushroom:** Various seasonal  
**Location:** Poplar Creek Natural Area

**21** *Summer Evening Foray in the Edmonton River Valley*  
**Mushroom:** Various seasonal  
**Location:** TBA

**28** Meeting: *Mushroom identification DVD/Video* by Taylor Lockwood

## July

**8/9** *New Members Field Orientation and Camp-out*  
**Mushroom:** Various seasonal  
**Location:** Ashland Dam Site

**19** *Mid-Summer Evening Foray in the Edmonton River Valley*  
**Mushrooms:** Various  
**Location:** TBA

**22/23** *Southern Alberta Foray*  
**Mushrooms:** Leccinum, Russula, Lactarius and other Agarics  
**Location:** Bow Valley Provincial Park

**26** Meeting: *Mushroom identification aids - stains and other chemicals*  
*Final discussions and plans for the mushroom exposition at the Devonian*

**29** *Pre-exposition foray*  
**Mushrooms:** As many different varieties as possible.  
**Location:** Members choice.

**30** *"City of Champignons" Mushroom Exposition*  
**Mushrooms:** Any and all types of fungi  
**Location:** Devonian Botanic Garden

## August

**17-20** *North American Mycological Association (NAMMA) Foray*

**Events:** Speakers, workshops and forays

**Location:** Hinton & Area

**23** Meeting:  
*Dr. Bryce Kendrick.*  
**Location:** Northern Forestry Centre

**30** *Summer Evening foray in the Edmonton River Valley*  
**Mushrooms:** Various  
**Location:** TBA

## September

**9/10** *Foothills Campout and Foray*  
**Mushroom:** Honey Mushrooms, Hedgehogs and Chanterelles  
**Location:** Lambert Creek Area

**27** Meeting: *Honey mushrooms - the multiple faces of Armillaria* by Markus Thormann

## October

**25** Meeting: *Scary and nasty mushrooms* by Martin Osis  
 Photo Contest Recap

## November

**TBA** *President's Dinner*



## General Member Meetings

Fourth Wednesday of every month -

Time: 7:00 pm

Location: Riverbend Library

