



# OMPHALINA

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Foray registration & information issue

*Newsletter of*



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# FORAY NEWFOUNDLAND AND LABRADOR

*is an amateur, volunteer-run, community, not-for-profit organization with a mission to organize enjoyable and informative amateur mushroom forays in Newfoundland and Labrador and disseminate the knowledge gained.*

*Webpage: [www.nlmushrooms.ca](http://www.nlmushrooms.ca)*

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*seened AT gmail DOT com,*

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## **COVER**

*Lactarius alpinus* Peck, Cape Raven, Great Northern Peninsula, 20 Sept, 2012. Photo: Roger Smith.

A most gorgeous symphony of yellow and orange. New for the province, uncommon, but not rare in its habitat. Read inside why this specimen, collected in the course of one of our forays, is an important mycological specimen. If we get into any barrenland during the Goose Bay Foray, we might find it under mountain alder. Join us and help collect specimens that help to advance our understanding of this group of organisms, Fungi, with whom we share this earth.

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## Message from the Editor

Welcome to our Foray issue!

Yes, it's time to think Foray again. The humidity in powdered form, seen behind me, is definitely on the wane now, losing its battle with the advancing sun.

As always, Foray matters first, regular content later.

This is our most adventurous foray yet, to the Big Land, the land of The Red Mushroom. We have wanted to do this for a long time, but needed to ensure a solid footing for FNL, before undertaking a potentially disruptive adventure. We realize that not everybody on the Island will be able to follow us to the Big Land. With a sold out foray and a waiting list these last 6–7 years, we have a robust and loyal following. After such a long association, members and friends unable to make the trip should no longer feel “abandoned”.

As a provincial organization, it should be our mandate to try to cover the entire province, within the limits of available infrastructure to support our large group and special needs. Pure science might contend itself with bringing back exotic mushrooms from the remote corners of our realm to our herbarium in the realm's very central core (here on the west coast, of course). However, FNL is not an organization of scientists, serving scientific ends, but a social organization of ordinary people, curious about other organisms, like mushrooms, with whom they share the earth. For FNL, the aim is to organize enjoyable forays for all comers, from first time curious amateur to veteran, where people—members—make contact with other people of similar interests, exploring the mushrooms and meeting their fellows of different regions within our province. Mushrooms are everywhere, so we need to be as well. Any scientific value our efforts to collect and catalogue the fungi of our province may bring, is a bonus.

This in no way minimizes the scientific value of our work, even if it is a byproduct, not the main aim. After more than a decade of collecting, we have amassed much data and material that can be mined, not only for our knowledge locally, but also to open new insights on fungi in a general way. As a small example, consider the title story about *Lactarius alpinus*. When it was collected at a foray, nobody suspected it may have scientific value, yet this is the first collection of that North American species that has been sequenced, confirming that what has been identified as that species in Europe actually is that species. Perhaps not an earth shattering discovery, but for those working for an understanding of the genus, an anchor to stabilize their work. Such specimens are collected by all participants at all forays, all the time, while having a good time. Sounds almost criminal.

This issue provides the President's invitation (p. 3), background information about the ecology of the Goose Bay region (p. 4), the species list from Goose Bay's own 2012 foray (p. 8), first published in *OMPHALINA*, vol. 3, no 7, Nov., 2012 (we highly recommend downloading that issue from our website [nlmushrooms.ca](http://nlmushrooms.ca) and reading it), a list of available accommodations (p. 9), and a Registration Form (p. 10). Subsequent issues will bring additional material, and our website will be continuously updated, as new information or material becomes available.

Oh, and there is other (“regular”) material as well. Like, check out the Mail page. Did this guy shoot holes in the mushrooms?

See you in Goose!

andrus



# FORAY MATTERS...

## Foray 2016 at Happy Valley-Goose Bay!

This year's foray will be in a completely different landscape from all of our previous events. It will be our first full foray in Labrador (previously we have had several smaller sub-forays in the Straits area and one inland from Nain)—and a start at our inventory from the largest part of our province. We will be centred in Happy Valley-Goose Bay, which is in the High Boreal Forest Ecoregion. See the description, p. 4 (courtesy Protected Areas Association of NL).

We hope to see many residents of Labrador swell our ranks this year. For those of us unfamiliar with the region, it will be a great chance to explore the area with the help of local experts. The large banks of sandy soil, rock barrens, black-spruce taiga forest, large meandering rivers, dense lichen groundcover, and wildfire-killed stands will certainly contain many species that we have not come across elsewhere.

This year, because we are unable to find accommodations for the entire group in one place, we have to ask all participants to arrange their own lodgings in either Happy Valley-Goose Bay or Northwest River. There is a good range of choices, from Bed-

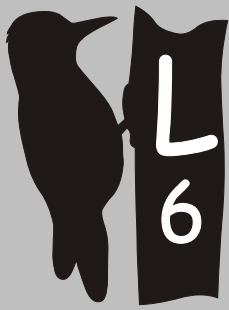
and-Breakfasts to hotels (see Listing on p 9). All are within about 20 minutes drive of the Birch Brook Nordic Ski Club, where we will have our laboratory, sorting room, display room, and evening presentations.

We shall still have breakfasts and suppers together, so that we can give last minute information for upcoming events during the foray. It is important that you arrange your accommodations as soon as you decide to attend this foray, because even in September it is possible for all places to be booked.

The Big Land has a charisma that will make this a very popular foray. I invite you to register early while there are still spaces available, and I look forward to seeing you in Labrador!

**Print the Registration Form on pp. 10-11. Our website <[nlmushrooms.ca](http://nlmushrooms.ca)> also has or will have soon a downloadable Registration Form, information on how to get there, and other important matters. Any important notices or information about the Foray will appear on our website and on this page in future issues.**

Michael Burzynski



# High Boreal Forest

ECOREGION  
Forest  
Barren  
Tundra  
Bog

NF



The High Boreal Forest ecoregion surrounds Lake Melville and extends inland along several river valleys. Its 16,800 km<sup>2</sup> includes the

Churchill River valley and the coastal plain around Lake Melville, which form two distinctive components of this ecoregion. In the south the coastal plain ends at the steep slopes of the Mealy Mountains, while in the north it meets a broad inland plateau that covers much of central Labrador.

The river valley is extensive and follows the Churchill River several hundred kilometres upstream. The terrain is mostly forested and reaches 500 metres above sea level. This region is part of the great **boreal forest** of northern latitudes around the world. The forests of the High Boreal Forest ecoregion are more extensive and full — that is, there are fewer open spaces — and are less likely to become barrens after a disturbance such as fire, than the neighbouring Low Subarctic and Mid Subarctic Forests.

Flat **river terraces** occur along the Churchill River and separate different forest types within this ecoregion. They are largest and best developed around Goose Bay, near the mouth of the Churchill River. As you travel upstream and the river narrows, terraces become smaller and less developed. Those that flank the larger portions of the river undergo active slumping — portions of the terrace or river bank break off and "slump" into the river.

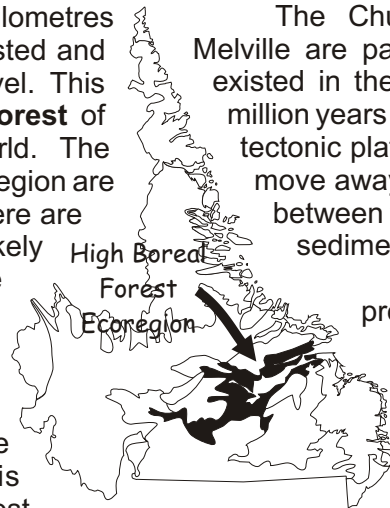
Although summers are cool and winters

cold, this ecoregion has the most favourable climate in Labrador, with warmer summers and shorter winters than surrounding ecoregions. For example, winters are shorter and much less severe here than to the west in the neighbouring Mid Subarctic Forest. This ecoregion has a growing season of 120 to 140 days, which is longer than nearby ecoregions. In addition, it has a frost-free period of 80 days or more. Lake Melville and the Churchill River system are sometimes free of ice until late November. Ice break-up usually starts in May and may last until June. Scattered patches of permafrost are found in some of the bogs.

The Churchill River valley and Lake Melville are part of an ancient rift valley that existed in the late Proterozoic — about 600 million years ago. A rift valley occurs when two tectonic plates or pieces of the earth's crust move away from each other, leaving a gap between them. This rift valley was filled by sediments about 600 million years ago.

As with the rest of the province, the High Boreal Forest ecoregion was once covered by glaciers. The U-shape of the Churchill River valley is a characteristic example of glacial activity. When the last ice age ended about 10,000 years

ago, the rapidly melting glacial ice sent a flood of water down through this river valley, partly filling it with sand. Then, with the tremendous weight of the glaciers gone, the land rose and the sand was eroded by the Churchill River into terraces and bluffs. Ancient changes in sea level can be seen in beach lines 400 to 500 metres above the shoreline of present day Lake Melville.



**Ecoregion:** An area that has distinctive and repeating patterns of vegetation and soil development, which are determined and controlled by regional climate. Ecoregions can be distinguished from each other by their plant communities, landscapes, geology, and other features. These characteristics, in turn, influence the kinds of wildlife that can find suitable

habitat within each ecoregion.

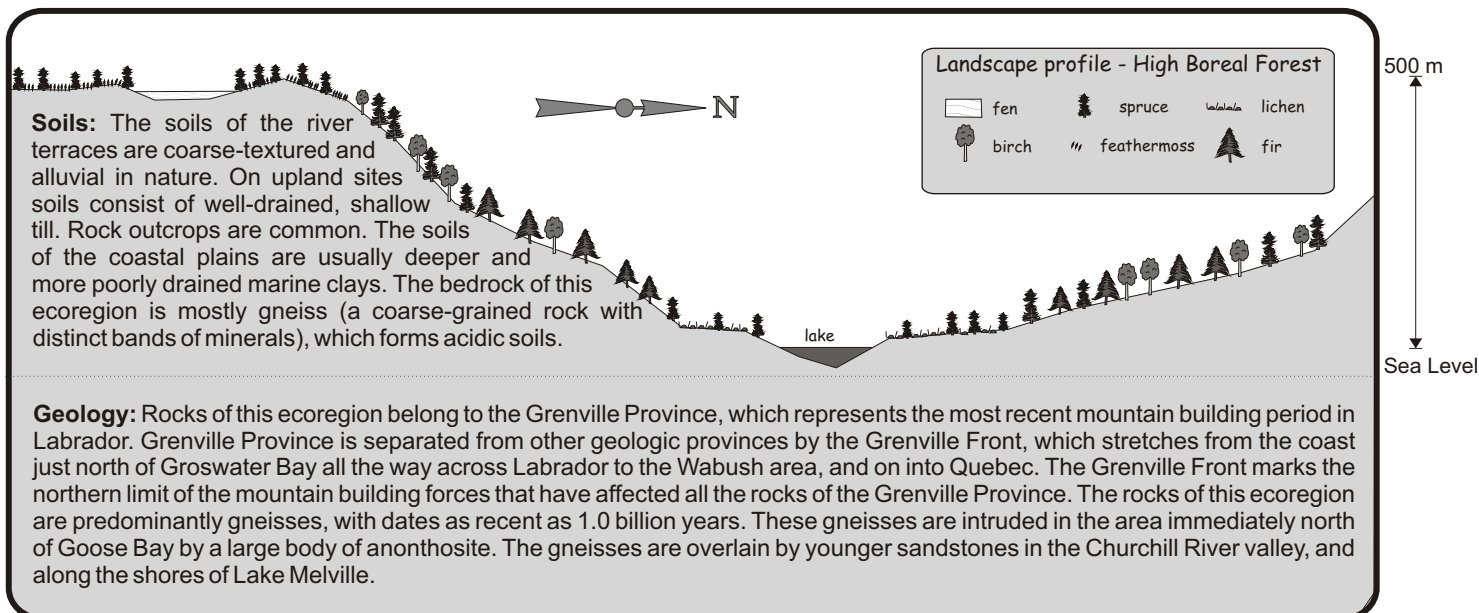
**Boreal forest:** The mainly coniferous forest found in northern latitudes, which extends in a band around the globe, covering large portions of the northern temperate zones of North America, Europe, and Asia.

**River terraces:** Formed by the erosional effects of a river on its slopes. As a river meanders and changes course, it cuts steps — or terraces — into the banks. Eventually, the valley deepens and these terraces become higher, drier ground.

**Alluvial:** Pertaining to or composed of materials deposited by water.

Check your public library for a full set (36) of these booklets: one introductory document and one for each of the 35 ecoregions and subregions in the province. For more information about the series see page 4.





## Vegetation Profile

The forests that cover most of the river valley of the High Boreal Forest are highly productive. In fact, the most productive forests in Labrador occur here. This means the trees grow faster and are larger and closer together than in other Labrador ecoregions. The types of trees found in these forests vary with their distance from the river. Forests on valley slopes are generally more productive and have a large number of species, such as balsam fir, white birch, and trembling aspen. Upland forests contain balsam fir and black spruce with a floor covering of feathermoss.

On very moist soils on slopes and river terraces where seepage and/or alluvial conditions occur, forests containing balsam fir, black spruce, and white birch with a rich floor covering of herbs are found. Lower terraces are usually covered by black spruce/lichen forests.

Forest fire activity also has an influence on forest growth here. For example, black spruce, which is well adapted to invading recently disturbed sites, is dominant on the river terraces and upland sites where fire activity is most frequent. However, when fires occur on river valley slopes, forests are replaced

by white birch and trembling aspen rather than by black spruce.

On upland terraces, ribbed fens are often found in depressions. These are peatlands with extensive pools that cover the surface at right angles to the slope. The flat, hummocky surface vegetation (mostly sedges) gives it a ribbed appearance when viewed from above.

Plateau bogs are very common in the coastal area surrounding Lake Melville. They are underlain by large marine clay deposits and have raised plateau-like surfaces containing large, scattered pools. Sphagnum mosses are the main peat-forming species. Peat depth can range from 2 to 10

metres. The plateau bogs found here have large palsas (permanently frozen mounds of peat) distributed throughout them.

Forested areas on the coastal plain are restricted to beach ridges and the natural levees of rivers and streams. Here coarser soils form, which results in better drainage.

This ecoregion is one of the only known provincial locations of common wood sorrel (*Oxalis montana*). This low-growing plant has heart-shaped, clover-like leaflets that fold down around the stem at night. This action most likely reduces moisture loss.

**Species in Focus:** White birch (*Betula papyrifera*), a hardwood species found throughout most of the forests of Labrador, occurs in this subregion on moist valley slopes and river terraces. White birch may live to be 100 years or more, and is easily identified by its white, peeling bark.



Photo: Glen Ryan

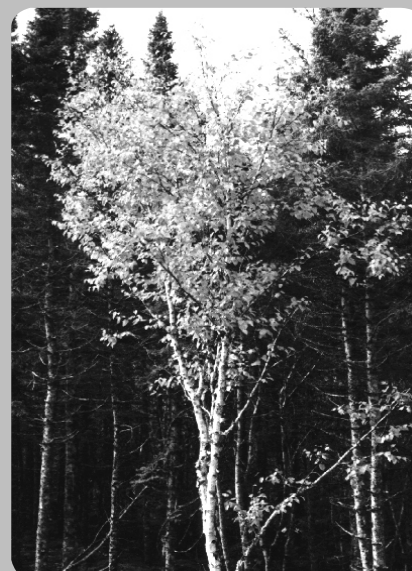


Photo: Glen Ryan

## High Boreal Forest ecoregion

## Wildlife Profile

The mammals of the High Boreal Forest include many species found throughout Labrador. As its name suggests, the northern bog lemming prefers bogs, though it can also be found in moist woods. Lemmings live in colonies where they dig shallow, underground burrows connected by a maze of sunken runways. Food consists of grasses and sedges, which they cut into short sections and store inside their runways for winter use.

Forest mammals found here include moose, porcupine, mink, American marten (locally called pine marten), flying squirrel, red squirrel, lynx, woodland jumping mouse, and snowshoe hare. The black bear and red fox occur in most habitats, while the beaver, muskrat, water shrew, and river otter occur near water.

Several bird species typical of more southern regions of Canada are known only from this part of Labrador. A few examples are sora, least flycatcher, red-eyed vireo, and Philadelphia vireo. A variety of woodpeckers are also found in these forests, including the three-toed woodpecker, black-backed woodpecker, and northern flicker.

Other forest dwelling birds are the gray jay, boreal chickadee, Swainson's thrush, pine siskin, dark-eyed junco, northern waterthrush, and osprey. Common redpoll is found mostly on the barrens, while the white-throated and white-crowned sparrows occur in shrub habitat. Warblers are also common, such as the Tennessee, orange-crowned, yellow, and Wilson's warblers.

Shorebirds breeding in the region include the solitary sandpiper, common snipe, and spotted sandpiper. Low numbers of seabirds and waterfowl also breed here, particularly in the Hamilton Inlet area. Examples are the common loon, common merganser, American black duck, common tern, and ring-billed gull.

The red-tailed hawk, which occurs rarely on the island of



Photo: Paul Linegar

**Species in Focus:** Although introduced to the island of Newfoundland, the spruce grouse occurs naturally in the coniferous forests of Labrador. It feeds largely on the needles and buds of conifers and various kinds of berries. The breast and throat of the male is distinctive — black narrowly bordered with white — while the rest of the body is finely barred with black, grey, and brown. The female is dark rusty brown and more thickly barred. Because the spruce grouse is amazingly tame — never having learned to fear humans — it is easily killed. As a result, it has rapidly disappeared from those southern parts of its former range where humans have settled.

Newfoundland, has a widespread breeding distribution throughout the forests of this region, as well as throughout much of the forests of Labrador. It usually nests near the tops of trees, where it builds a bulky nest of sticks lined with bark.

The extensive system of rivers, lakes, and ponds are home to many species of fish. The most common are arctic char, Atlantic salmon, three-spine and nine-spine

sticklebacks, brook trout, lake trout, lake whitefish, rainbow smelt, longnose sucker, white sucker, and northern pike.

This ecoregion has the largest number of amphibians in the province. The American toad, northern leopard frog, wood frog, and mink frog are all found here. The blue-spotted salamander and the two-lined salamander have also been recorded. 17



Photo: Bob Halfyard

River terraces along the Churchill River contain different forest types. This is because changes in elevation and distance from the river produce changes in growing conditions.

## High Boreal Forest ecoregion



## Climate

The most favourable climate in Labrador. Winters are shorter and summers warmer than surrounding areas. Growing season is 120 to 140 days.



Annual rainfall  
1000 to 1100 mm



Annual snowfall  
4.0 m



Mean daily temperatures  
February -14°C to -18°C  
July +13°C to +14°C

## Protected Areas Profile

There are no protected areas presently located in this ecoregion. However, part of it is within the proposed Mealy Mountains National Park.

## Focus on Animal Distributions

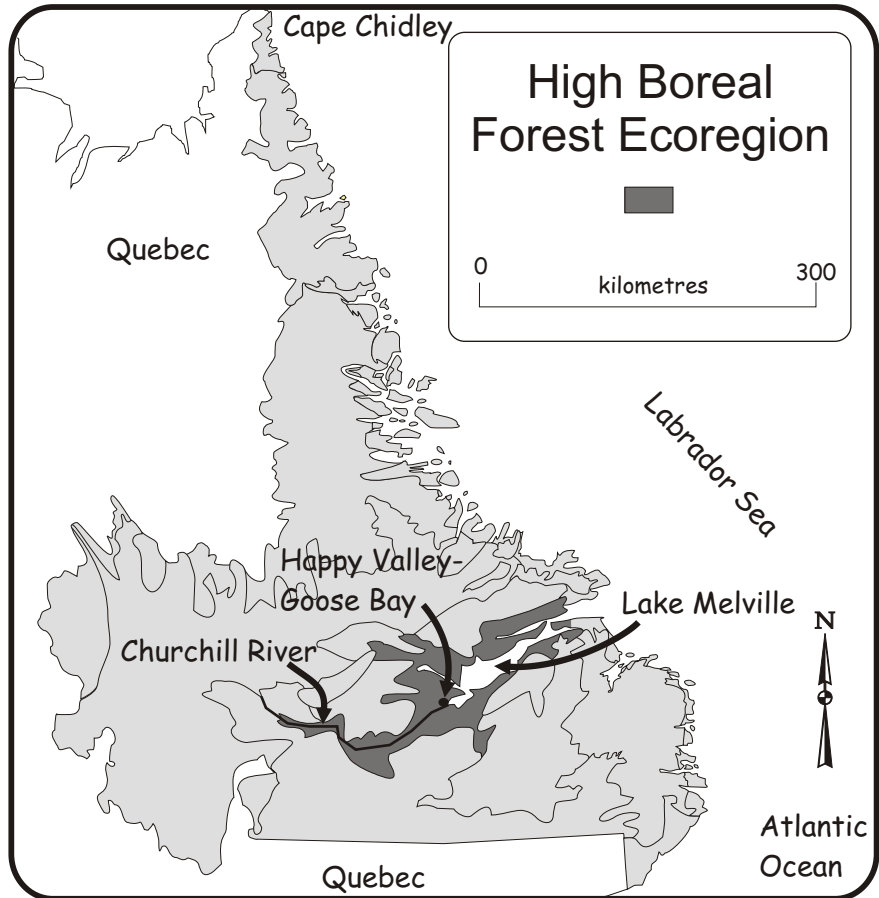
Many people traveling to Labrador from the island of Newfoundland are struck by the increase in the number of animal species. For example, the woodchuck, an animal common along the Labrador coast where it can be spotted poking its head out of extensive burrow systems, is a sight totally unfamiliar to the Island. Other mammals present in Labrador but absent from the Island include the porcupine, wolf, lemmings, and many others. And in Labrador you can find more salamanders, frogs, and toads as well.

No reptiles occur on the island of Newfoundland. Those

amphibian found on the island are few, have limited ranges, and were introduced. Some of our most popular animal species, such as the moose, have only been introduced to the Island in the last century.

This difference in animal distributions between the island and mainland portions of the province is the result of changes that occurred during the last ice age. Conditions associated with glacial activity removed most

animal species from both regions about 10,000 years ago. Once the ice retreated Labrador was easily recolonized by those animals living in the unglaciated areas of southern North America. The island of Newfoundland, however, was not so easily reached. It was a much more difficult task for land-dwelling animals to make the crossing. Indeed, those animals that did succeed, likely did so by traveling on an ice flow or a piece of drift wood.



Protected Areas Association of Newfoundland and Labrador (PAA) gratefully acknowledges the following partners for their generous contributions to the Newfoundland and Labrador Ecoregion Brochures project:

- Department of Environment and Conservation  
Parks and Natural Areas Division
- Department of Natural Resources
- Gros Morne National Park of Canada - Parks Canada
- Terra Nova National Park of Canada - Parks Canada
- Natural Resources Canada - Canadian Forest Service
- Aliant
- Mountain Equipment Co-op
- The Samuel and Saidye Bronfman Family Foundation
- WWF Canada
- Western Newfoundland Model Forest
- Gros Morne Co-operating Association

To view this full brochure series visit <http://www.paanl.org> – To obtain additional copies contact PAA or any of the following:

Department of Environment and Conservation  
Parks & Natural Areas Division  
33 Reid's Lane, Deer Lake, NL A8A 2A3  
PH (709) 635-4520  
FAX (709) 635-4541  
Email: [parksinfo@gov.nl.ca](mailto:parksinfo@gov.nl.ca)  
<http://www.gov.nl.ca/parks/>

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For comments on this series, contact PAA: (709)726-2603 [paa@nf.aibn.com](mailto:paa@nf.aibn.com) <http://www.paanl.org/>

## High Boreal Forest ecoregion

Printed on Domtar Sandpiper. 100% post-consumer waste. Made in Canada. © 2000. Updated Fall, 2008.

## SKI CLUB

### Agaricus silvicola

Amanita porphyria  
sinicoflava  
vaginata

Boletus subtomentosus f. gracilis

### Cantharellula umbonata

Collybia cirrhata

### tuberosa

Coltricia perennis

### Connopus acervatus

Cortinarius

alboviolaceus

angelesianus

armillatus

camphoratus

### caperatus

cinnamomeus

collinitus

flexipes

rubellus

semisanguineus

traganus

### Craterellus

### tubaeformis

Cudonia circinans

Cystoderma amianthinum

jasonis

Dacrymyces

chrysospermus

Fomitopsis pinicola

Gloeophyllum

protactum

sepiarium

Gymnopilus penetrans

Gymnopus confluens

dryophilus

Gyromitra ambigua

Hebeloma sacchariolens

### Hydnum umbilicatum

Hygrocybe acutus

marginata

Hygrophoropsis aurantiacum

### Hypocrea leucopus

Hypomyces chrysospermus

Inocybe leptophylla

Ischnoderma resinosum

### Laccaria bicolor

### Lactarius deterrimus

### helvus

hibbardae

rufus

scrobiculatus var. canadensis

### thyinos

trivialis

### Leccinum holopus

### scabrum

Pholiota alnicola

spumosa

Piptoporus betulinus

Pluteus cervinus

Psathyrella piluliformis

semivestita

Pucciniastrum goeppertianum

Rhodocollybia maculata

Russula aeruginea

aquosa

brevipes

discolorans

griseascens

### paludosa

Suillus brevipes

Tyromyces chioneus

Xerocomus badius

## BASE

Amanita wellsii

### Cantharellula

### umbonata

### Cantharellus sp NL

Chalciporus piperatus

Clitopilus prunulus

### Collybia tuberosa

Gomphidius glutinosus

Harrya chromapes

Hydnellum caeruleum

peckii

pineticola

Hygrophoropsis mor-

ganii

### Laccaria bicolor

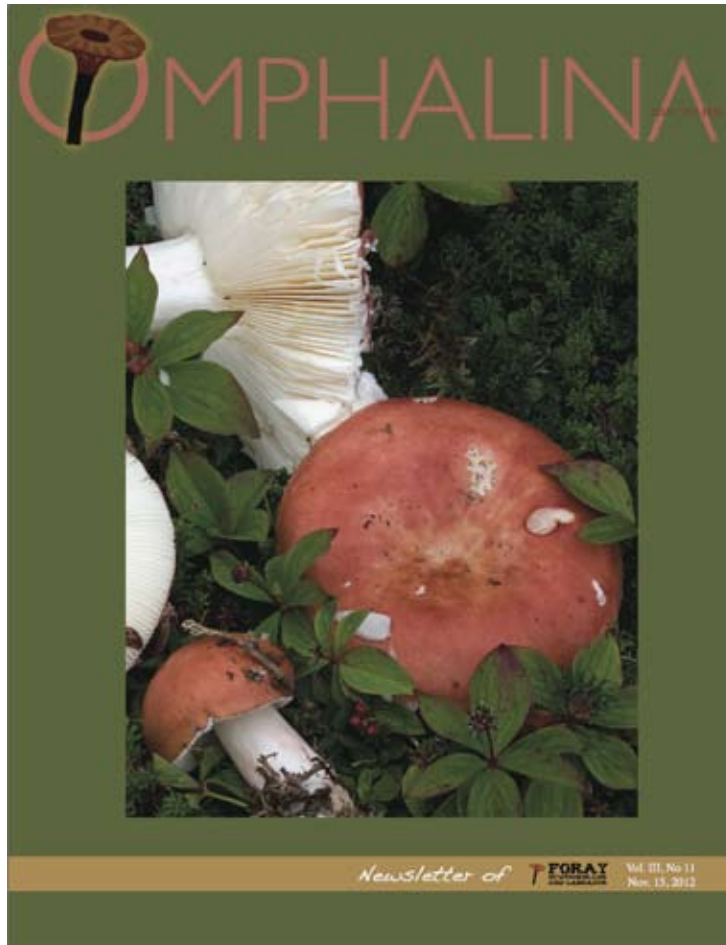
### Lactarius helvus

### Leccinum vulpinum

Phellodon tomentosus

Suillus glandulosus

Trichloma focale



### snellii

### varicolor

### vulpinum

Lichenomphalia umbellifera

Lycogala epidendrum

Lycoperdon perlatum

pyriforme

Onnia tomentosa

Paxillus involutus

Peziza badia

Phellinus igniarius

**Black bold** = species found in both sites

**Green bold** = good edibles

**Red bold** = species not found on the Island to date

**Brown** = wood decomposer

**Orange** = prefers sandy soil



Title banner from 2012: Lodge of Birch Brook Nordic Ski Club—our headquarters for Foray 2016

Accommodations Listing near Happy Valley-Goose Bay — Foray 2016					
Hotel	Location	Room Type	Cost (taxes extra)	Phone	Website
<b>Motel North</b>	North West River (13 Paddon Rd.)	5 single units available for Foray participants	\$109/night (Foray/corp. rate for single units)	1-877-996-9301	<a href="http://www.hotelnorth.ca/north-west-river">http://www.hotelnorth.ca/north-west-river</a>
<b>Red Wine Bed and Breakfast</b>	North West River (25 River Rd.)	Suites	\$113/night	(709) 899-2666	<a href="http://www.redwinebedandbreakfast.com/">http://www.redwinebedandbreakfast.com/</a>
<b>Hotel North I</b>	Goose Bay (25 Loring Dr.)	Nearly fully booked: only 1 double room and 2 suites available to date (April 2016)	Rates from \$149-\$249/night	1-877-996-9301	<a href="http://www.hotelnorth.ca/happy-valley-goose-bay-1">http://www.hotelnorth.ca/happy-valley-goose-bay-1</a>
<b>Hotel North II</b>	Goose Bay (382 Hamilton River Rd.)	Variety of rooms available	\$149/night (Foray/corp. rate)	1-888-892-5505	<a href="http://www.hotelnorth.ca/happy-valley-goose-bay-2">http://www.hotelnorth.ca/happy-valley-goose-bay-2</a>
<b>Royal Inn and Suites</b>	Goose Bay (33 Royal Avenue)	Variety of rooms available	\$120-170/night	1-888-440-2456 (709) 896-4404	<a href="http://www.royalinnandsuites.ca/">http://www.royalinnandsuites.ca/</a>
<b>TMT's Bed and Breakfast</b>	Goose Bay (451 Hamilton River Rd.)	?	?	(709) 896-4404	
<b>Valley Bed and Breakfast (formerly Davis B&amp;B)</b>	Goose Bay (14 Cabot Cres.)	4 rooms	\$100/night	(709) 896-5077	
<b>Big Land Bed and Breakfast</b>	Goose Bay (34 B Palliser Cres.)	3 rooms	\$90/night	(709) 896-2082	<a href="http://biglandbedandbreakfast.com/">http://biglandbedandbreakfast.com/</a>





**FORAY**  
NEWFOUNDLAND  
AND LABRADOR

## Registration & Acknowledgment of Foray Participant's Responsibility, Express Assumption of Risk, and Release of Liability

Happy Valley-Goose Bay September 9 to 11, 2016

1. *Spaces are limited*, so registrations are accepted on a first-come first-served basis. We can only accept payment by cheque or cash. A Registration is only recorded when full payment and a signed Acknowledgement have been received. Please submit a completed Registration and Acknowledgement form for each participant.
2. Please print out both pages of this form, fill them out, sign, add your cheque made out to "Foray NL", and send to:

Geoff Thurlow  
16 Hammond Drive  
Corner Brook, NL, A2H 2W2, CANADA

**Very Important!**  
Before registering, please read the  
INFORMATION about the foray  
posted on our website  
[www.nlmushrooms.ca](http://www.nlmushrooms.ca)

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

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City: \_\_\_\_\_ Province/State: \_\_\_\_\_ Code: \_\_\_\_\_ Country: \_\_\_\_\_

Tel: (\_\_\_\_\_) \_\_\_\_\_ - \_\_\_\_\_ e-mail: \_\_\_\_\_

### Participation fee (in Canadian dollars)

*Adult* (includes registration fee, reception, two breakfasts, Saturday bag lunch, Saturday supper,

Sunday lunch, workshops (except materials), lectures, trails, and other activities)..... \$150.00

*Youth* 13 to 17 pay 50% (Children 12 or younger participate for free)..... \$75.00

*Database Team:* Students - no fee; Non-student team veterans 50%\* ..... \$75.00

*Local Residents* (for those staying in their own homes—this fee does not include

Saturday and Sunday breakfasts or Saturday bag lunch) ..... \$100.00

This is a "Members-only" foray. Your membership is included in the participation fee. Membership lasts until the following year's foray. **This year, the participation fee includes meals, but does not include accommodations! Everyone is responsible for making their own housing arrangements.** Please see the accommodation list in *Omphalina*. Places are limited in the Watercolour workshop, and will be allotted on a first-come first-served basis. If the session is full, your fee will be refunded.

**Watercolour Workshop** \$41.00 (for painting kit, do not pay if you bring your own)..... + \_\_\_\_\_

**Mushroom Carving Workshop** \$3.00 for materials..... + \_\_\_\_\_

**Book Purchase:** I wish to buy \_\_\_\_\_ NL mushroom field guides @ \$20.00 each..... + \_\_\_\_\_

This is a special members' price. We do not sell the book at the foray.

**FUNGI Magazine:** I wish to subscribe to FUNGI Magazine, five issues for \$60.00..... + \_\_\_\_\_

As a service to members, ForayNL will place a block subscription, at cost, right after the Foray.

**TOTAL** ..... \_\_\_\_\_

### Special needs/wishes:

Dietary or other needs \_\_\_\_\_

Expertise preference \_\_\_\_\_

Willing to (co)lead a field trip \_\_\_\_\_ Willing to identify specimens \_\_\_\_\_

Wish to help in other ways (please suggest) \_\_\_\_\_

\* Database team members with organizational support please pay full fee. Contact M. Burzynski if you have questions: [info@nlmushrooms.ca](mailto:info@nlmushrooms.ca)

I understand that during my participation in the events that together make up the Annual Fall Mushroom Foray, henceforth known as “the Foray” of MUSHROOM FORAY NEW-FOUNDLAND & LABRADOR, INC., henceforth known as “FNL”, I may be exposed to a variety of hazards and risks, foreseen or unforeseen, which are inherent in the Foray and cannot be eliminated without destroying the unique character of the Foray. These events include, but are not limited to: accommodations, identification outings, scientific presentations and investigations, meals, including as a food course mushrooms selected by participants, leaders, including FNL Organizers and Faculty, and travel to and from the outings and meals. The inherent risks include, but are not limited to: the dangers of serious personal injury, property damage, and death, henceforth known as “I&D”, from exposure to the hazards of travel; moving in the wilderness, including uneven or insecure terrain, actions of fellow participants, wild animals or third parties, including hunters; mushrooms that may be poisonous, toxic, or cause unforeseen allergic or other adverse reactions in individuals, both independently and in conjunction with other substances, including wine or other alcoholic spirits. FNL Organizers and Faculty have not tried to deny or minimize my understanding of these risks. I know that I&D can occur by natural causes or activities of other persons, FNL Organizers and Faculty, animals, trip members, trip leaders and assistants or third parties, either as a result of negligence or because of other reasons. I understand that risks of such I&D are involved in adventure travel such as the Foray and I appreciate that I may have to exercise extra care for my own person or others around me in the face of such hazards. I further understand that the Foray may not have, or be readily accessible to, rescue, medical facilities, or expertise necessary to

deal with the I&D to which I may be exposed.

In consideration for my acceptance as a participant on the Foray and the services and amenities to be provided by FNL Organizers and Faculty in connection with the Foray, I confirm that:

1. I have read these and any other terms, rules, information and conditions applicable to the Foray, made available to me directly or on the FNL website;
2. I will pay any costs and fees for the Foray;
3. I choose to participate in the Foray of my free will, being fully aware of the risks involved; and
4. I acknowledge my participation is at the discretion of the leaders.

The Foray officially begins and ends at the times and location(s) designated by FNL Organizers and Faculty. The Foray does not include carpooling, transportation, or transit to and from the Foray (including ferry) or trails during the Foray, and I am personally responsible for all risks associated with this travel. This is meant to include transportation provided by FNL Organizers and Faculty or participants during the Foray, including transport or carpooling to trails during the Foray and between the accommodations and the Foray trails.

If I decide to leave early and not to complete the Foray as planned, I assume all risks inherent in my decision to leave and waive all liability against FNL Organizers and Faculty arising from that decision. Likewise, if the leaders have concluded the Foray, and I decide to go forward without the leaders, I assume all risks inherent in my decision to go forward and waive all liability against leaders including FNL Organizers and Faculty arising from that decision.

This Agreement is intended to be as broad and inclusive as is permitted by law. If any provision or any part of any provision of this Agreement is held to be invalid or legally

unenforceable for any reason, the remainder of this Agreement shall not be affected thereby and shall remain valid and fully enforceable.

To the fullest extent allowed by law, I agree to WAIVE, DISCHARGE CLAIMS, AND RELEASE FROM LIABILITY FNL, its officers, directors, employees, agents, faculty and leaders, from any and all liability on account of, or in any way resulting from I&D, even if caused by negligence of FNL, its officers, directors, employees, agents, faculty and leaders, or any other parties in any way connected with FNL or the Foray. I further agree to HOLD HARMLESS FNL, its officers, directors, employees, agents, faculty and leaders from any claims, damages, injuries or losses caused by my own negligence while a participant in the event. I understand and intend that this Assumption of Risk and Release of Liability is binding upon my heirs, executors, administrators and assigns, and includes any minors accompanying me on the outing.

I have read this document in its entirety and I freely and voluntarily assume all risks of such I&D and notwithstanding such risks, I agree to participate in the Foray.

Signed: \_\_\_\_\_

Date: \_\_\_\_\_

If you are a minor (under age 18), your parent or legal guardian must sign this Agreement on your behalf.

I hereby agree and consent to the foregoing **Acknowledgment** on behalf of the minor named here: \_\_\_\_\_

Relationship: \_\_\_\_\_

Signed: \_\_\_\_\_

Date: \_\_\_\_\_



# *Lactarius alpinus*



Jorinde Nuytinck, Andrus Voitk

Over the years we have made five collections of small orange-yellow *Lactarius* species from more remote regions. Superficially they resembled each other, seeming to be the same species, but their identification varied with different identifiers. The names went through several “corrections” over the years, and eventually settled on *L. aurantiacus* (Pers.) Gray and *L. lanceolatus* O.K. Mill & Laursen. The first is a species described from Europe and the second from North America, but also known from Europe. Because they were a rather interesting group, when an opportunity for limited DNA studies came, it was seized with enthusiasm. The phylogenetic results were very interesting: one grouped with or close to the relatively common *L. tabidus* Fr., one clustered with *L. alpinus* Peck, and two formed a hitherto unknown species clade (Figure 1). As so often is the case, once an evolutionary separation of seemingly similar collections becomes clear, careful review reveals several “obvious” morphological differences between the clades (Figure 2).

The purpose of the present article

is to introduce the gorgeous *Lactarius alpinus*. The species is a relatively well known alder associate in alpine and tundra settings throughout the Northern Hemisphere. Because it is not found in more inhabited regions, it is not encountered frequently, but it is not overly rare in its preferred habitat. This is the first report of it in Newfoundland and Labrador, but once known, we expect that it will be collected more frequently in suitable habitat.

Taxonomically, ours is a very important collection.\* *L. alpinus* was described from an alpine setting in New York State by Charles Horton Peck in 1875 (Figure 3). All 13 DNA deposits of this North American species in GenBank come from Europe. It is at least theoretically possible that the European fungus could have been a different species. Ours is the first North American DNA sequence of *L. alpinus*, and because it falls together with the European ones, we can establish that these are conspecific. Now, you may argue that ours could also represent something else than that described by Peck, but the odds do not favour such a possibility. Ours

may not be a strict topotype (a similar species from the type locality), but our experience has been that most species described by Peck are also found in NL; in a wider sense, NL may be considered part of the toporegion for areas where Peck collected.

You may wonder how real the possibility of several such species can be. A similar species to which *L. alpinus* has been misapplied is quite likely. All over the world *L. alpinus* is a known partner of *Alnus* subgen. *Alnobetula*.<sup>1</sup> (In case you wonder what this is, trees have also undergone some name changes: *Alnus viridis* [green alder] has been shown to be an illegitimate name, and has been replaced with *A. alnobetula*. Thus our mountain alder is now known as *A. alnobetula* ssp. *crispa*.) However, collections identified as *L. alpinus* from Western North America have been noted to be partners of *A.* subgen. *Alnus*.<sup>1</sup> As we know, trees are far better taxonomists than mycologists, so it should not prove too much of a surprise, should the western species turn out to be a different genetic entity. Just from a look at photos on the

\* To make it available to all scientists, the ITS sequence has been deposited in GenBank (KX094937) and the specimen in The National Herbarium in Ottawa (DAOM-711378).

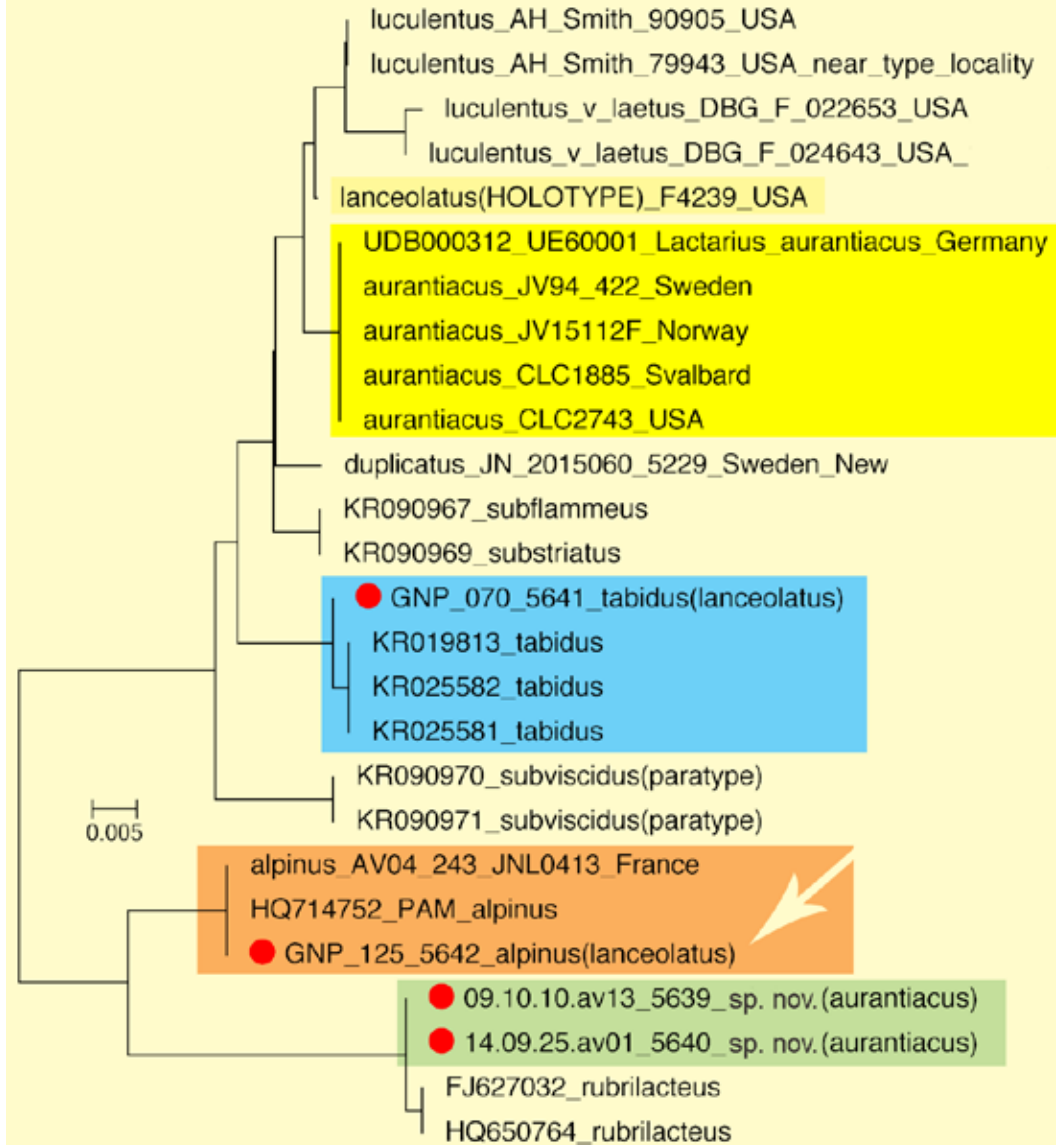


**Figure 1.** Unrooted phylogenetic tree of NL specimens (red circle) among their relatives.

Original field identification in brackets after the phylogenetic identification. The two collections identified as *L. lanceolatus* belong to different species, both somewhat removed from the type collection of *L. lanceolatus*. *L. tabidus* (blue panel) is a relatively common species, collected on several forays, but the collection in question was yellower than normal, in an unusual habitat, and its expected birch associate may have been overlooked because it was the dwarf *Betula michauxii*.

This is our first encounter with *L. alpinus* (orange panel, arrow), although it is a North American species that should be more common in its unusual setting, under mountain alder in a tundra and sub-tundra setting.

Two collections (green panel) clustered near *L. rubrilacteus*, far from the *L. lanceolatus* they were thought to be. Their identity is pursued with further study, to be reported in the future.



### Peck CH: Report of the Botanist

(for 1873, written 1874)

Twenty-seventh Annual Report of the New York State Museum, 27:96-97. 1875

#### LACTARIUS ALPINUS n. sp.

Pileus fleshy, dry, umbilicate or centrally depressed, tomentose-squamulose, ochraceous or tawny-yellow; lamellae close, yellowish-ochraceous; stem subequal, solid, whitish or pallid; milk white, unchangeable, taste acrid.

Plant about 2' high, pileus 1' broad, stem 2"-3" thick.

Thin soil covering rocks. Summit of Haystack Mt., at an altitude of about 5,000 ft. Aug.

Only three specimens were found. I have seen no other *Lactarius* on the high summits of the Adirondacks.

**Figure 3.** Peck's protologue (original description) for *Lactarius alpinus*.

Despite his characteristic Laconic style, the combination of small size, alpine setting, yellow colour and scaly cap serves to identify it. A scaly cap, thought to be an ancestral character in *Lactarius*<sup>1</sup>, is uncommon for most species of the genus, and serves to identify the species even if the association with alder is not noted. The harsh conditions of exposed northern barrens in NL successfully reproduce alpine conditions, allowing such alpine species to feel at home at sea level.

internet, most do not seem to share the dry, non-gelatinized, scaly cap described by Peck, as seen on our specimen.

By the way, a variety, *L. alpinus* var. *mitis*, has also been described; unsure whether this really represents a different genetic species, we have

chosen not to pursue this discussion below the specific level. Clearly, a lot remains to be discovered about these species.

#### Acknowledgment

We thank Quinten Bafort with help sequencing these specimens.

#### Reference

1. Rochet J, Moreau P-A, Manzi S, Gardes M: Comparative phylogenies and host specialization in the alder ectomycorrhizal fungi *Alnicola*, *Alpova* and *Lactarius* (Basidiomycota) in Europe. BMC Evolutionary Biology, 11:40 <http://www.biomedcentral.com/1471-2148/11/40>. 2011.



**Figure 2.** From above down: *Lactarius alpinus*, *L. tabidus*, unknown *L. sp.*; Fruiting bodies Left, enlarged view of cap Right.

Superficially all look like similar orange-yellow small *Lactarii*, and one might be forgiven to think them one species. The first and last are seldom encountered, so that it is difficult to become sufficiently familiar with them to truly know them, or to tell them apart from other similar *Lactarii*.

Careful comparison reveals several differences: stem height / cap diameter ratio  $\geq 2$  for *L. alpinus*,  $\leq 2$  for the other two. *L. alpinus* grows in wet soil under mountain alder (*Alnus alnobetula* ssp. *crispa*—not shown on illustration); the other two grow in Sphagnum, *L. tabidus* with birch (small leaves of *Betula michauxii* can be seen in upper part of photo), and *L. sp.* with larch. The cap of *L. alpinus* is dry, rough and minutely scaly, that of *L. tabidus* is smooth, viscid to mucinous, and that of *L. sp.* is smooth and somewhat gelatinized, most noticeable over the disc.



In memoriam:

**WOLFGANG SIEGFRIED GÜNTHER  
MAASS**

OCTOBER 23, 1929  
APRIL 5, 2016

Sometime overnight on April 4 and 5, 2016, Wolfgang Maass embarked on his final adventure. Born in Helsinki to a German father and Swedish-Finnish mother, he was educated in Germany and achieved his doctorate in 1957. An accomplished botanist, Wolfgang was also an authority on peat mosses (*Sphagnum*) and a specialist in the biosynthesis and chemistry of lichen substances. In 1960, Wolfgang immigrated to Canada, settling in Halifax. While there, he worked at the National Research Council until his retirement in 1986. In the latter years of his employ with NRC, Wolfgang had initiated lichen surveys throughout Atlantic Canada, with the predominant effort directed toward the distribution of Boreal Felt Lichen. In the early eighties, Wolfgang found significant populations of Boreal Felt Lichen in Newfoundland and lesser quantities in Nova Scotia. In 1996, Wolfgang became a strong advocate for the protection of Boreal Felt Lichen in Atlantic Canada, and particularly in Newfoundland. It is largely through his efforts that an awareness of this and other rare lichens was locally fostered, and this has translated into the conservation of numerous rare lichen habitats that otherwise would have been lost. Wolfgang has contributed significantly to our understanding

of Atlantic Canada lichens, and amassed valuable lichen collections which are now in care of a number of prominent lichen herbaria, including the University of Helsinki, the University of Bergen (Norway), and most extensively at the lichen herbarium of the New Brunswick Museum. In 2002, Wolfgang was senior author of the COSEWIC Status Report on Boreal Felt Lichen, a report which resulted in a designation of Endangered for the Atlantic population (Nova Scotia and New Brunswick) and of Special Concern for the Boreal (Newfoundland) population. Wolfgang last undertook lichenological studies in Newfoundland during the September 2007 Tuckerman Lichen Field Trip of the American Bryological and Lichenological Society. In his final years, his deteriorating health severely limited his incessant desire to pursue lichens. Wolfgang's passion for lichens has left us a legacy of his enormous contribution in this field, and is evidenced by the continued healthy presence of Boreal Felt Lichen in many pristine habitats throughout its Atlantic Canadian range. Goodbye old friend, I'll be watching for your shadow in the lichen heavens that you have left us.

Mac Pitcher

Photo supplied by Wolfgang, author unknown





# The Bishop's Sketchbook

Welcome to our Foray issue.



# Vibrissea truncorum

Andrus Voitek



*Vibrissea truncorum* is not a common mushroom in our province: we have not collected it during our forays and this is my first record of it in 15 years of collecting. However, a few weeks later, Glynn Bishop also found it, so maybe this is the *Vibrissea* year. It is a bright yellow, club-like ascomycete, described as growing on wood submerged in water. That description will bring to mind *Mitrula elegans* (see [OMPHALINA 4\(11\):16](#)), and it is comforting to know that genetically *Vibrissea* and *Mitrula* are relatively closely related. The phylogram, below, has been adapted from Hustad & Miller, to show this relationship, and to show that what has been called *Vibrissea* in the North and South Hemispheres are not the same genus. Looking at this pruned diagram, you may think that the southern and northern clades could be merged into one, but in the adaptation, 14 intervening generic clades were removed. To consider both southern and northern *Vibrissea* as one genus, all

these intervening genera would also need to be considered *Vibrissea*, and this will not prove acceptable or helpful. One *Vibrissea* will have to be renamed.

Although reportedly growing on underwater wood, the depicted group grew on wood buried in soil wet from melting snow. It seems that the wood must be sopping wet, but does not have to be underwater. The stems are cleaner on photos of younger fungi growing on underwater wood. The characteristic gray-black spots of mature stems are obscured by splashed mud from rain on these terrestrial specimens. With

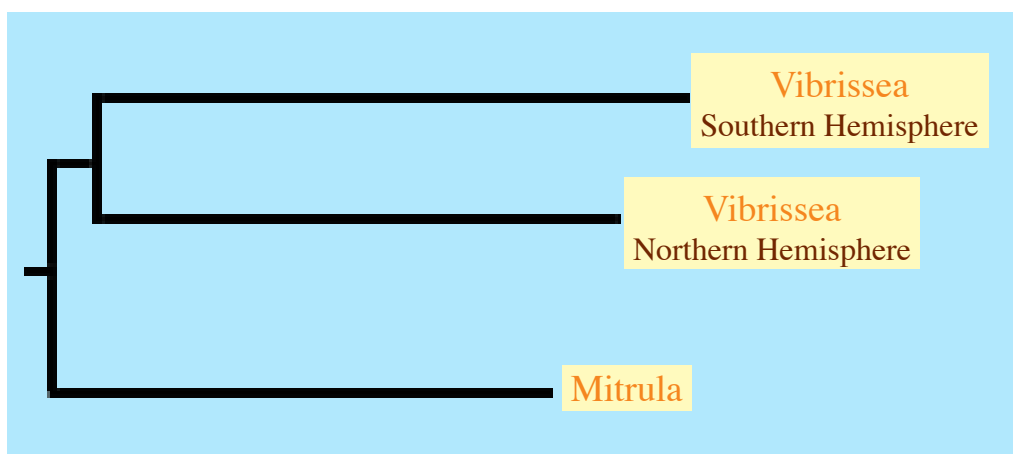
maturity the stems become dark overall.

## Here is your mystery to ponder:

How do the spores find their way to the proper substrate? One might suppose that normally they fall in the water and find other submerged wood to grow in. But how did they find their way to this piece of birchwood buried in the soil of this hillside, only sopping wet temporarily during snow-melt?

## Reference

Hustad VP, Miller A: Phylogenetic placement of four genera within the Leotiomyces (Ascomycota). *North American fungi*, 6:1-13. 2011.





# Chaga fruit body update

Andrus & Maria Voitk



Last year [[OMPHALINA 6\(2\)](#)] we reported on our first find of the rarely seen fruiting body of *Inonotus obliquus* (chaga). As so often happens, once you stumble upon something and develop a search image, you begin to see it oftener. Having looked for it for over a decade without success, in the short space of a year since finding the first, we have now found three more.\* There is a seeming sameness to them all. All fruited on dead but standing, rather small, thin birch. In each case, the bark was split vertically, obvious from a distance. Under the bark the vertically aligned tubes could be seen, as a dried and cracked layer about 5–9 mm thick, extending vertically 1–2 m around 1/4–1/2 of the

trunk diameter. All were found in January or February, presumably because the absence of leaves and undergrowth made them visible. They did not seem to be psychrophilic (i.e. fruiting during winter thaws) because all were rather worn out and none resumed sporulating when exposed to room temperature, as true psychrophiles do. The four finds are illustrated:

**A** Original discovery, Jan. 14, 2015, showing tree, tube layer, and close up view. **B** Jan. 29, 2015. Bark removed, showing scrappy tube layer underneath. **C** Jan. 15, 2016, showing worn-out tube layer and one small sclerotium (the “real” chaga). **D** Feb. 14, 2016. Tree and tube layer.

\* Since writing this we have found another 4 in the same woods, mostly in much worse shape. Once you learn what to look for, it is not uncommon. Visible in winter. More fruiting bodies than chaga!



# POET'S CORNER

Michel Savard

## **INONOTUS OBLIQUUS** **Chaga**

bête noire et panacée  
le chaga charbonneux saigne froidement  
le bouleau littéraire

\*

crab-like cure-all  
you bleed with charcoal obstinacy  
the literary birch

tout le jour tu cherches le chaga  
mais à la fin c'est lui son gros œil  
calciné qui te trouve et t'épingle

\*

looking for you they beat the bush all day  
yet in the end you are the one  
you your big charred eye  
who finds who stabs them





# THE MAIL BAG

OR WHY THE PASSENGER PIGEONS ASSIGNED TO SERVE THE  
LAVISH CORPORATE AND EDITORIAL OFFICES OF OMPHALINA GET HERNIAS

I live in Northern California and I spend a lot of time on the north coast. I was thrilled to see your article on *Peziza ammophila* in the sand dunes (OMPHALINA 5(9):12, Oct., 2014). Most people wouldn't go out into the dunes since there couldn't possibly be anything there. It's actually a magnificent place, quiet and lonely.

And there is plenty of life to be found.

Just wanted to thank you with a few pictures of the same species in our part of the world, for writing about something about which very few have an interest.

Sincerely,  
Hugh Smith



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*Photo: Muskrat Falls, Labrador, Mavis Penney*