Spore Print
2007 No. 2 Quarterly Newsletter of the Edmonton Mycological Society

Club Mushroom

There are a number of mushrooms which could be called '*club mushrooms*' and, if you are not careful in your identification, can be confused especially when the sample is not mature. The good news is that none of the local varieties are poisonous. You might, however be wondering why somebody thinks they are so delicious when you couldn't get the first mouthful down. That difference is the result of picking different mushrooms and calling them all 'club'.

According to Leni's book, *Mushrooms of Northwest North America*, all three local species are edible, although some are more bitter than others. She also comments that this group can be eaten raw. The taste raw and cooked are similar, so testing a small sample by taste before picking can help you identify which ones you do want to harvest.

The preferred *Clavaria* mushrooms are:

Flat topped Coral – clavariadelphus truncatus – which can be found throughout North America. It is most common in the Rocky Mountains growing in a coniferous environment, preferring a cold and wet location. This yellow to ochre mushroom is clublike, often broad and flattened at top. The fungi is wider at the top and narrows toward the base with a firm to spongy consistency. The entire fungi is edible and fairly solid with no hollow portions. The spore print is ochre (a brown-toned yellow). The flesh is whitish to ochre and becomes darker on bruising. This fungus has a nice long growing season of August to October.

Clavariadelphus truncatus is a sweet tasting fungus that can be found under confiers in needle litter. Photo courtesy: Loretta Puckrin

(Hypomyces ...continued on page 3)

President's Message

Markus Thormann, president of the Edmonton Mycological Society

It is hard to believe, but June has already approached and we're looking forward to the longest day of the year. We are well into our mushroom season, having gone on several forays already and seeing more and more fungi merging from the multitudes of substrata, in which their mycelia overwintered. Despite the once again poor showing of morels, verpas were very abundant and exceptionally large, and we can now look forward to many spring agarics and delicious and healthy oyster mushrooms appearing in the coming weeks.

While scouring the news about fungi, I came across a truly amazing and thought-provoking article published in late May 2007 in the online journal *PLoS One*. It outlines yet another amazing fact about fungi. We all remember the Chernobyl disaster, when a nuclear reactor in Chernobyl, Ukraine, exploded and subsequently released nuclear radiation over most of the northern hemisphere in 1986. A team of researchers at Albert Einstein College of Medicine in New York under the leadership of Ekaterina Dadachova determined that some fungi actually grew better near Chernobyl than elsewhere. The fungi examined are all common soil fungi and had a pigment called melanin in their hyphae - a substance also present in human skin. The researchers hypothesized that melanin may play a role in the fungi similar to that of chlorophyll in plants, which traps energy from sunlight and converts it to "food energy" needed to sustain life. How exactly melanin captures radiation energy is still unclear; however, it highlights yet another amazing fact about fungi in that they are extremely resilient and can survive just about anything, including nuclear disasters!!! The question "What can fungi do?" should really be changed to "What *can't* fungi do?".

At this time, it is my distinct pleasure to announce that we have once again received a grant from the Alberta Conservation Association. We applied for $14,500.00 and will receive the entire amount to continue work on our "Fungi of Alberta" data base. The main objectives of this year will to fill in some holes in the data base, check fungal taxonomy, and access the University of Alberta

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Clubs *(continued from page 1)*

Northern Pestle (Clavariadelphus borealis)

This variety has a white spore print. It is club shaped at first but soon develops a depressed and wrinkled top with an orange shade in the centre, growing up to 10 cm tall and 6 cm across .

There are two edible but bitter specimens found in Alberta.

Pestle Fungus (Clavariadelphus pistillaris) – which can be found in deciduous and coniferous forests – fruits more seldom and is often bitter in taste. This variety can grow up to 20 cm tall with a diameter of 7 cm when single but is often 'two-headed'. When it does fruit there are many fruiting bodies. The spore print is white to buff. This fungus turns brown when bruised. The season is July-October. Some books consider this to be a nice mild flavour without the bitterness so it might depend on the area in which it grows as to how preferred the species is as an harvested mushroom. The flesh is very thin and you need to pick a large amount to get even a taste therefore it is not considered a choice edible for picking.

Strap-shaped pestle (Clavariadelphus sachalinensis) – This particular fungi has a number of shapes and sizes. Its environment is the boreal forests growing under pine or spruce. The various shapes often occur in the same area (*see Mushrooms of Western Canada – page 166*). It is most often flat or spoon-like in shape. The spore print is buff or ochre and the flesh is white with no staining. Its growing season is July to November.

This fungus is very similar to *Clavariadelphus ligula*. The *Clavaidelphus ligula* has a white spore print and a slightly bitter taste. This species enjoys growing under conifers in clusters and has a similar growing season to *Clavariadelphus scahalinensis.*

Purple Club Coral (Clavariaceae purpurea) – As the name suggest this fungi is purple in colour but grows like the other club mushrooms – in a cluster of round-tipped 'spikes'. Its colour makes it easy to identify. The flesh tends to be a slighltly purple toned white. Although considered edible, this specimen with a slightly unpleasant odour is not considered choice. It also grows under spruce and fir in mountain regions from September to October.

Clavaria Genus (Clavariaceae, Clavariadelphus) Related to the Cantharellaceae genus

This grouping includes the club and the coral mushrooms, of which a number are edible. The names describe the basic structure – that is, the club mushrooms are club shaped or upon occasion slightly branched. The coral mushrooms are tufts or clusters of branched thin stems that closely resemble the ocean's coral structures. More than a half a dozen distinct genera are now recognized as *Clavaria*.

There are a number of fungi that appear to be club-shaped but are not part of this genus. Some examples are the Orange Earth tongue (*Microglossum rufum*) and irregular Earth Tongue (*Neolecta irregularis*)

Loretta Puckrin

President's Message
(continued from page 2)

Cryptogamic Herbarium information. Breanne has agreed to continue working for us on this project. In addition, some of those funds will be allocated towards the Alberta Foray in Lac La Biche this summer.

Also, keep your eyes peeled for some new and exciting products available to you. For example, Martin Osis has been working on a key for the edible fungi in Alberta, and we will post it soon on our web site. In addition, the official report from the joint Edmonton Mycological Society/North American Mycological Association (NAMA) foray in Hinton last summer will be accessible on our web site soon as well. This report has recently been sent to our EMS/NAMA foray funding partners and will be used to acquire financial resources for various projects in the future. Moreover, our "Edible Fungi of Alberta" poster is in the printing stage and will be available to you free-of-charge soon. Please don't forget to take lots of images of medicinal fungi for our next poster in the series of fungi of Alberta.

I hope you have all had a mycologically exciting spring so far.

Happy 'Shrooming
Markus Thormann

Alberta Foray - Lac La Biche, Alberta

August 3,4, 5 & 6, 2007

Have you registered yet????

The Alberta Foray is an excellent time to meet fellow budding mycologists and have a geart time. Further these weekends are a great leap forward in the amount of knowledge we have about what is actually found in our woods right here in Alberta. All the work that is done goes toward our fungal bio-diversity knowledge and is documented and recorded in our data base. We will also be looking at photographing all the specimens so we have long term records which you can access in the future when trying to identify that mystery mushroom.

As our club grows and gets more members from across Alberta, we need to have forays that reach out to them and bring mycological expertise from the province together in order to examine what is growing in Alberta. In 2005 we went to the Rocky Mountain House area, last year to both the Canmore and Hinton areas. This year's forays will be held August 3,4,5,6 in Lac La Biche. About fifteen years ago we used to foray in this area on a yearly basis and usually had great forays, lots of *russulas*.

This year we want to keep everybody focused on mushrooms rather than chores. We will be using the Portage College facility in Lac La Biche. They will provide us with motel style accommodations, cater all of our food, provide us with classroom space, a place to display all our mushrooms as well as a lecture theatre. We are still negotiating grants and facility rentals but we are looking in the range of $185.00 per person including all accommodations and meals, with a discount for those looking at camping.

Don't forget to register and we will meet at Lac La Biche in August.

Registration Form for the Alberta Foray

Name: _____

Address: _____

City: _____ **Province:** _____ **Postal Code:** _____

Phone No.: _____ **Email:** _____

Fees

These fees include meals and accommodation

- ☐ **Singles: $185.00**
- ☐ **Couples: $350.00**

If camping, the fees are as follows:

- ☐ **Single: $115.00**
- ☐ **Couple: $200.00**

Please register early.

There will be a $50.00 fee per person for late registrations after the deadline of June 27, 2007.

Send cheques and registration form to: ***Edmonton Mycological Society***
1921, 10405 Jasper Avenue Standard Life Building
Edmonton, AB T5J 3S2

Pleurotus ostreatus	Oyster
Armillaria species	Honey
Polyporus umbellatus	Umbrella Polypore
Inonotus obliquus	Chaga
Ganoderma applanatum	*Artists Conk*
Fomes fomentarius	Tinder Conk
Fomitopsis pinicola	Red Belted Conk
Trametes versicolor	Turkey Tail
Auricularia auricula	Wood Ear
Schizophyllum commune	Split Gill
Cordyceps species	
Grifola frondosus	Hen of the Woods
Piptoporus betulinus	Razor Strop
Flammulina velutipes	Velvet Foot
Hericium species	Hedgehog
Hypsizygus tessulatus	Western Hypsizygus
Panaeolus subbalteatus	Belted Cap Panaeolus
Phallus impudicus	Stinkhorn
Phellinus ignarius	False Tinder Polypore
Sparassis crispa	Cauliflower Fungus

Annual Photo Contest -2007

Keep taking pictures and sending them in. You can enter the Photo contest as many times as you would like and every photo increases the data base photo gallery.

Remember that we are planning to print a medicinal mushroom poster, so keep your eyes open and your camera ready. The list of mushrooms that will be featured on the poster are listed on this page.

Initial entry fee: $ 5.00
PLUS
Additional entry fees ____ x$1.00

(Enter as many times as you wish. The $5.00 entry is for the first entry only)

NOTE: Payment for additional entries should be in by closing date of November 1, 2007

Submit entries by mail to EMS or by Email to:
photocontest@wildmushrooms.ws

Send entry fee to :
Edmonton Mycological Society
1921 – 10405 Jasper Ave.
Standard Life Building
Edmonton AB T5J 3S2

What's in a name? Latin binomials *vs.* common names

Two mycophiles are on a foray, and the following conversation ensues.

Mycophile 1: "I was at my favourite foray site last week and found lots of horn of plenty."
Mycophile 2: "Which one is that?"

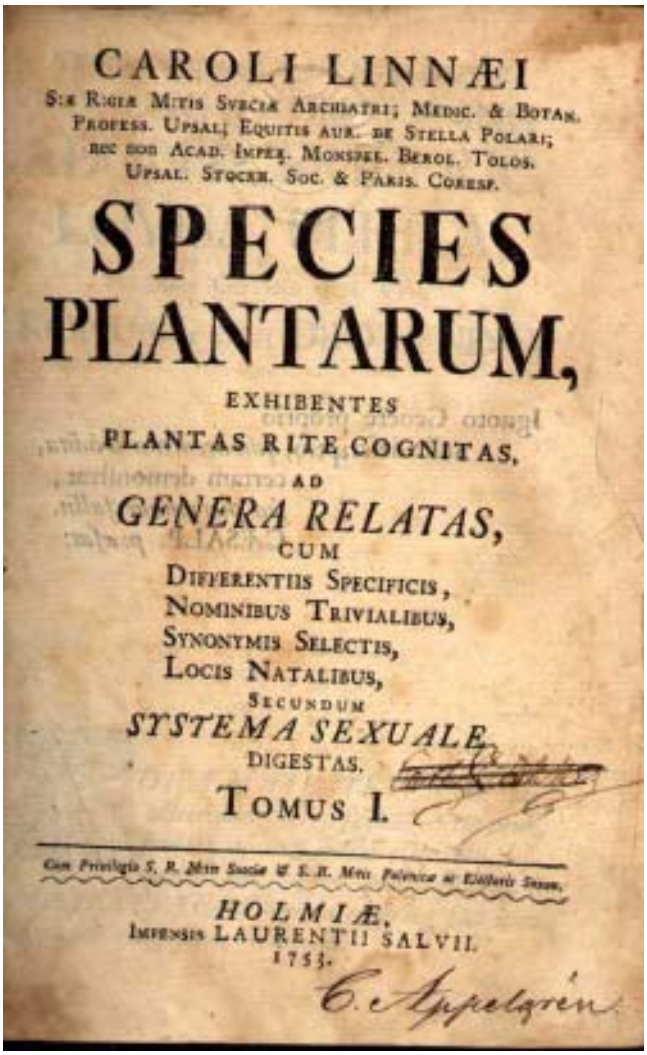
Mycophile 1: "You know….the trumpet of death."
Mycophile 2: "Trumpet of death….never heard of that one."

Mycophile 1: "Come on. They're also known as black trumpets."
Mycophile 2: "Black trumpets???"

Mycophile 1: "Alright, let's see. I am sure you have picked black chantarelles before. They're all over the place in these woods."
Mycophile 2: "I know the yellow chantarelle. What's a black chantarelle?"

Mycophile 1: "Perhaps you know its formal name. Its Latin name is *Craterellus cornucopioides*."
Mycophile 2: "Oooh….I see. Yes, I have collected *Craterellus cornucopioides* in the past as well. They're delicious!"

These types of conversations are happening far more frequently than you can imagine. Think of a mycophile from a different country coming to Canada or you visiting another country to pick mushrooms. In September, you're on a foray to pick *Armillaria*, which we commonly refer to as "honey mushrooms"; however, they're also known as "honey agarics" or "oak fungus" in English-speaking countries. In Germany, they're known as "Hallimasch" or "Honigpilz" (literally "honey mushroom"), in Sweden as "honungsskivling", and in Italy as "chidini famigliola buona". The list goes on, as does the confusion among some amateur and professional mycologists.


CAROLI LINNÆI
SR. REGIÆ MITIS SVECIÆ ARCHIATRI; MEDIC. & BOTAN. PROFESS. UPSAL; EQUITIS AUR. DE STELLA POLARI; NEC NON ACAD. IMPER. MONSPEL. BEROL. TOLOS. UPSAL. STOCKH. SOC. & PARIS. CORESP.

SPECIES PLANTARUM,

EXHIBENTES
PLANTAS RITE COGNITAS,
AD
GENERA RELATAS,
CUM
DIFFERENTIIS SPECIFICIS,
NOMINIBUS TRIVIALIBUS,
SYNONYMIS SELECTIS,
LOCIS NATALIBUS,
SECUNDUM
SYSTEMA SEXUALE
DIGESTAS.

TOMUS I.

HOLMIÆ,
IMPENSIS LAURENTII SALVII.
1753.

What can be done to avoid this confusion?

Well, the solution is hundreds of years old. Carolus Linnaeus (1707-1778), also known after his ennoblement in 1757 as Carl von Linné, was a Swedish botanist, physician, and zoologist, who laid the foundation for the modern scheme of nomenclature. He is aptly known as the "father of modern taxonomy"! His prime contribution was to establish conventions for the naming of living organisms that ultimately became universally accepted in the scientific world. In fact, the work of Linnaeus represents the starting point of binomial nomenclature, i.e., every organism has a Latin name that consists of a genus and a species, similar to your first and last names. All living organisms are further classified in a hierarchical

(What's in a name? ...continued on page 7)

framework, which is based on the morphological relatedness of all organisms known at that time (and still today). That is why, for example, agarics are classified in the family Agaricaceae or boletes in the family Boletaceae. This framework was first published in *Species Plantarum* in 1753 and introduced the Latin binomial to the scientific world.

Why would Linnaeus see a need for the classification of and a Latin name for organisms?

Well, before Linnaeus, long and often very complex names (composed of a generic name and a *differentia specifica*) had been used by biologists. The *differentia specifica* actually gave a description of the species and was not fixed, i.e., they could change easily with time and might be different among biologists. For example, our inky caps, *Coprinopsis atramentaria*, may have been described as "*Coprinus growing in clusters on stumps and logs with caps dissolving into a black, inky liquid*". Linnaeus, frustrated with this fluid and inconsistent approach, took every effort to improve the composition and reduce the length of the complex names by abolishing unnecessary rhetoric, introducing new descriptive terms, and defining their meaning with an unprecedented precision (I am sure he was frustrated with common names, too). In the late 1740s, he began to use a parallel system of naming species with *nomina trivialia*. *Nomen triviale*, a trivial name, was a 1- or 2-word epithet placed on the margin of the page next to the complex "scientific" names in the books of his era. The only rules Linnaeus applied to the *nomen triviale* was that they should be short, unique within a given genus, and that they should not be changed (although taxonomists do this all the time). For example, using Linnaeus' approach, the aforementioned inky caps were first named *Agaricus atramentarius* by Bolton in 1788 and subsequently *Coprinus atramentarius* by Fries in 1838 and *Coprinopsis atramentaria* Redhead, Vilgalys & Moncalvo in 2001. These name changes through time reflect a growing understanding of the relatedness of different fungi, partly as a result of advances in microscopy and the use of molecular techniques in fungal taxonomy. Index Fungorum lists all current and past Latin names of all fungi (http://www.indexfungorum.org/Names/Names.asp).

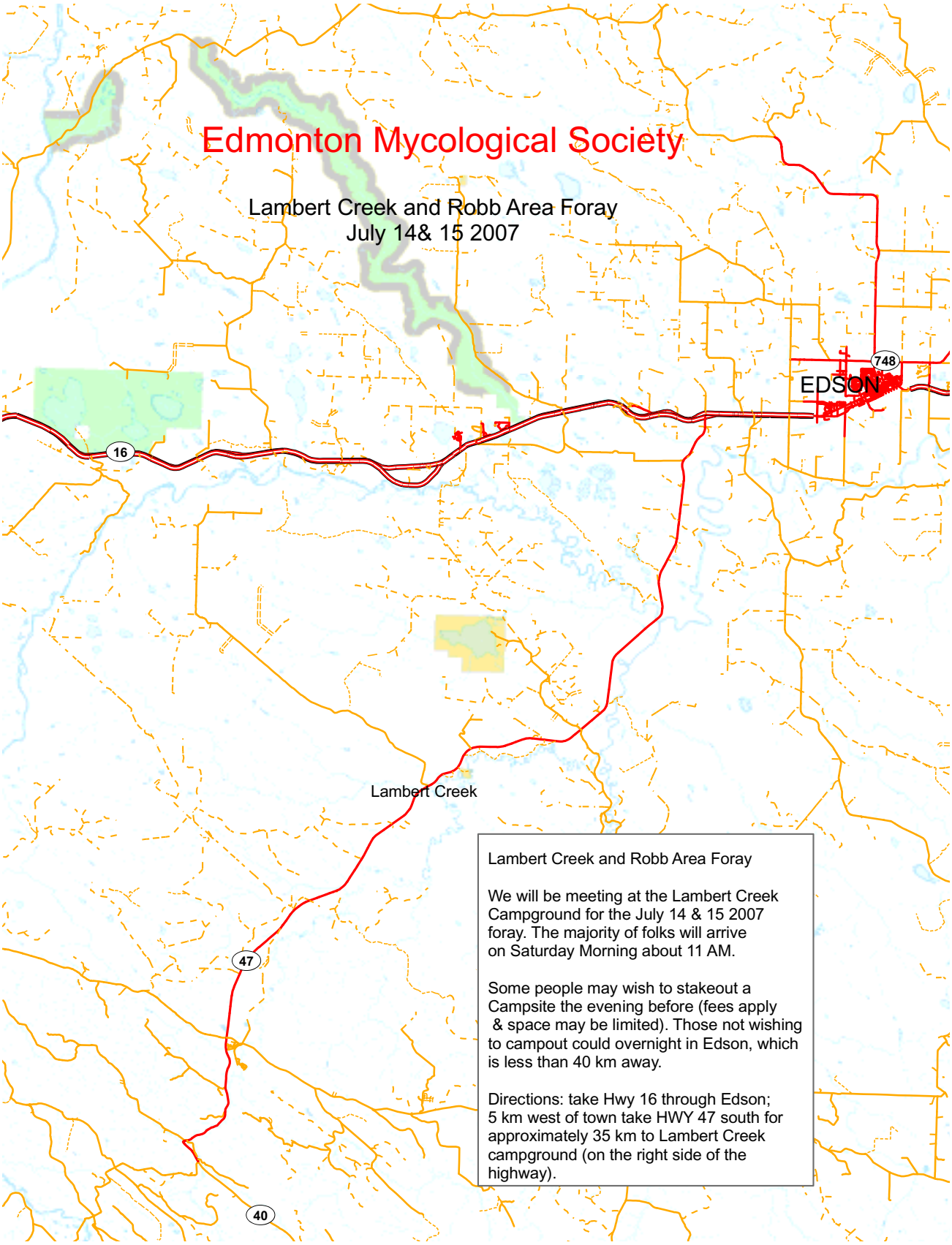
Due to Linnaeus' inspiration and desire to simplify botany, professionals and amateurs from around the globe are able to converse with one another and not be confused about which organism they are conversing about.

Due to Linnaeus' inspiration and desire to simplify botany, professionals and amateurs from around the globe are able to converse with one another and not be confused about which organism they are conversing about. For example, *Verpa bohemica* (or more correctly *Ptychoverpa bohemica*) is a binomial name given to a very specific fungus. This name leaves no uncertainty. "Early morel" or "false morel" are vague and variable among regions and only create confusion and uncertainty among mycophiles from different parts of the world or even from the same part of the world.

Lastly, no, you do not need to take, or have taken, Latin classes to pronounce Latin names. I have never taken any Latin classes and managed just fine to navigate through the maze of odd letter-combinations common in Latin words. All it takes is a little practice. I was once told by a colleague that "the way to pronounce Latin names is with confidence. If you're confident, then everyone else will think that you actually know how to pronounce those complex words". So, give it a try…

Markus N. Thormann

Lambert Creek Foray



Lambert Creek and Robb Area Foray

We will be meeting at the Lambert Creek Campground for the July 14 & 15 2007 foray. The majority of folks will arrive on Saturday Morning about 11 AM.

Some people may wish to stakeout a Campsite the evening before (fees apply & space may be limited). Those not wishing to campout could overnight in Edson, which is less than 40 km away.

Directions: take Hwy 16 through Edson; 5 km west of town take HWY 47 south for approximately 35 km to Lambert Creek campground (on the right side of the highway).

A Mushroom ... is a Mushroom ... is a ...???

Dumas struck his forehead suddenly with the flat of his hand "Mushrooms! What about mushrooms?"

"Right across the way," said Veron, " I see a mushroom vendor."

"A mushroom vendor?" Dumas cried. "Do you mean to tell me that your cook buys commercial mushrooms, grown in some abandoned mine or dank cellar? Shame on her."

"To the bois!" he cried." We'll pick our own mushrooms."

" But picking your own mushrooms," said Veron, "that's risky. There are some similarities that only a trained botanist..."

"Ho-Ho!" Dumas roared. "You say that to me, who could live off the wood like an Indian."

"But there are toadstools, so dangerous that they kill in three minutes," said Veron.

"None of your commercial mushrooms forme. Without taste! How can an abandoned mine take the place of God' woods?"

Dumas pointed out an orange mushroom which, he said, was precisely the species indicated for a bouillabaisse. "That's the girolle (chanterelle)," he declared.

"This is a girolle?" asked Veron picking one.

"For heaven's sake, no!" Dumas cried. "That's the false girolle. It's deadly!" He snatched the mushroom from Veron's hand and threw it away.

"But it looks exactly like the one you picked," Veron pointed out.

"Of course it does. It's almost impossible to tell them apart, they look so much alike," Dumas said.

"But how do you know you are not going to commit a great blunder?" cried Veron.

"Never fear, said Dumas. "It's the eye. To a practiced eye there's a ... well, I don't know how to describe it ... a touch. A je ne sai quoi ... that makes every difference in the world."

" A je ne sai quoi!" Veron shrieked.

"Calm your self my dear doctor," said Dumas continuing to pick girolles. "Here is a real girolle and here is a false one. Now look at them, side by side."

"They look exactly the same to me," said Veron.

"Ah, yes to you. But it is all in the gracefulness."

"Only that the edible variety is more graceful?"

"Yes, or the other way around," said Dumans busily gathering.

"What do you mean the other way around. Don't you yourself know which is the more graceful?" jumped Veron.

"Oh, come now doctor. Some connoisseurs think the poisonous girolle is the more graceful while others hold that on the contrary it is the edible variety that exceeds the poisonous in the matter of gracefulness. Really now, shall we quarrel over this. Isn't it enough that there should be this subtle difference?"

Veron was ready to die.

Taken from the book "King of Paris" by Guy Endore, 1956, a biography of Alexandre Dumas (author of Two Musketeers, Count of Monte Cristo and over 250 other works of literature).

Twentieth Annual Moral Foray

This year's foray took us to Ministik Lake Bird Sanctuary on May 12 to our inaugural morel site for our 20 Annual Moral Foray. It was very well attended, there was nothing but a blur bodies scurrying throughout the aspen parkland of this site. There were about 50 people (I was never able to make proper head count) dashing through the woods for the elusive morel. Alas, very few morels were found, this was however a banner year for Verpa conica with almost everybody coming away with a kilogram or more. Very few fungi of other species were noted mostly because of the attention people were paying to the finding of morels.

Fomes fomentarius
Fomitopsis pinicola
Ganoderma applanatum
Microstoma protracta
Morchella elata
Nectria cinnabarina
Nolanea sericea (Entoloma sericeum var. sericeum)
Psathyrella madeodisca
Trametes sp.
Verpa bohemica
Polyporus elegans (last year's specimen)

EMS Calendar of Events for 2007

Please Join Us!!

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

March

24 *Dry Mixedwood Boreal*
Mushrooms: Winter Polypores
Location: George & Ann Litven's Woodlot

Done

April

25 **Meeting:** *NAMA Foray Intro Presentation and Keying various Genera* by Martin Osis

Done

May

12 *Aspen Parkland*
Mushrooms: Morels, Verpas and Spring Agarics
Location: Return to the Club's inaugural morel site - Ministik

Done

23 **Meeting:** *Fungal Photography* by Loretta Puckrin

Done

June

6 *New Members' Field Introduction*
Mushrooms: Last morels and early agarics and polypores
Location: Edmonton River Valley-site TBA

Done

16 *Volunteer Steward Commitment*
Mushrooms: Oysters and early summer agarics
Location: Poplar Creek Natural Area

Done

27 **Meeting:** *Growing your own mushrooms. Spore plugs will be available and information on how to get as well as a DVD from NAMA on growing mushrooms.*

July

14/15 *Mid-summer Camp-out*
Mushroom: Leccinum, other boletes, Chanterelles(?)
Location: Robb Area

18 *Mid-Summer Evening Foray in the Edmonton River Valley*
Mushrooms: Various
Location: Old Timers Cabin

25 **Meeting:** *Boreal Forest Fungi Presentation* by Markus Thormann

August

3-6 *Alberta Foray (Boreal Forest Region)*
Events: Mushroom Collection for the Database, Forays and Lectures
Location: Lac La Biche. ***Registration Required.***

11 *Pre-Exposition Forays*
Mushrooms: All groups from all habitats
Location: All regions, your choice.Mushrooms to be collected for the Mushroom Exhibit the next day.

12 *City of Champignons Exhibition*
Mushroom: Displays of all sorts
Location: Devonian Gardens

22 **Meeting:** *Cordyceps* by Robert Rogers

September

8-9 *Lambert Creek Campout*
Mushroom: Honey Mushrooms, Hedgehogs and Chanterelles
Location: Lambert Creek or Hinton Area - TBA

22/23 *Sicamous*
Mushroom: Fungi of the region **with the Vancouver Mycological Society**

26 **Meeting:** *Mycophagy Presentation* by TBA
Bring your appetite.

October

24 **Meeting:** *Presentation Program TBA*

November

TBA *President's Dinner*

General Member Meetings

Fourth Wednesday of every month -

Time: 7:00 pm **Location: Riverbend Library**