



OMPHALINA

ISSN 1925-1858

Special Foray Edition

Newsletter of



Vol. II, No 3
Apr. 11, 2011



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

ADDRESS

Foray Newfoundland & Labrador

21 Pond Rd.

Rocky Harbour NL

A0K 4N0

CANADA

E-mail: info@nlmushrooms.ca

BOARD OF DIRECTORS

Michael Burzynski

PRESIDENT

Geoff Thurlow

TREASURER

Faye Murrin

SECRETARY

Randy Batten

Sean Dolter

Jamie Graham

Jeri Graham

Anne Marceau

Andrus Voitk

Maria Voitk

Nathan Wareham

Marian Wissink

CONSULTANTS

MYCOLOGICAL

Dave Malloch

NB MUSEUM

AUDITOR

Rick Squire

SQUIRE & HYNES

LEGAL COUNSEL

Andrew May

BROTHERS & BURDEN

RISK MANAGEMENT

Sue Sullivan

SULLIVAN RISK

CONSULTING

WEB CONSULTANT

Jim Parsons

THOUGHT NEST

CONSULTING

OMPHALINA is the lackadaisical newsletter of Foray Newfoundland & Labrador. There is no schedule of publications, no promise to appear again. Its primary purpose is to serve as a conduit of information to registrants of the upcoming foray and secondarily as a communications tool with members.

The content is neither discussed nor approved by the Board of Directors. Therefore, opinions expressed do not represent the views of the Board, the Corporation, the partners, the sponsors, or the members. Opinions are solely those of the authors and uncredited opinions solely those of the Editor.

Please address comments, complaints and contributions to Andrus Voitk, self-appointed Editor at

foray AT nlmushrooms DOT ca,

who eagerly invites contributions to OMPHALINA, dealing with any aspect even remotely related to mushrooms. Authors are guaranteed instant fame—fortune to follow. Authors retain copyright to published material, and submission indicates permission to publish, subject to the usual editorial decisions. Issues are freely available to the public on the FNL website. Because content is protected by authors' copyright, editors of other publications wishing to use any material, should ask first.

COVER

Looking back onto Mount Stamford from the trail leading to Minchin Cove, Terra Nova National Park, May, 2005. Terra Nova National Park is the site of our annual foray in the International year of the Forests and Chemistry.



Special Foray E dition

CONTENT

Editorial	2
General information	3
Gear	5
Miscellaneous information	6
How to get there	7
Program	8
Lichens	9
Fungal Arts	
<i>Urve Manuel</i>	10
Dyeing with mushrooms	
<i>Stephanie Squires</i>	11
Terra Nova National Park	
<i>Michael Burzynski</i>	12
Mushrooming in TNNP	
<i>Faye Murrin</i>	14
Radioactive mushrooms	
<i>Michael Beug</i>	14
North Shore Forest	17
Central Newfoundland Forest	21
Registration information	25
Registration Form	26
Notice	back cover



Message from the Editor

Registration for our 2011 Forest Foray is now open. The Board of Directors feels we have an excellent foray in place and is busy shaping its finer details. Accommodations limit the number of registrants, so register early. First-come-first-served. The Registration Form is on p 26. Please print out both pages. Set your printer to print pp 28-29 (difference in numeration because the printer enumerates the covers, whereas we do not). If your printer does not want to print 2 pages of 30, a freestanding Form can be downloaded from our website.

This SPECIAL FORAY ISSUE is designed to put all foray-related information between two covers in one place. Regular content will reappear in the next issue. Significant changes, updates, or information pertinent to registered participants will be relayed in subsequent issues.

You may be interested to know that the Faculty Foray this year takes place in White Bay South, thanks to generous support from the Model Forest. If it works, we shall have the ability to explore many areas of the province in the future, that we might not otherwise be able to survey.

We should especially like to draw your attention to pp 9, 10 & 11, outlining some new trials.

The inclusion of lichen lore is experimental. If we find someone willing to take on the management of this program, it can become a permanent feature and evolve into a significant contribution to the foray and the natural history of our province. If you enjoy it this year and if you have some organizational skill that you are willing to put to this effort, please speak to Michael Burzynski, our President. You will have lots of help from Mac Pitcher, our provincial lichen guru.

For many clubs an Arts & Crafts table is one of the big foray attractions. We are very happy to have the services of Urve Manuel this year to organize it for both participants and exhibitors

to enjoy. It will be a Show and Sell event, where you can exhibit your handiwork for viewing pleasure only, or place it for sale, if you wish. If you have any mushroom related products that you would like to share with us, please contact Urve.

We are delighted to present a workshop on dyeing fabric with mushrooms this year, and are fortunate to have Stephanie Squires, a mycophile with considerable dyeing experience, as instructor. This is a great opportunity for anyone with the least curiosity about dyeing fabric with natural dyes to learn some of the basic techniques.

Maria, who is in charge of the workshops, informed us that Chef Ulrich Hochwald will return this year to participate in the Cooking Workshop. Ulrich is away at the moment, so that the exact nature of the workshop will be shaped on his return. Once we have it worked out, we shall notify you in a subsequent issue.

Ecoregion brochures reproduced courtesy of the Protected Areas Association of Newfoundland and Labrador. These are available to the public at <paanl.org> for personal use, and, as in this case, for the purpose of education. We are grateful to PAANL for this useful resource.

Finally, many thanks to 2009 Faculty member Michael Beug, Toxicology Chair at NAMA, for sending in three reports for our use, one of which appears on p 16. Although not directly pertaining to our foray, radiation after the unfolding tragedy in Japan is sufficiently topical and germane to include here. Michael's other contributions will appear in future issues.

Happy mushrooming and see you at the foray!
andrus

General information 2011

WELCOME!

Our participants—from self-admitted rank amateurs to professors with a world-wide reputation in mycology—hail from Newfoundland, Labrador, mainland Canada, the United States of America and Europe. A hearty welcome to you all and an especially warm welcome to our visitors! We hope all of you will find this a good experience that draws locals to mushrooms and visitors to Newfoundland for many years to come.

HUNTING SEASON!!!

Moose-hunting season opens close to us on the weekend of our foray. Foray trails are inside Terra Nova National Park, and off limits to hunters. Still, please be prudent in the woods, stay together and wear bright clothing. We cannot guarantee that hunters will not stray into these areas, although as a general rule, poachers are much more watchful...

FORAYS

The purpose of a major annual foray like this one is to enable participants to learn about mushrooms while actively collecting them in the field. It concentrates more on species identification, list development and census than on collecting for food. Exchange of information, both informal during outings and social events and formal in the form of lectures, are very much part of a major foray.

Careful collection and documentation of specimens is very important. If 60 people dump everything they pick all day on a table for the poor identifiers, the latter will drown under a huge pillar of fung. Please help by keeping collections separate, trying to identify them, if you can, and fill out what you can on the collecting slips for each—our record for filling out slips has been excellent. Good information helps identification enormously. Please pick the whole mushroom, not just parts. For many mushrooms, features of the "root" part of the stem are crucial for correct identification.

DISPLAY TABLES

A reward for your efforts will be over 200 different species, professionally identified and labeled for view—the equivalent would take a single col-

lector several years to amass, going out full-time. There is a lot of database activity going on, making some participants reluctant to look at the specimens, because they feel they are "in the way". Do not be scared off by the activity. The Database Team has its work to do, including getting specimens on the table. Please note that the display room is set up for YOU. It is there ONLY so that participants can see what has been collected and identified, learn, follow their own specimens, compare to other collections, etc. If this were not important, there would be no need for a display table, the specimens could be dried immediately and the Database Team's work would be a lot simpler. So do not feel reluctant to examine what has been collected. Visit the tables often at any time it suits you.

SPECIES LIST

Past Lists and Reports as well as an Annotated Cumulative List of mushroom species are available on our web site <nlmushrooms.ca>. We expect to add more new species each year, working toward a provincial list. At present it is over 1,000 species. At a wild guess we might have 3,000-7,000 species of native mushrooms in Newfoundland and Labrador. If this is true and we do our job right, addition of new species should not slow down for many a year.

FACULTY: IDENTIFIERS, MYCOLOGISTS & LEADERS

Recent studies have shown that possibly as much as 67.4% of mycologists are human. Not all Faculty know everything about every mushroom. Not all Faculty know the area. Their main task is to aid in the accurate identification of mushrooms brought in. They stay inside sorting and identifying specimens while the rest of us get to enjoy the outdoors. Without their services we'd have a useless mound of fungal compost at the end of the day. Out-of-town Faculty travel here at their expense, thus subsidizing their opportunity to serve us! Don't be shy to show your gratitude.

The percentage of trail leaders who are human, closely rivals that of the mycologists. The main task of leaders is to get you in and out of the woods safely and on time; they are responsible for their group.

Therefore, please respect their decisions, notify them if you have any problems, tell them if you intend to stray far afield or must leave the group. Leave together, stay together and arrive together. September is rutting time for moose. Bulls are less likely to charge a group than single individuals and poachers are less likely to mistake groups than individuals. All leaders have above average knowledge of mushrooms and we are lucky to have a few with formal mycological training as well as some with great teaching ability. All leaders serve for the pleasure and pride it gives them, without any financial recompense. Therefore, treat them all well—don't be reticent to thank and flatter!

ALCOHOL & TOBACCO

Yes, it's allowed, but please restrict alcohol consumption to the Reception-Cookout-Dining areas and your quarters. You may bring wine or beer to your evening meals. Please do not drink alcohol in other public places.

At the Reception on Friday we provide local wild fruit wine from Rodrigues Wineries and at the Quidi Vidi QuuQup on Saturday we provide Quidi Vidi beer. Both beverages are donated by their respective makers to support our foray; we encourage you to patronize their products in appreciation. All other times it's strictly BYOB. Alcoholic beverages can be purchased in government liquor stores in larger cities; in smaller communities alcoholic beverages are often sold in special sections of licensed general stores. Beer can be found in most gas stations. An outlet for wine and beer is at the Esso station on the east side of the highway, just south of the Terra Nova Hospitality Home.

All room at the Terra Nova Hospitality Home are smoke free.

ACKNOWLEDGMENT

Please note that an Acknowledgement that you are aware of the risks involved with a foray and are willing to assume them in return for the experience is part of the Registration Form that all must sign to register. We look on this as the terms of engagement or understanding between FNL and participants. On our side, we shall strive to do all to make this as enjoyable, informative and safe an experience as possible. That said, there are some perils inherent in forays into nature to collect mushrooms as well as

in their identification for eating purposes. Among such perils must be recognized the possibility of human error, no matter how knowledgeable and well-intentioned the individual. While we try to prevent such possibility, we can neither deny its existence nor guarantee its absence. By signing the Acknowledgement, you also acknowledge this possibility and agree to accept responsibility for it in return for the experience. Please read and understand it first. Clearly, no matter how much we try to avoid them, there are some risks inherent in venturing in the outdoors, somewhat increased during hunting season. By signing the Acknowledgment, you acknowledge that you are aware of these risks and assume them, in order to participate. And, of course, we are not the only ones in the outdoors; in addition to other human beings (e.g. hunters), there are animals, small and large, that may pose a potential threat. Again, by signing the Acknowledgement you indicate your awareness and acceptance of this possibility as a potential risk you are willing to assume in return for the foray experience.

From our website you can also download our Policies and Procedures Book, to see what guidelines we follow to make your experience pleasant, smooth and safe.

LOST

One of the risks of outdoor activity is getting lost. From the publications page of our website <nlmushrooms.ca> you can download articles about what to do if this happens. Please read them. These are general guidelines and all is not applicable to our situation. For example, there is no cell phone service in most of the areas we foray, so having a phone and keeping a list of numbers to call is not applicable. Also, we have only a limited amount of 2-way radios. However, everybody gets a whistle and since we do not venture very far afield from each other, this remains an excellent means of signaling in our situation. Know the few simple codes and always take your whistle with you.

TELEPHONE & INTERNET

Terra Nova Hospitality Home has a toll free line, 1-888-267-2333 and a local line, (709) 543-2260. You can see it on the internet at <www.terranova.nfld.net/>.

There is a wireless internet connection.

CLOTHING

Saturday is opening day of moose hunting season. Orange and bright clothes are prudent, even in protected areas. Orange cap will be supplied (see below). Bright coloured clothes also make it easier to spot you, should you become separated from your group. September is also the rainy season and can be quite chilly to downright freezing. Loose layered clothing is best, with waterproof red or orange outer shell, if needed. Comfortable warm hiking boots with sneakers or rubber boots in reserve are good.

EQUIPMENT

1. Basket or large bag.
2. Plenty of wax paper, paper bags, or small containers to keep specimens separate. (Some will be supplied.)
3. An inexpensive plastic bait box for smaller mushrooms is a good idea.
4. Knife is a necessity.
5. Camera.
6. Pen or pencil; collecting slips will be provided.
7. Small backpack.
8. Water bottle, if you need it.
9. Fly dope—flies and mosquitoes are usually not a problem on the island at this time of year.
10. Sunscreen—another thing not generally required at this time, but since it does not weigh much, take some along, if you think you may need it.
11. Map and compass optional—we do not intend to wander far afield from the trails.
12. GPS (if you have one) to mark waypoint to return to car and to mark sites of rare or unusual finds.
13. Whistle will be supplied (see below), should you become separated from your group while off the trail. **REMEMBER TO TAKE IT WITH YOU!**
14. Cell phone, if you have one (in case it works where you will be).
15. Two-way radios, if you have them. We have a limited supply and can provide some.
16. Mushroom field guide:
Voitk: A little illustrated book of common mushrooms of Newfoundland and Labrador (See PUBLICATIONS page on our website for more information). If your bookstore does not carry it, ORDER FROM:

Gros Morne Cooperating Association
PO Box 130

Rocky Harbour, NL, A0K 4N0, Canada

Tel: 709-458-3610

Fax: 709-458-2162

E-mail: jackie.hiscock@pc.gc.ca

PRICE:

\$24.95 + 13% HST (\$3.24) CAD = 28.19

Shipping \$3.00 in Canada, \$5.00 to US.

All proceeds go to the Gros Morne Cooperating Association to help its support of Gros Morne National Park

MasterCard or VISA preferred by phone.

17. And above all, enthusiasm and good spirit!

WHISTLES, CAPS, &c

September is moose hunting season. Bright coloured clothes are prudent, even in protected areas. Bright coloured clothes also make it easier to spot you, should you become separated from your group. We provide a safety whistle and orange cap—you must have both to participate. If you got one a previous year, please bring it again. If you forgot/lost your old one, we'll provide a replacement, but would appreciate a voluntary payment [whistle, \$10.00; cap, \$15.00]. Please carry them with you on all outings. These are not toys. Do not blow the whistles unless in need. Especially, do not allow children to blow them for fun and do not blow them indoors. They are very loud, serious safety devices, designed to be heard over great distances in the woods. The sound will harm your hearing. Please take care of them, as they can serve you for years to come. Simple code:

1 blast—Where are you? / I hear you.

2 blasts—optional for internal signalling for a group, meaning to be agreed upon with leader.

3 blasts—Help!!! / I am lost. / Come here!

4 blasts—Everybody, go to prearranged meeting place!

We also have some two-way radios and a few Back-Track GPS devices. Needless to say, if you get one, it must be returned!

Miscellaneous 2011

SIGN-UP PROCEDURES, workshop & trails

Trail descriptions will be available. Please sign up appropriately, especially if you have mobility limitations or problems with climbing and other strenuous exertion. There are several very good areas for foraging that require minimal mobility. You can have a full foray experience without the rough stuff. Most trails are not long, but a whole day (4-6 hrs) is required to cover them thoroughly.

Both for the trails and for Sunday Workshops, please sign up in the spaces available. If the list is full, please **DO NOT** add your name below. We need to keep the groups of reasonable size so that everybody has an opportunity to interact with leaders and each other and so that leaders can remain accountable for their groups. Some workshop activities require a small number to work, so again, adding your name to a full list is counterproductive. If the trail/activity of your first choice is fully subscribed, please select another (or possibly trade with somebody).

NEEDS, WISHES, PREFERENCES

If you have any special dietary needs, please let us know. The kitchen may not be able to solve every need, but we shall surely try and let you know if there is a problem.

If you wish to lead a foray, please indicate. If you're from outside the area, we'll pair you up with someone familiar with the trail, if need be. Some knowledge of mushrooms is required to lead, but you need not be a walking encyclopedia. Knowing common mushrooms, being able to guess the genus of some others and a desire to show or explain what you know to your companions is all we ask. If you wish to help identify specimens with the identifiers, considerably more expertise is required.

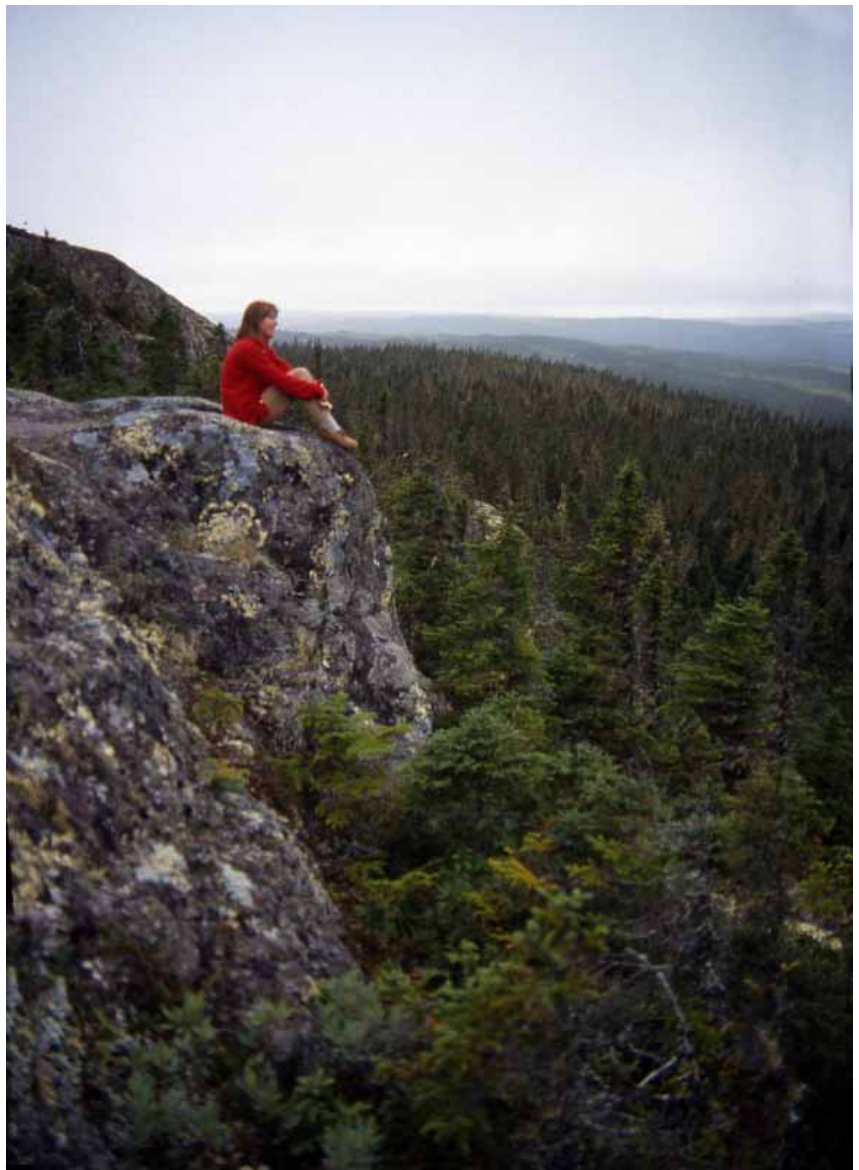
Most people know if they can do it.

PETS

No pets, please! Sorry.

HAVE FUN!

That's all the sage advice for now. Please come with your mind made up to have fun. Maybe learn a bit too. Our goal is to make this a rewarding experience for everybody.



How to get there 2011

AIR

St. John's airport (YYT) is about 2 1/2 hour drive from Terra Nova Hospitality Home. **CAUTION:** Moose on the road after dark! Info about airlines, arrival & departure times <<http://www.stjohnsairport.com/index/index.cfm>>. Connecting flights from Deer Lake, Gander, Halifax, Toronto, Montreal and Heathrow.

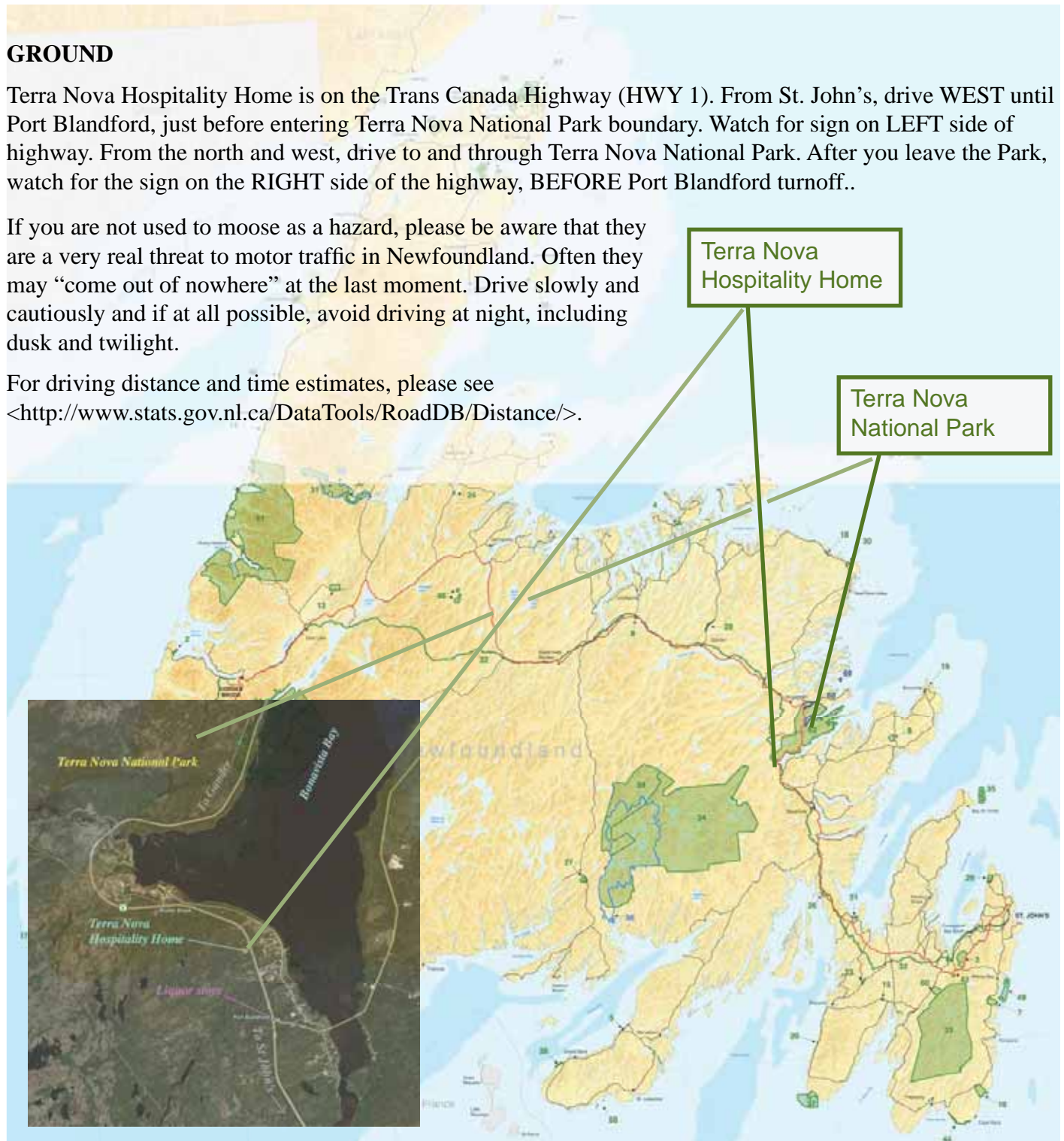
Gander Airport (YQX) is closer, but has significantly decreased choice / flexibility of flights / times.

GROUND

Terra Nova Hospitality Home is on the Trans Canada Highway (HWY 1). From St. John's, drive WEST until Port Blandford, just before entering Terra Nova National Park boundary. Watch for sign on LEFT side of highway. From the north and west, drive to and through Terra Nova National Park. After you leave the Park, watch for the sign on the RIGHT side of the highway, BEFORE Port Blandford turnoff..

If you are not used to moose as a hazard, please be aware that they are a very real threat to motor traffic in Newfoundland. Often they may "come out of nowhere" at the last moment. Drive slowly and cautiously and if at all possible, avoid driving at night, including dusk and twilight.

For driving distance and time estimates, please see <<http://www.stats.gov.nl.ca/DataTools/RoadDB/Distance/>>.



PROGRAM 2011

FRI SEP 9

4:00 PM

Registration

6:30 PM

Reception & supper *Place tba*

8:00 PM

Talks by faculty members. People and subjects to be defined, but likely topics:

Lichens of NL

Mushroom identification

Mushrooms and DNA

SAT SEP 10

8:00 AM

Breakfast

9:00 AM

Forays (TRAILS tba in Program Book)

1:00 PM

Lunch *on the trail*

5:00 PM

Quidi Vidi QuuQup & Supper

7:00 PM

Photo Contest results *Laura Park*

7:30 PM

Talks by faculty members. People and subjects to be defined, but likely topics:

Polypore lore

Dyeing with mushrooms

***Laccaria* of Newfoundland and Labrador**

Newfoundland chanterelles

Newfoundland *Auricularia* and lookalikes

SUN SEP 11

8:00 AM

Grenfell Breakfast

8:40 AM

Group Photo

OUTSIDE

9:00 - 1:00 PM

Workshops conducted by the faculty. People and subjects to be defined, but likely workshops:

Pick for the Pot

Photography (P&S and SLR)

Lichen walk

Polypore walk

INSIDE

9:00 - 10:00 AM

Workshops by faculty. People and subjects to be defined, but likely/potential subjects:

Tables

Microscopy

Mushroom Cooking

How to use a key

Dyeing with mushrooms

Lichens

Ascomycetes

1:00 PM

Lunch

2:00 PM

AGM, elections, thanks

The above is a tentative outline. The final Program will appear in the Program Booklet handed out at registration. Future issues of **OMPHALINA** will advise registrants of the place for the Reception Fri eve, once it has been determined.

LICHENS

This year we are adding lichens to mushrooms at our foray—to our knowledge the only mushroom foray to bring all mushrooms under one roof. Lichens are mushrooms, just like *Cortinarius* and all the other mycorrhizal mushrooms that we have learned to know and love. They have formed an association with a photobiont, an organism that has chlorophyll, which allows it to convert the sun's energy into sugars by a process known as photosynthesis. The fungus feeds the organism water and minerals and gets some of the sugars in return—a mutualistic relationship. The only difference between a *Cortinarius* and a lichen is that while the photobiont for the *Cortinarius* is a multicellular organism from the plant kingdom, like a tree, that of the lichen is one or more unicellular organism(s), an alga and/or a cyanobacterium.

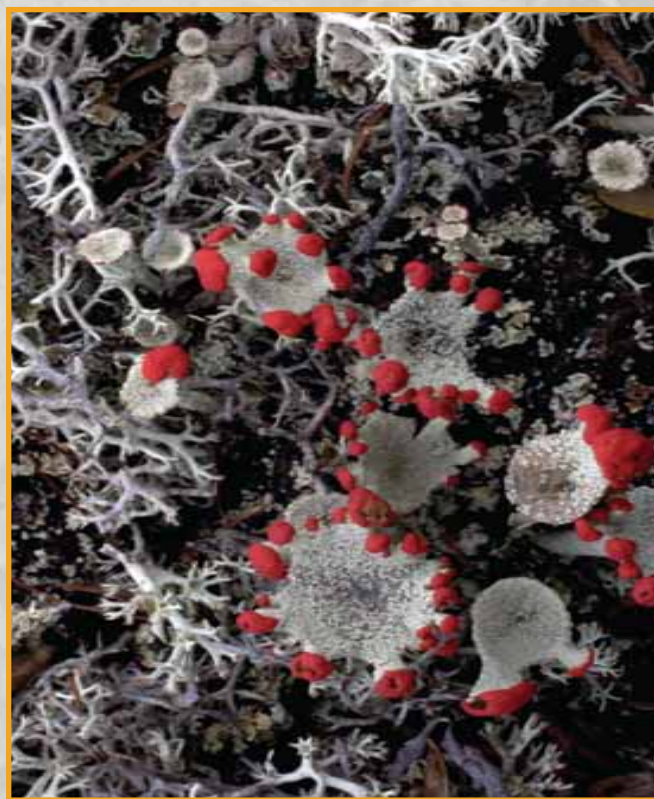
This difference is important in one regard. Because the tree is big and the fungus is big, it is easy to keep the two apart. The fruiting body of the fungus, the mushroom, can be collected without any loss to either organism. In the case of lichens, the photobiont is microscopic and is physically incorporated into the structure of the combination, known as the lichen. Thus, collecting the lichen removes the entire organism.

We have some very rare lichens, some which are unique to the Island, not found anywhere else in the world. We do not want our collecting to be the cause of losing even more of these organisms, already sitting on the cusp of extinction. Therefore, while we collect all mushrooms for identification, PLEASE DO NOT COLLECT LICHENS.

We shall have among the faculty some lichen experts. ONLY LICHEN EXPERTS WILL COLLECT LICHENS. We shall try to assign a lichen expert to some trails and shall identify those trails.

Therefore, if you have an interest in lichens or are curious to learn a little about them in the field, make sure to select those trails. One of the evening talks will also deal with lichens.

Additional lichenologists are welcome, as are others with a serious interest in these organisms. If you are such a person, and PARTICULARLY if you are interested in collecting some lichens, or if you have any other questions about the lichen aspect of the Foray, please contact **Mac Pitcher** <[secondwind AT xplornet DOT com](mailto:secondwind@xplornet.com)>. Mac is responsible for the organization of this aspect for us and should be able to incorporate your talents and interests, as well as explain what you might expect, before you commit by registering.



FUNGAL ARTS

Call for submissions for the **FUNGAL ARTS** tables at the Foray this year!

Are you creative? Do you love artistic forms of mushrooms? If yes, then
FUNGAL ARTS
is for you!

If you enjoy creative activity and wish to incorporate mushroom themes or mushroom products into your creations, please consider exhibiting this at the Foray. Your item may be offered either for SALE or for DISPLAY at this year's Foray.

Urve Manuel (glass artist and organizer of the Best West Craft Fair) has agreed to look after the set-up for us. (If you offer anything for sale, however, you will be responsible for your own transaction and money. And no, there is no commission!) There is no limit to what or how many items you can show, provided they have a fungal connection.

Please send an e-mail to:

Urve Manuel <urve DOT manuel AT gmail DOT com>

by August 15th, 2011, stating the type and number of items, approximate sizes, approximate space requirement and any special needs that you will have, as well as whether the items are meant for the DISPLAY or SALE table.

Set-Up

Urve will set up tables with items for SALE as well as tables with items for DISPLAY-ONLY during the Foray where participants can view and/or purchase your beautiful fungal creations.

Bring your Artistic, Creative, Utilitarian, Medicinal, and Informative Mushroom Items to the Foray!

Start your **FUNGAL ARTS** now!

MUSHROOM DYE WORKSHOP

Sunday Morning, Foray 2011

Stephanie Squires will teach a small-batch method for dyeing silk with the mushroom catch-of-the-day. This method is also applicable for cotton or wool, but silk will be used because it can be dyed even with a small amount of any of our local dye mushrooms. This method makes it easy for the participant to pursue dyeing at home, and to use any natural dye materials.



Participants will learn:

- to identify common dye mushrooms and their families,
- to test an unknown for dye potential,
- how to use mordants in a single-step dye method, and
- how to produce different colours from one mushroom.

Participants will be provided silk scarves and hankies ready to dye, and a set of silk swatches to make samplers of the different mushroom dyes; everyone will go home with some fungally regal loot. Dress appropriately for stirring dye baths, rinsing silks, and other splashy activity. Rubber gloves will be provided.



Workshop fee including all materials is \$40 — please pay to FNL at time of registration.



Terra Nova National Park

Michael Burzynski



Terra Nova is a landscape of rolling hills covered in dark forest, of wide bogs, shallow lakes and ponds, of clustered rocky islands, and a sculpted coastline of bays and deep sounds. It is a subtle landscape that takes time to explore. Each hill climbed and each turn of a brook brings you

deeper into the park. Each cove and beach and cliff along the coast brings you closer to an understanding of the interwoven nature of land and sea in this complex national park.

Established in 1957, Terra Nova was the first national park in the province. It is 404 square kilometres in

size, and has a history of human occupation that goes back 5,000 years. Faye Murrin and her students have worked in this area for years and now Foray participants can add an important contribution to the knowledge of mushrooms in the national park.

Bedrock in the park area is a mix of seafloor sediments, volcanic ash and lava, red conglomerate, and exposed granite. Ice advances between two-million-years ago and 12,000 years ago sculpted the scenery of the park, and the last glaciation left granite erratics scattered across a landscape denuded of vegetation, animal life, and soil. Life crept back and soil began to form, and a patchwork of ecosystems became established throughout the park.

Because fungi depend on other organisms for food, the major habitats of Terra Nova contain communities of plants and animals that determine what fungi can grow where. Forest, bog,





crowberry heath, old field, river valley, beaver meadow, pond, rock knob, heath barren, beach, and lichen bed all have the potential for different and unusual species.

The forest is dominated by dense stands of black spruce and balsam fir, and in large areas the forest floor is covered with a thick, green moss carpet. Where the canopy is more open and more light hits the forest floor, the understory is dominated by sheep laurel (*Kalmia*) and caribou lichen—typical boreal forest species. Fire is an important agent of forest renewal in this part of the province, and black spruce is well adapted to survive and thrive in these conditions. Other major tree species are white birch, balsam fir, eastern larch, and white spruce.

During Foray 2011, participants will search trails in the park and in the surrounding communities, exploring as many different habitats for mushrooms as possible.

We hope that you can join us!

PHOTOS

Previous page

Upper: Strand grass on Newman Sound.

Lower: View over Newman Sound

This page

Upper: View from Blue Hill

Lower: Salvage



Studying Mushrooms in Terra Nova National Park

Faye Murrin

Mushrooms are the fruiting bodies of a much larger individual organism that is made up of from long thin filaments of cells collectively called the mycelium. The mycelium of mycorrhizal mushrooms form underground partnership with roots of trees in our boreal forests and are essential in helping the tree roots to collect nutrients from our relatively poor forest soils; the mycelium receives a payment of sugars from the trees in return.

I started collecting mycorrhizal mushrooms in Terra Nova Park in 2000 with the help of a wonderful group of students and



Cortinarius camphoratus

Image © Faye Murrin

volunteers, first with an eye to describing the biodiversity of mushrooms and then in looking at the effects of moose browsing on that biodiversity. The personnel of the Park have a long-standing interest in trying to mitigate the loss of Balsam Fir trees, a species high on the list of favorite foods of our famously successful population of moose, one of the world's largest of herbivores. In any one year, not all the species will form mushroom fruiting bodies and additional species can be found each year. To date we have identified several hundred species.

It is amazing to me now that of the thousands of mushrooms I saw and collected in the Park, there are many that I can specifically recall collecting—the exact place and moment. Sandy Pond is one of my favorite sites: the first time we drove down the winding road toward the pond, I remember being dumbstruck by the sight of hundreds and hundreds of mushrooms fruiting on both sides of the road—mushrooms with pores on the undersides of their caps, or more conventional gills and others with spines—many of which I had not seen be-



Suillus placidus

Image © Faye Murrin



Bankera violascens

Image © Faye Murrin

fore. On another trip with my canine assistant Rosie, as we were coming along one of the last turns in the trail, I examined a beautifully mossy area on a slight incline and discovered three mushrooms with a pure white cap and stalk, and underneath the cap were pores which were exuding blood-red droplets. I had never seen anything to match it. Later when I identified this mushroom I learned that it had a wholly appropriate name: *Suillus*

placidus—the peaceful bolete.

Access to another of my favourite collecting sites in the Park, Minchin Cove, requires a day's hiking or a 30 minute boat ride. It was once the site of a settlement and saw mill but now is home to brown bears (prints and berry-laden scat piles proved this, not sightings), ravens (the most ancient and coarse-throated of which put up every hackle on the back of my neck as it flew, calling, high above us) and, of course, it gives us some excep-


tionally fine mushrooms. My most memorable collections from that area include dozens of the magnificent all-white Death Angel, *Amanita bisporigera*, and collections of enigmatic *Cortinarius* species, with their distinctive cob-webby veils, which dominate the mycorrhizal flora in Newfoundland's boreal forests and which I find the most intriguing.



Amanita bisporigera

Image © Faye Murrin

For more details, pictures and key to some of the mushrooms found in Terra Nova Park, you can visit my website at <<http://philos.biol.mun.ca/fungalkey/>>.



Do I need to worry about Radioactive Mushrooms as a result of the disaster in Japan?

Michael Beug

With almost daily news coverage about the nuclear disaster in Japan, mushroom collectors may wonder if it is safe to pick and consume wild mushrooms in North America. The answer so far is unambiguously that collecting and consuming wild mushrooms in North America remains as safe as before. Just make certain that you are not collecting your mushrooms on or near an old uranium mine.

After the Chernobyl nuclear disaster, there were many areas in Europe where mushrooms concentrated dangerous levels of Cesium-137 (and other radio nucleotides) and were dangerous to consume for many years. Iodine-131 was also a problem. However, so far the levels of radio nucleotides reaching North America are very small and pose no threat. I checked the Oregon Public Health website on March 30, 2011 and the radioactivity peaked on March 22 at 0.00016mrem/day and has now dropped to 0.000001mrem/day. Assuming that the radiation

had maintained the peak level of 0.00016 mrem/day, you would need to be exposed day and night for 100 years to equal the radiation from one chest x-ray. Monitoring sites in California, Washington and Alaska have all paralleled the Oregon results.

I will continue to monitor the Oregon web site (public.health.oregon.gov) and let everyone know if the situation changes markedly for the worse. However, I do not anticipate a problem even if Japan continues to struggle for months or even years with their very real disaster.

For the record, I did study nuclear physics in college and I am an anti-nuclear activist strongly opposed to nuclear power. But my concerns are focused on 1) the tens of billions of federal dollars going to prop up nuclear power (while funding for virtually all green energy is being cut) and 2) the immorality of creating a waste problem that remains a hazard for 250,000 years or more.

Picture of mushroom cloud over Nagasaki taken from Wikipedia, in the public domain.



North Shore Forest

This ecoregion is made up of a long narrow zone about 20 km wide along the very northeastern edge of the island of Newfoundland. It includes the coastal area of the Baie Verte Peninsula, Notre Dame Bay, most of the "straight shore" (the area of shoreline along the northeast coast, which has fewer inlets and bays than the surrounding coastline and so is "straighter"), and the western edge of the Bonavista Peninsula. One of the smallest ecoregions on the island, the North Shore Forest covers about 5,400 km².

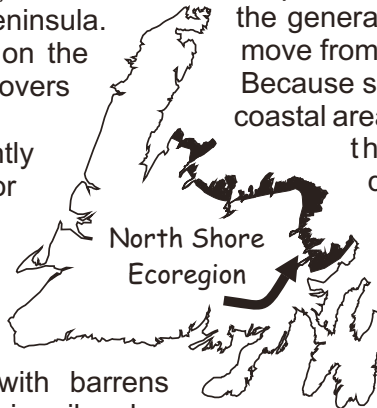
The landscape here is gently rolling with small hills. Except for the Baie Verte Peninsula, where the terrain is more rugged and can reach 315 metres above sea level, elevations are generally less than 130 metres. The area is largely forested, with barrens occurring here and there — primarily along exposed coastal areas.

Most of this ecoregion is in direct contact with the North Atlantic Ocean. An irregular coastline with numerous bays and islands extends the influence of the sea far inland. This results in greater exposure to wind, which in turn, results in a decrease in the quality and height of the forests. As you move inland and away from these winds, trees become straighter and taller.

The North Shore Forest is intermediate between the Central Newfoundland Forest, which lies to the south and includes much of the

interior of the Island, and the Eastern Hyper-oceanic Barrens, which covers the very northern tip of the straight shore near Lumsden and the northeastern tip of the Bonavista Peninsula. The North Shore Forest subregion has forests similar to the forests found in the Central Newfoundland Forest ecoregion, yet has barrens and coastal heathlands much like those in the Eastern Hyper-oceanic Barrens.

This area is the driest on the Island, despite its closeness to the ocean. This follows the general rule that dryness increases as you move from the interior of the Island northwards. Because summers here are the warmest of any coastal area in Newfoundland, and rainfall is less than other regions, moisture deficiencies — rare on the Island — can result. This means that more water evaporates from the soil than is replaced by precipitation or other sources. This usually happens only at the end of summer and results in a lower water-table. 🌳



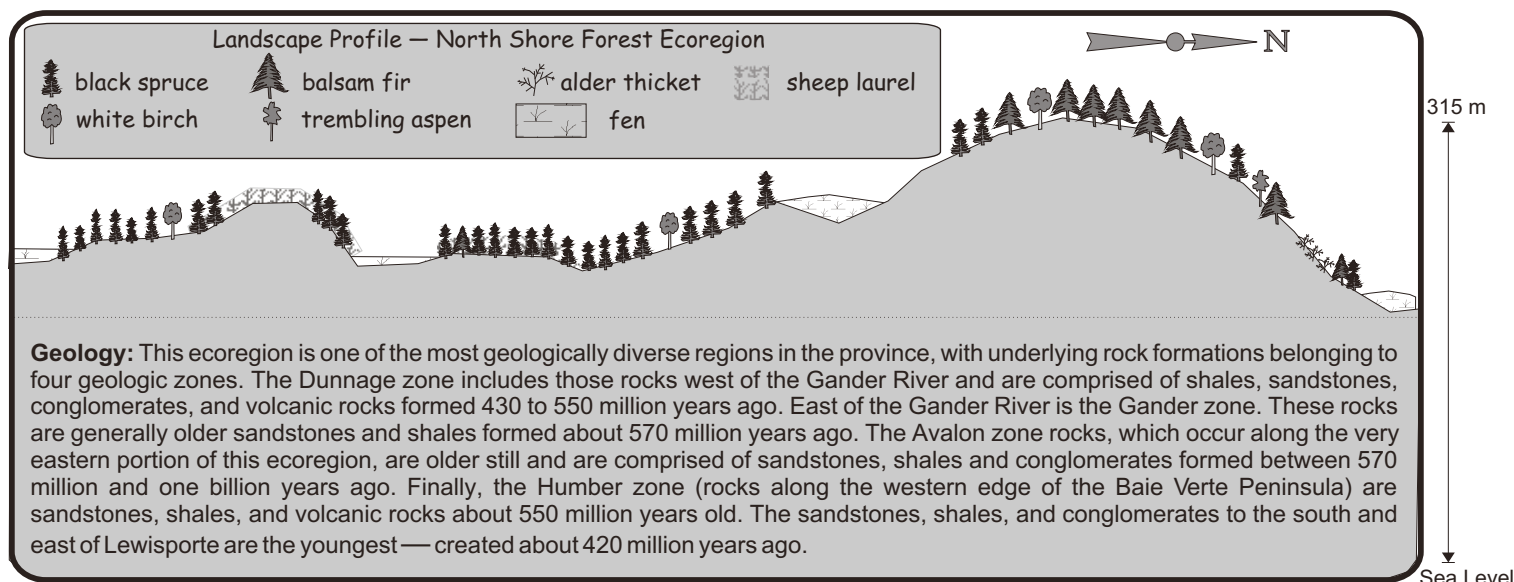
Soils: We find three basic kinds of soils in this ecoregion. Surrounding Bonavista Bay are "humo ferric podzols." These are brown soils containing mostly inorganic material that occur in relatively dry sites. North of Glenwood and Gander are areas of "organic fibrilsols" (soils that occur in peatlands and are composed mostly of organic matter), while along the northeast we find "ferro humic podzols" (dark soils with a high organic content). Areas adjacent to Notre Dame Bay are characterized by exposed bedrock with little soil development.

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.

Fire stands: Groups of trees well adapted to conditions following forest fire and as a result are the first to colonize burnt areas.

Arctic-alpine plants: A descriptive term for plants that cannot grow where there are hot summer temperatures. Arctic-alpine plants are generally found farther north than the treeline (by latitude), or above the treeline elevation on mountains.



Vegetation Profile

There are several important factors that separate the vegetation patterns found here from neighbouring ecoregions. The first is low moisture levels. As you travel northward from the interior of the Island, the land becomes increasingly drier. This puts the North Shore Forest ecoregion at the most northern — and driest — end of the moisture gradient. Because of this, forest fires occur regularly and are often extensive. Black spruce **fire stands** are common; in fact, they are more common here than in the Central Newfoundland Forest. In those areas that have escaped recent fires, balsam fir forests with an understory of sheep laurel or feathermoss occur.

The ocean is another influence on plant growth. This influence becomes obvious as you move closer to the shoreline. Here, trees are smaller and less vigorous due to fiercer wind conditions.

The vegetation of the North Shore Forest is very similar to that of the neighbouring Central Newfoundland Forest ecoregion, with widespread balsam fir and black spruce forests. However, due to its slightly more northerly location

and increased exposure to wind, there are several important differences. One is that white spruce is more common here than in the Central Newfoundland Forest. Also, trembling aspen, which forms stands in much of the Central Newfoundland Forest, is found only in the southern part of the Bonavista Peninsula, and it does not form stands.

Another difference is that alder swamps contain mostly mountain alder, replacing the speckled alder found farther south. This is because summers are colder and shorter here than to the south, and mountain alder is better

adapted to these conditions. Alder swamps are well adapted to wooded areas that experience frequent flooding and have waterlogged soils.

However, compared to other coastal areas, the North Shore Forest has higher summer temperatures. This results in the absence of several **arctic-alpine plants** (such as *diapensia*) normally found in coastal areas. The region is home to many common coastal species such as alpine bilberry, and both Swedish bunchberry (*Cornus suecica*) and bunchberry (*C. canadensis*). 🌲

Species in Focus:

Black spruce (*Picea mariana*) is an important species in the process of succession because it is adapted to colonizing recently disturbed sites such as burn-overs. This remarkable tree grows well in damp soils and can be found in this ecoregion along the edges of bogs and other wetlands or in areas where drainage is poor.



Photo: Parks and Natural Areas Division

Wildlife Profile

This ecoregion is home to several seabird colonies. The largest is Little Fogo Island, where 38,000 pairs of Leach's storm-petrels breed. Slightly smaller than a robin, this sooty-brown bird lays a single white egg at the end of a burrow. While their mates feed at sea during the day, incubating adults (both males and females share this task) do not stir from their burrows. When night arrives, birds return to the colony and the air fills with their shadowy, fluttering flight and soft, twittering calls.

Other seabirds breeding in this ecoregion include herring gulls, ring-billed gulls, common terns, arctic terns, black-legged kittiwakes, great black-backed gulls, and Atlantic puffins. The many islands and the extensive coastline provide seabirds with ideal nesting locations.

Common eiders historically nested in this ecoregion, but around the turn of the century numbers were severely reduced due to hunting for both meat and feathers. Since then, populations have experienced a steady, if slow, increase, with reports that some eiders are now nesting on offshore islands in this ecoregion.

Other birds occurring in the North Shore Forest are typical of those found elsewhere on the Island, including the bald eagle, boreal owl, osprey, blackpoll warbler, gray-cheeked thrush, yellow warbler, Wilson's warbler, and common redpoll.

Mammals commonly found elsewhere on the Island can be seen here as well. These include moose, snowshoe hare, mink, red fox, black bear, meadow vole, otter, beaver, and the little brown bat. The red squirrel, lynx, and muskrat can also occur.

The region's many lakes and

rivers support a variety of fish including Atlantic salmon and brook trout, which are both important species for recreational fisheries. Other fish include arctic char, three-spine and nine-spine sticklebacks,

rainbow smelt, and American eel.


The green frog, which was introduced to the Island, occurs in ponds and marshes in low numbers. 



Photo: Doug Phelan

Species in Focus: A characteristic breeding bird of this ecoregion, the common tern is grey above and white below, with a black cap. Both the legs and bill are reddish. It nests on the open edges of sandy and gravelly beaches, mostly on islands, and forages over inshore coastal waters. Common terns primarily eat small fish, which they capture by folding their wings and plunging into the water, sometimes appearing to submerge completely below the surface.




Photo: A Glen Ryan

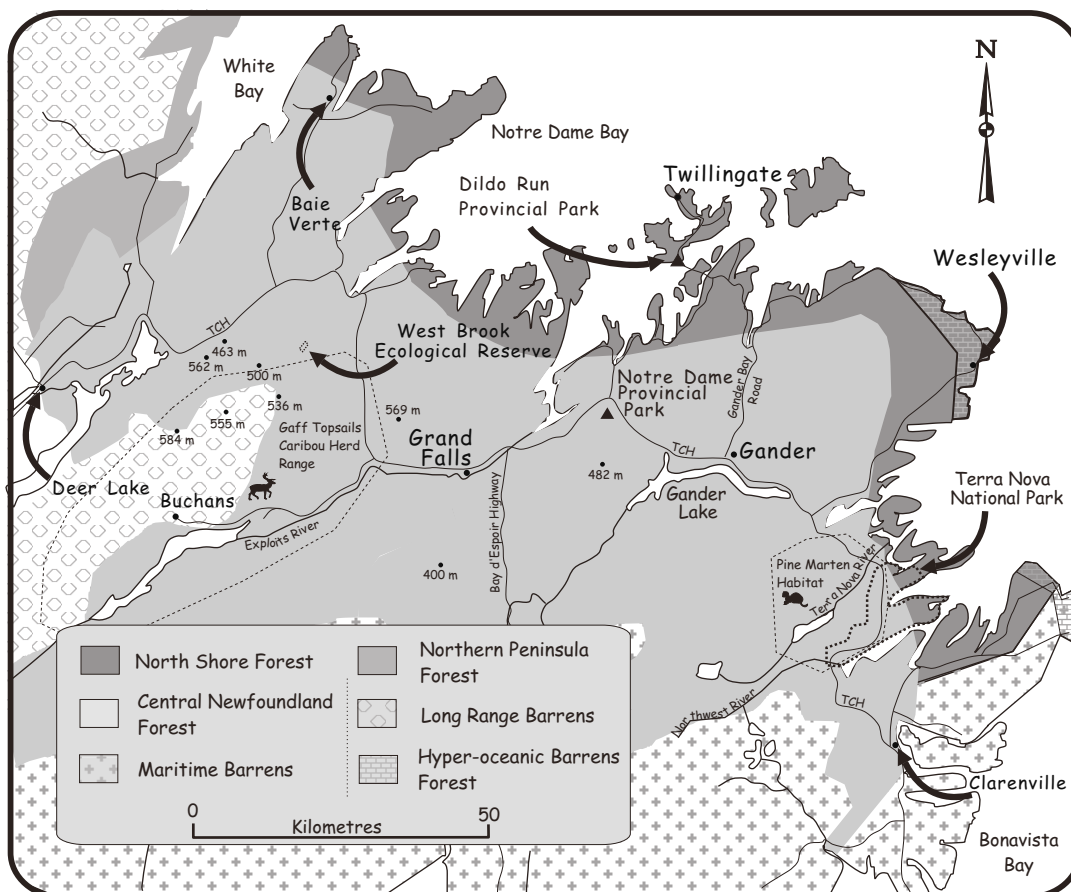
Forests here often grow right up to the shoreline. Trees closest to the shore are usually the most stunted by wind and can have unusual shapes due to this weathering.

Protected Areas Profile

Portions of this ecoregion are protected by Terra Nova National Park and Dildo Run Provincial Park.

Terra Nova National Park includes almost 20,000 hectares of the North Shore Forest, with the remainder falling within the Central Newfoundland Forest. The park, which includes the scenic estuary of Newman Sound, represents the southern, inner coastal features of this ecoregion. However, it does not include salt marshes, or the northern coastal features of this ecoregion.

Dildo Run Provincial Park is located just south of Twillingate. It includes boreal forest and a sheltered coastal area, and offers a spectacular view of the coves and islands of Notre Dame Bay. However, it is too small (327 hectares) to provide adequate ecoregion representation. 



Climate

The warmest summers of any coastal area in Newfoundland occur here. It is also the driest ecoregion on the Island, with moisture deficiencies common in summer. The growing season is 150 days. Night frosts may occur in summer.



Annual rainfall
1100-1300 mm



Annual snowfall
2.5-3.5 cm



Mean daily temperatures
February -5°C to -7°C
July +15°C to +16°C



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 - Parks Canada
- Terra Nova National Park - Parks Canada
- Natural Resources Canada - Canadian Forest Services
- 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
PO Box 8700, St. John's, NL A1B 4J6
PH (709) 729-2664
FAX (709) 729-6639
Email: parksinfo@gov.nl.ca
<http://www.env.gov.nl.ca/parks/>

Terra Nova National Park
General Delivery
Glovertown, NL A0G 2L0
PH (709) 533-2801/3154
FAX (709) 533-2706
Email: info.tnnp@pc.gc.ca
<http://www.pc.gc.ca/pn-np/nl/terranova/>

Gros Morne National Park
P.O. Box 130
Rocky Harbour, NL A0K 4N0
PH (709) 458-2417
FAX (709) 458-2059
Email: grosморне.info@pc.gc.ca
<http://www.pc.gc.ca/pn-np/nl/grosморне/>

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

Central Newfoundland Forest

North-central subregion



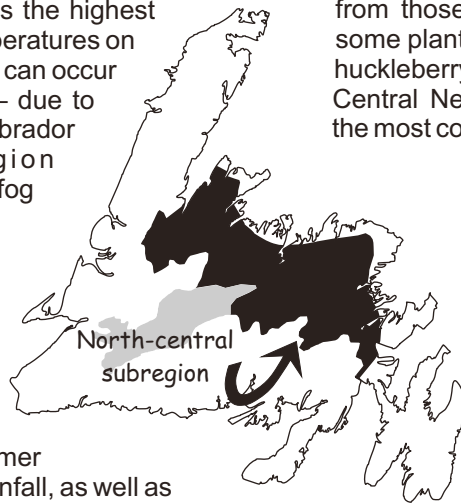
The Central Newfoundland Forest ecoregion covers about 28,000 km² of the central and northeastern third of the island of

Newfoundland. The second largest of the Island's nine ecoregions, its forests are the most typically **boreal**, and its climate the most **continental**.

On average, this ecoregion has the highest summer and lowest winter temperatures on the Island. Although night frosts can occur occasionally during summer — due to cold northeast winds off the Labrador Current — this ecoregion experiences the least wind and fog on the Island.


Warm summer temperatures and a location east of the Long Range Mountains also make it one of the driest ecoregions on the Island. Of its four subregions, the North-central has the highest summer temperatures and the lowest rainfall, as well as occasional prolonged dry spells. Not surprisingly, this gives it the greatest number of forest fires. Extensive **fire stands** of black spruce and white birch result.

The North-central subregion is much more densely forested than areas to the east, north, and southeast. This is especially evident as you approach Clarenville on the Trans Canada Highway from the east. Here the barren landscape of the Maritime Barrens ecoregion quickly changes to thick forest. As you approach this subregion from the west, the fern-



dominated forests found near Deer Lake — and typical of the Western Newfoundland Forest — give way to the moss-dominated forests typical of this ecoregion.

The North-central subregion is the largest of the four subregions. Its terrain is gently rolling, with hills ranging from 150 metres above sea level in the northeast to 200 metres in the south and west. Bogs are a common landscape feature, but are different from those in neighbouring ecoregions because some plants, such as dwarf huckleberry and black huckleberry, are absent. As elsewhere in the Central Newfoundland Forest, **domed bogs** are the most common bog type.

The underlying rock formations of the North-central subregion belong to four geologic zones, giving it the most diverse geology in the province. Each of these four zones represents different parts of the Island's geological history. Changes to these zones have occurred since their creation. In particular, the North-central subregion was greatly affected by the last glaciation, which ended close to 10,000 years ago. 

Soils: Most of the soils found in this subregion are "humo ferric podzols." These are brown soils containing mostly inorganic material that occur in relatively dry sites. They are typically found in coniferous and mixed (both deciduous and coniferous) forests.

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. Subregions occur when distinctive variations within ecoregions are on a smaller scale than between ecoregions. The Central Newfoundland Forest is broken down into four subregions.

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.

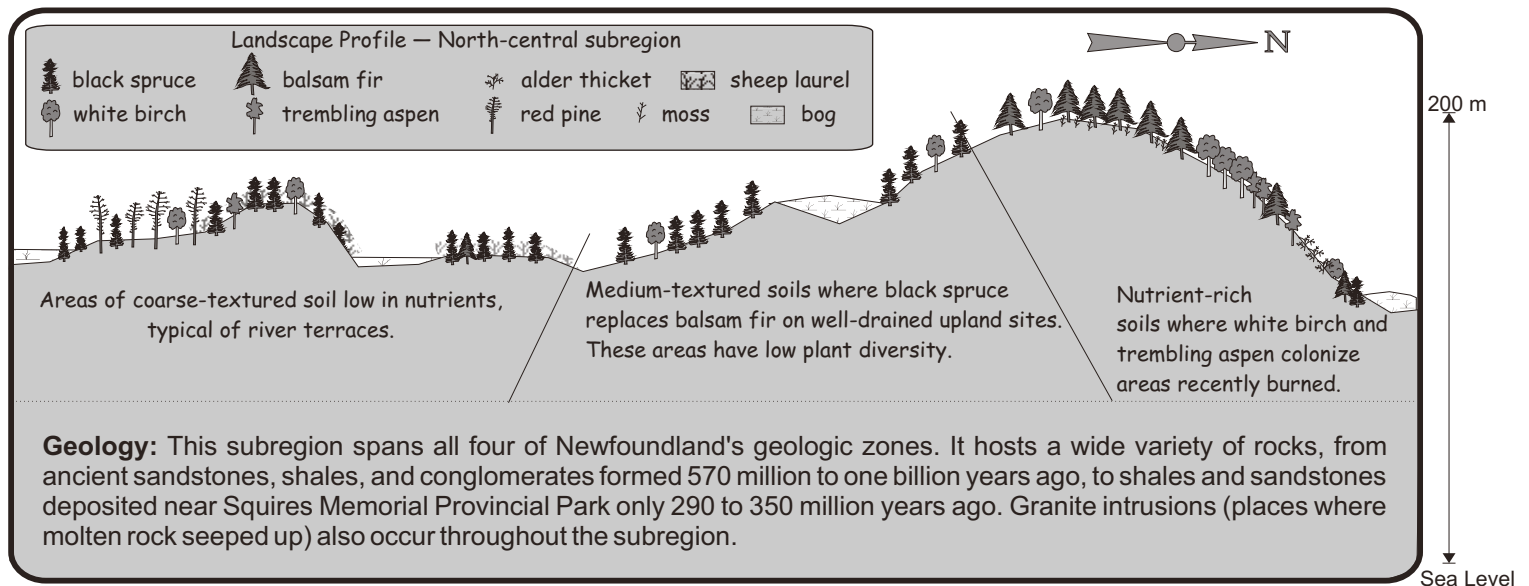
Continental climate:

Climate resulting from a geographic location in the interior of a landmass, which lessens the moderating effects of the ocean. This leads to colder winters and warmer summers than areas that have a similar latitude but are close to a large body of water.

Fire stands: Groups of trees well adapted to conditions following forest fire and as a result are the first to colonize burnt areas.

Domed bogs: Bogs with convex surfaces containing build-ups of sphagnum mosses that form mainly in forested valleys and basins.

Glacial outwash: Sediment carried by streams of meltwater travelling from stationary ice masses and deposited in broad, shallow channels near the edge of the ice. Outwash sands form well-drained upland plains.



Vegetation Profile

High forest fire frequency and warm summers exert major influences on vegetation in the North-central subregion.

In areas where fires have repeatedly occurred, and in other highly disturbed sites (such as cut-overs), a dwarf-shrub heath usually dominated by sheep laurel is common. Fire stands of black spruce, white spruce, and trembling aspen also occur in these areas. Where fires have not recently occurred, however, balsam fir with a feathermoss floor covering is most common. Other regularly found forest types are: balsam fir with a sheep laurel understory, and balsam fir with Schreber's moss ground cover.

A few distinctive plant-growth patterns occur in the Central Newfoundland Forest ecoregion. For example, this is the only area on the Island where, on well-drained hilly sites, black spruce replaces balsam fir after a fire. The soil in these locations contains some of the lowest levels of humus — or organic material — anywhere on the Island. Black spruce grows especially well in dry, nutrient-poor soils like these.

Another distinguishing combination of all Central Newfoundland Forest subregions occurs here: black spruce forests with an abundance of ground lichens grow on frequently flooded gravel and sandy areas, such as flood plains and

estuaries.

White birch occurs here in stands or as part of mixed forests. White birch will colonize areas that have been disturbed. As a result, it thrives in this ecoregion because of the high number of forest fires. White birch also prefers steep, well-drained slopes.

Red pine, the rarest conifer on the Island, grows only in the Central Newfoundland Forest. This tree once had a much larger distribution on the Island. Because it requires fire for seed dispersal, it is well adapted to the ecoregion. Red pine grows in sandy and gravelly soils that were formed by **glacial outwash** or as lake sediment. These soils are coarse and nutrient-poor. Generally, red pine occupies the

driest and most nutrient-poor sites in Newfoundland.

Trembling aspen, a tree found in many other areas of the Island, is most abundant in the Central Newfoundland Forest. In fact, this is the only ecoregion where it occurs in stands — probably because the warm summer temperatures allow root suckers to form, which let the plant take up nutrients from the soil more easily. This more efficient means of nutrient uptake enables the tree to quickly colonize new areas, including recent burn-overs. Because aspen form stands in burn-overs, they are more common in the North-central subregion than in any other subregion, or ecoregion, in Newfoundland.

Species in Focus:

Only a few small stands of the fire-resilient red pine (*Pinus resinosa*) exist today on the Island. Some of these trees are the oldest in North America; one is estimated to be over 460 years old. However, this species is in danger of being lost from the Island. Because it is at the northern limit of its North American range here, it is sensitive to environmental changes and regenerates slowly.



Photo: A Glen Ryan

Wildlife Profile

As is typical of boreal forests, many of the animal species inhabiting the North-central subregion are adapted to long, cold winters and short, warm summers. Moose, snowshoe hare, muskrat, otter, mink, black bear, beaver, and lynx — species that also live in similar habitat elsewhere on the Island — occur throughout this subregion.

Significantly, the eastern section of the North-central subregion — in the forests of Terra Nova National Park — is home to a small population of the endangered Newfoundland pine marten. These animals are a remnant of what was once a much larger and more widespread population. They are now restricted to a few isolated pockets in mature boreal forests, with the main concentration around Little Grand Lake in the Portage Pond subregion of this ecoregion.

Caribou — primarily members of the Middle Ridge herd — are found in the North-central subregion. Normally ranging farther south in the Maritime Barrens, these caribou usually move only into the southern portions of this subregion, although individual animals do turn up throughout the area. Caribou from the Gaff Topsails herd can also be seen in the southwestern section of the subregion.

Birds that typically live in forest habitat occur here, including gray jay, ruffed grouse, spruce grouse, osprey, great horned owl, northern flicker, sharp-shinned hawk, pine siskin, chickadees (boreal and black-capped), fox sparrow, and white-winged crossbill. Common waterfowl are green-winged teal, ring-necked duck, American black duck, and Canada goose.

Many warbler species can be seen throughout this region — Wilson's, black-throated green, black-and-white, and yellow-rumped are just a few of the many that can occur here. The secretive thrushes, in particular the Swainson's and hermit thrushes, are also at home in the dense forests of this region.

Although they are generally associated with human environments, the common crow, American robin, and

herring gull inhabit the forests. The herring gull is widely distributed in low numbers throughout the entire ecoregion, where single pairs nest on small islands — sometimes on only a small rock — and in adjacent peatlands or gravel areas.

There are few amphibians and no reptiles here. The green frog, an introduced species, inhabits quiet ponds and marshes. It is not widespread and its populations are small.

The region's many lakes and

rivers support a variety of fish, including Atlantic salmon and brook trout. Other fish include arctic char, three-spine and nine-spine sticklebacks, rainbow smelt, and American eel.

The uncommon sea lamprey inhabits the Gander and Exploits Rivers. This unusual and primitive fish feeds on the body fluids of other fish. Using its mouth, the lamprey attaches itself to its prey, then makes a hole in the prey's skin with its piston-like tongue.

The North-central Forest subregion is distinguished by the regular occurrence of black spruce and white birch fire stands. High summer temperatures and low moisture levels contribute to the high number of forest fires.



Photo: B. Pinsent



Photo: Parks and Natural Areas Division

Species in Focus: Moose, now a familiar part of provincial culture, is a relatively new species on the Island. From the first few animals released in 1878 and again in 1904, moose have spread throughout the Island and become an important game animal. This solitary animal is the world's largest living deer. It prefers coniferous forests containing ponds and lakes where it feeds on trees, shrubs, grasses, and aquatic vegetation.

Protected Areas Profile

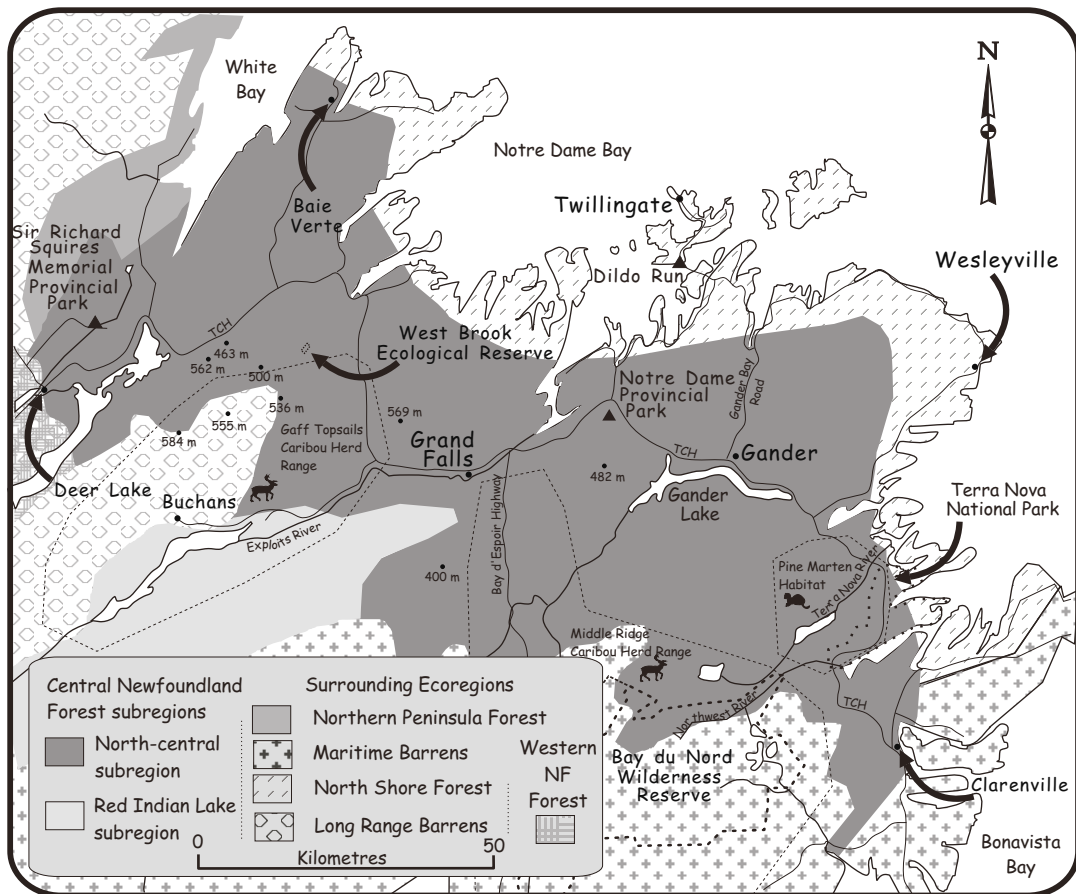
There are four protected areas within the large North-central Forest subregion: Terra Nova National Park, West Brook Ecological Reserve, Sir Richard Squires Memorial Provincial Park, and Notre Dame Provincial Park. Although these areas offer some protection of important subregion features, none includes undisturbed forests representative of this subregion, or northern coastal areas.

Terra Nova National Park contains the largest portion of the North-central Forest and provides the greatest protection of essential subregion features. However, the park is bisected by the Trans-Canada Highway and contains few areas of undisturbed forest. Much of the forests here are still recovering from extensive cutting that occurred before the park was established.

West Brook Ecological Reserve was established in 1993 to protect the Island's largest remaining stand of red pine. The reserve protects one of only 22 red pine stands left on the Island, and most of these have

only a small number of trees. The reserve's 1,000 hectares contain about 3,000 individual trees located at the headwaters of West Brook.

Notre Dame Provincial Park includes a pond with surrounding fir, spruce, birch and aspen forest. Sir Richard Squires Memorial Provincial Park contain a dense balsam fir forest, hiking trails, and a portion of the Humber River. The salmon jumping at Big Falls in July and August are a popular attraction for anglers and other park visitors.



Climate

This subregion experiences the most continental climate on the island of Newfoundland. The growing season ranges from 140 to 160 days, although night frosts can occur during summer.



Annual rainfall
1200 mm



Annual snowfall
3-3.5 cm



Mean daily temperatures
February -4°C to -8°C
July +15°C to +16°C



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 - Parks Canada
- Terra Nova National Park - Parks Canada
- Natural Resources Canada - Canadian Forest Services
- 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
PO Box 8700, St. John's, NL A1B 4J6
PH (709) 729-2664
FAX (709) 729-6639
Email: parksinfo@gov.nl.ca
<http://www.env.gov.nl.ca/parks/>

Terra Nova National Park
General Delivery
Glovertown, NL A0G 2L0
PH (709) 533-2801/3154
FAX (709) 533-2706
Email: info.tnnp@pc.gc.ca
<http://www.pc.gc.ca/pn-np/nl/terranova/>

Gros Morne National Park
P.O. Box 130
Rocky Harbour, NL A0K 4N0
PH (709) 458-2417
FAX (709) 458-2059
Email: grosmorne.info@pc.gc.ca
<http://www.pc.gc.ca/pn-np/nl/grosmorne/>

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

Registration Information 2011

SPACE AVAILABILITY

Space is limited and will be allotted first-come-first-served, in order of receipt of complete registration (Registration Form, Acknowledgement & cheque all duly filled out, signed and physically received by Treasurer). To ensure a place, please register early. Once all spots filled, subsequent registrants will be notified and given the option to remain on a Waiting List. Spots opened up by cancellations from confirmed registrants will be filled in order from this Waiting List, so it pays to get timely registrations in even after the list is full.

REGISTER EARLY

The obvious advantage of early registration is that organizers can plan a better foray, knowing the available budget and number of participants. Also, this year the accommodations are below than registrant numbers.

Advantages of early registration for participants:

1. Guarantees spot in Foray
2. OR, little later, at least gets better place on Waiting List
3. Gets you into desired workshop, if applicable.
4. Allows good planning for the best possible foray experience
5. PROVIDES A SIGNIFICANT DEDUCTION PREMIUM
6. Lets you feel good about yourself!

PARTICIPATION FEE

The participation fee includes taxes, Park permits, experts' costs, presentations, accommodation for two nights, Reception, Quidi Vidi QuuQup, one meal on Friday, three meals on Saturday, and two meals on Sunday, all Saturday and Sunday forays, Foray booklet and other hand-out material. All fees are calculated in Canadian Dollars.

Please note that there is NO FEE REDUCTION for participants opting for off-site accommodation or eating their own food. We prefer that everybody stay at Terra Nova Hospitality Home. This makes it easier for us to disseminate information and announce changes, to know that all are present and well and, most of all, sharing accommodation helps engender the spirit of camaraderie we strive for in our forays.

CANCELLATION POLICY

1. By Friday, August 12: full refund, less a \$15 per person cancellation fee.
2. After August 26: \$25 per person cancellation fee to which we may have to add up to \$100 additional per person, if we cannot fill the spot. This is not an attempt to gouge you, but by then most of our expenses have become irrevocable. In past years our budget has been good and we have given a full refund with no penalty whatsoever even 24 hrs before the Foray! A commercial facility this year is very expensive for us and we may not be in a position to do what we might prefer in our heart to do—it is possible that for the first time you may end up paying for late cancellation.

PERMITS

Your fee covers a temporary pass to any protected areas used by the foray. We have Permits to Collect for Scientific Purposes—collecting for identification, not eating. Please honour these terms. Outside protected areas there are no such restrictions.

MEMBERSHIP

Our foray is open to members only and the participation fee has a membership fee built into it. In addition to giving you a direct say in how the foray is run, there are other benefits of membership. Please see MEMBERSHIP on our website.

RECEIPT

If you need a receipt, please indicate. An electronic receipt will be e-mailed to you that you can print.

EXTRA COST WORKSHOP

Please note that some workshops carry an extra fee, above your registration fee, to cover costs associated with giving the workshop, primarily materials. Since it is both costly and time-consuming to prepare these workshops, they require a minimum number of participants to justify the resources. For this reason we ask that you register for these in advance. As always, first come, first served. If the workshop is fully subscribed, we shall notify you and refund your money on site, if no space opens up. Should we need to cancel the workshop we shall also notify you and refund your fee at registration.

2011 Registration & Acknowledgment of Foray Participant's Responsibility, Express Assumption of Risk, and Release of Liability

1. Please make cheques out to "FORAY NL"
2. Please print out this Form, fill out, sign and send along with cheque to:
Mr. Geoff Thurlow
16 Hammond Drive
Corner Brook, NL, A2H 2W2, CANADA

Name: _____ Date _____

Please provide address to which you would like FUNGI magazine sent:

Address: St.: _____

City: _____ Prov/State: _____ Code: _____ Country: _____

Tel: (_____) _____ - _____ E-mail: _____

COST (in CAD)

Participation fee for members	Single	225.00	_____
	Couple (each)	205.00	_____

"Members-only" foray. Membership fee included in participation fee. Membership runs from foray to foray. Part of the benefits of membership is a year's subscription to FUNGI magazine—one per household.

BOOK: I wish to buy ____ NL mushroom field guides @ 20.00 ea _____
Special members' price. We do not sell them at foray.

Mushroom dyeing workshop	40.00	_____
Mushroom cooking workshop	20.00	_____

SUBTOTAL (payments) _____

I already subscribe to FUNGI—deduct	Single	- 32.00	_____
	Couple (each)	- 16.00	_____

Early bird discount (before June 30)	Deduct	- 20.00	_____
OR Timely bird discount (June 30-July 31)	Deduct	- 10.00	_____

SUBTOTAL (deductions) _____

TOTAL _____

Please issue me a Receipt: Yes ____ No ____

Special needs/wishes:

Dietary or other needs _____

Expertise preference

Willing to (co)lead foray _____ Willing to identify specimens _____

Wish to help in other ways (suggest) _____

I understand that during my participation in the events that together constitute the Annual Fall Mushroom Foray henceforth known as “the Foray” of FORAY NEWFOUNDLAND & LABRADOR, henceforth known as “FNL”, and which includes, without limitation, identification outings, scientific presentations and investigations, meals, including as a food course mushrooms selected by participants, leaders, including FNL Organizers and Faculty, and accommodation (where applicable), travel to and from the accommodations, outings and meals, 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 inherent risks include, but are not limited to, the dangers of serious personal injury, property damage, and death (“Injuries and Damages”) from exposure to the hazards of travel, moving in the wilderness, including uneven or insecure terrain, actions of 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 contradict or minimize my understanding of these risks. I know that Injuries and Damages 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 Injuries and Damages 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 or medical facilities or expertise necessary to deal with the

Injuries and Damages 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 my understanding 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 location(s) designated by FNL Organizers and Faculty. The Foray does not include carpooling, transportation, or transit to and from the Foray 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 Injuries and Damages, 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 Injuries and Damages 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: _____

LI CHENS added this year!



FORAY

NEWFOUNDLAND AND LABRADOR

2011	2011	2011
	2011	2011
2011	2011	2011
	2011	2011
2011	2011	2011
	2011	2011
2011	2011	2011

Terra Nova National Park

Headquarters: Terra Nova Hospitality Home

September 9-11, 2011

GUEST FACULTY*

Teuvo Ahti
Renée Lebeuf
Faye Murrin
Todd Osmundson
André Paul
Leif Ryvarden
Roger Smith
Greg Thorn
Zheng Wang

*tentative at time of publication

Please check our website in the Spring, 2011, for
Information & Registration Forms:

[<www.nlmushrooms.ca>](http://www.nlmushrooms.ca)