



OMPHALINA



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OMPHALINA, newsletter of Foray Newfoundland & Labrador, has no fixed schedule of publication, and 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.

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Cover image: *Chaenotheca balsamconensis* growing on *Trichaptum abietinum* on a balsam fir snag. The tiny *C. balsamconensis* is a new Foray record, collected during the 2018 Foray by Claudia Hamel (photo: A. Arsenault).

Message from the Editor



I'm already looking through my closet to find my blaze orange hat and whistle, so you know we're getting close to the 2019 Foray! This issue we highlight some recent local discoveries, and the rich collection of lichens made during the 2018 Foray.

This issue also contains a hefty segment about the upcoming Foray 2019. As in 2018, this year's Foray will take place on the Avalon Peninsula in eastern Newfoundland. We've recycled a bit of content from the last issue so you have all of the current Foray information available to you in one place.

For your convenience, the Foray section comprises the entire back portion of this issue, cleverly encouraging you to print out a copy to give to a friend. Or give it to *ALL OF YOUR FRIENDS*. Take it to the market with you—you might meet a mushroom enthusiast sniffing *Pleurotus ostreatus* in the produce aisle! Give a copy to your doctor; researchers say a weekend in the woods searching for mushrooms is the perfect antidote to a stressful week. Every Foray adds at least 1.265 years to your life [#CitationNeeded]. Or print a copy on that velvety limestone "paper" and take a waterproof copy to the beach. I guess what I'm trying to say is: we hope you'll share your enthusiasm about the upcoming Foray with your friends and neighbors, and encourage them to come along too.

Lastly: another plea. There is opportunity in this community-supported magazine for even the newest mycophiles to share their discoveries with us. Maybe you have recently become a member of the Foray, or maybe you just stumbled across a weather-beaten copy of this communication printed on waterproof media that someone left at the beach—See? Good suggestion, wasn't it? There is a definitely space here to have your voice help encourage new enthusiasts. So pen a few words about your favorite mushroom and send it over to omphalina.ed@gmail.com.

Sara

Helvella acetabulum (L) QuéL.



Triina Voitk, Maria Voitk, Andrus Voitk

To our knowledge, this is the first report of this species in NL. It is a spring to early summer species, fruiting at the same time as many of its relatives (e.g., morels, most gyromitras, *Wynnella*, and some other early helvellas). It is found throughout the Northern Hemisphere, but hitherto not documented in our province.

This find is noteworthy because the site is a slope near our house that we have examined carefully every spring for the past 19 years without ever seeing such fungi. In Humber Village, where we live, there are a few places where morels can be found most years. This is one such place, on the shady side of the road. About every third year it produces very small ascomata of *Morchella laurentiana* about 1–3 weeks after the more sunny slopes. This year, we've not found any morels, but several large cup fungi are present in the grass (Figure 1). From above, they looked like some brown species of *Peziza*, ranging from 2–7 cm in diameter. However, on closer examination they had a short, white stalk, with forking rib-like white projections going up the side of the cup, a feature seen in some species of *Helvella* (Figure 2). We had never seen this species there (or elsewhere) despite 19 years of observation, yet there they were!

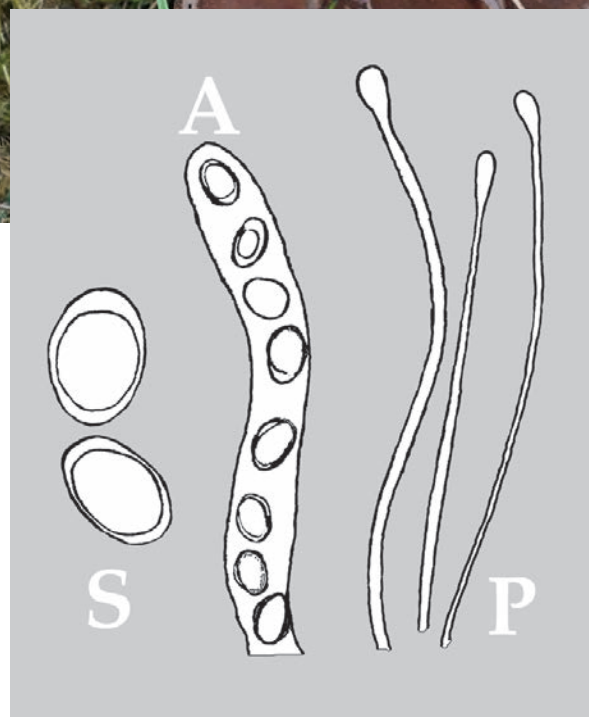
Keep your eyes open and let the editor know if you also find some. A more formal description follows, with illustrated microscopic findings (Fig. 3). Please remember

Figure 1: *Helvella acetabulum* in situ. A) Habitat: sloping roadside grassland, cleared about 50 years ago, about 3m from forest edge, closer to road (mixed forest, primarily *Abies balsamea* and *Betula papyrifera*). Ascomata marked with green arrows; B) Closer image, showing growth in moss, among grass and herbaceous plants, primarily wild strawberry and dandelion; C) Close-up of one specimen.

that this is a morphologic identification only. Harmaja¹ concluded on morphologic grounds that *H. acetabulum* is a multispecific complex. This has been confirmed by recent molecular studies^{2, 3, 4} so the group is ripe for further study.

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- ¹Harmaja H: A revision of the *Helvella acetabulum* group (Pezizales) in Fennoscandia. *Karstenia*, 17:45-48. 1977.
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Description

OVERVIEW. Medium-sized brown cup fungus on a short whitish, prominently ribbed stem.

MACROSCOPIC MORPHOLOGY. Cup 2–7 cm diameter, globose to oval, opening to almost flat in age; hymenium (inner fertile surface) smooth, dark brown; outer infertile surface very finely granular, brown, lightening to whitish at base. Stem up to 12 mm wide, 5–18 mm tall with several lacunae and multiple prominent ribs, often forked, extending to mid-cup, occasionally cup edge; white. Context thin, rubbery, friable.

MICROSCOPIC MORPHOLOGY. Spores 15.6–22.2 × 10.6–16.4 μm (average 19.4 × 13.7 μm), $Q_{ave} = 1.4$; elliptical, thin, hyaline. Asci 204–218 × 11.5–18.5 μm, containing eight spores. Paraphyses 110–232 × 2.9–5.8 μm, cylindrical, with clavate ends about 6–8 μm wide.

DISTRIBUTION. Reported throughout Northern Hemisphere, but likely a species complex.

HABITAT. Reported from forests, usually deciduous; this collection was on soil in grass on a roadside embankment (disturbed ground 50 years ago), about 2–3 m from edge of coniferous forest lined by birch and arbuscular leafy trees.

Figure 2 (top): Close-up in situ photo, showing darker hymenium (inner fertile surface of cup), darker outside infertile surface, and white stem with forking ribs extending about half-way to the cup edge.

Figure 3 (above): Line drawing of microscopic findings: S: oval hyaline spores; A: eight-spored ascus; P: thinner, slightly club-shaped paraphyses. Diagram: T. Voitk.

SEASON. Documented from 2nd week of June to 2nd week of July, 2019

ECOLOGY. Reputedly mycorrhizal; this site suggests possible sprobic component.

Helvella griseoalba

N.S. Weber

Andrus Voitk

The discovery of *H. acetabulum* triggered a faint memory of a similar species, also seen but once in 20 years. After considerable searching (with some help, because at the moment my hands work even worse than my memory), I discovered the species: *H. griseoalba* (Figure 1). Of the eight *Helvella* species I have collected over the years, *H. griseoalba* is the most similar to *H. acetabulum* in shape and size. The main differences are that it is grey, not brown, the cups are a bit smaller (none over 4.5 cm diameter seen), and the spores are a bit smaller ($14\text{--}15 \times 10\text{--}11 \mu\text{m}$).

The collection illustrated was found in 2014 in birch woods close to Humber Village, about 2 km from the current *H. acetabulum* site. We wander these woods at least once each week, but because the area is so much larger than our home turf, we cannot say with equal certainty that this species has only fruited once in 20 years. Still, it is definitely not a very common species.

In the past *H. griseoalba* has been synonymized with the similar European species *H. costifera*, but the studies cited in the previous article show that the European and North American taxa are not conspecific, so for the time being we use the North American name, as suggested by Kuo (mushroomexpert.com).



Figure 1. *Helvella griseoalba*, the only report we know of this species in NL.

Lyoathelia laxa

A RARE CORTICIOID FUNGUS FOUND IN NEWFOUNDLAND

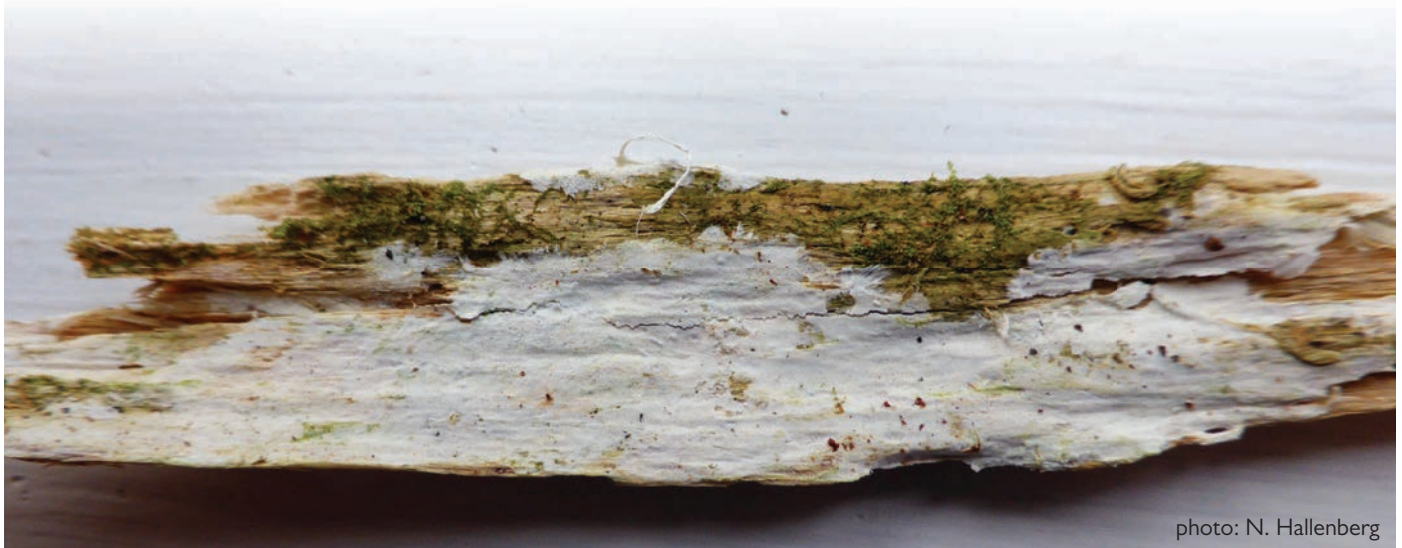


photo: N. Hallenberg

Nils Hallenberg

During the 2015 Gros Morne Foray, I collected a white corticioid fungus which I afterwards could not identify microscopically. It may not seem very spectacular but in this case the material was good and there were no missing microscopic details. After returning home to Gothenburg, Sweden, I showed the specimen to Karl-Henrik Larsson who identified it as *Lyoathelia laxa* (Burt) Hjortstam & Ryvarden. Thanks for this!

The fruitbody was found on the greyish surface of old, partly decayed, coniferous wood, manifested as white patches with strand-like outgrowths along the margin. It looked like a species of *Athelia*—and no wonder, because it had been referred to as this genus by previous authors.

Under the microscope, however, it clearly differs: the hymenium is not built up as candelabra-like structures, as in *Athelia*, and the basidia were clavate to ovoid and clearly stalked. Frequently the basidia contain big oil drops. Hyphae are rather narrow, 1.5–3 μ m, and all hyphae are clamped.

In the hymenium there are scattered capitate cystidia, 30–70 μ m long and slightly projecting above the hymenial level, with an apical head up to 7 μ m in diam. The basal stalk is 3–5 μ m wide. Such cystidia were also found among the rhizomorphs —r strands—where they commonly appeared as the ultimate cells of individual hyphae at the margin. All hyphae exhibited an abundance of crystal aggregates. In all, the basal hyphae make up a relatively thick subiculum, unlike what is seen in typical species of *Athelia*.

The basidiospores are subglobose to globose, 6–8 μ m in diam., with a distinct apiculus and thickened walls, non-amyloid. Protoplasm is dense and their content appears to be light refracting. The species belongs to the order Atheliales and has been sequenced (Larsson, pers.comm.) though not yet available in GenBank.

What make this finding spectacular is that this species seems to be very rare. There is only one earlier report from Canada (from BC), which is also the holotype. There have been a few reports from northern USA (Connecticut,

Pennsylvania, Virginia, Oregon, Washington), and from Japan and China. Almost 100 years after the species was first described and published (as *Peniophora laxa* Burt; Ann. Mo. Bot. Gard. 12:224, 1926), only about 10–15 specimens have been collected, all from the wood/bark of coniferous trees.

Of course, many specimens in Nature are overlooked and never collected. However, for this species as well as for all other rare species, it may be wise to reflect upon how such a life can go on.

Let us start with dispersal by airborne spores. It is easy to calculate that the concentration in the air should drop to almost zero just a short distance from the fruiting body. However, spore trapping experiments have shown that viable spores can be collected from the air up to 1,000 km from the nearest known fruitbody in nature¹. In this experiment, a haploid mycelium was exposed to open air for a day before the cover is then put back on the petri dish and mycelium left for further growth. The subsequent formation of clamps is an indication of contact with a conspecific spore. What makes long distance dispersal possible is the fact that airborne spores are not simply diluted with distance. Released spores are merely dispersed by the air as packages.

Secondly, even though many spores do not hit a suitable surface for growth, there are some which do, and under appropriate circumstances they will become established. The next problem will be finding a partner to mate with. To combat the potentially long wait for a partner, the small haploid mycelia will develop further in their newly occupied substrate and may survive for extended periods of time on their own. Fortunately, fungal cells also have the ability to withstand drought and freezing, thanks to the specific cell components (glycogen, trehalose, mannitol) that protect the cells during dehydration and freezing. Wood samples taken from nature and exposed to nutrient media frequently grow haploid mycelia. When mating is successful a new fruiting body can develop².

Returning to *Lyoathelia laxa*, we can see that the known area of distribution is limited to boreal

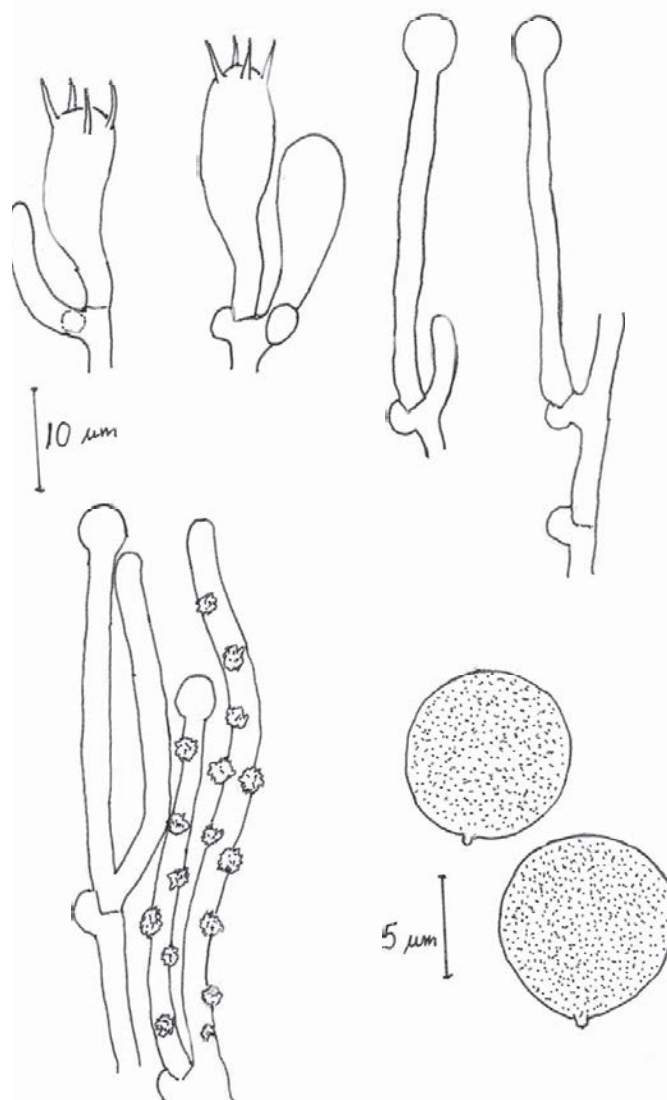


Figure 1. *Lyoathelia laxa*, with basidiospores, basidia, hyphae and capitulate cystidia. Drawing: N. Hallenberg

parts of North America and eastern Asia. So far, there are no findings from other parts of Eurasia. This means that the species may have survived the last glaciation period in available refugia close to their present occurrence. A unique find, indeed!

References

¹Hallenberg, N., Küffer, N. 2001. Long-distance spore dispersal in wood-inhabiting Basidiomycetes. *Nordic Journal of Botany* 21(4):431-436. <https://doi.org/10.1111/j.1756-1051.2001.tb00793.x>

²Hallenberg, N. 1995. Dispersal abilities and distributional patterns in Aphyllophorales, with special emphasis on corticioid fungi. *Symb. Bot. Ups.* XXX-3: 95-100.

SURVEY OF THE LICHEN-FORMING ASCOMYCETES COLLECTED DURING THE 2018 NL FORAY

Chris Deduke, André Arsenault, Carlos J. Pasiche-Lisboa and R. Troy McMullin

During the 2018 NL Foray on the Avalon Peninsula in eastern Newfoundland, we collected 319 lichen specimens from 15 locations, comprising a total of 120 species. There were 33 taxa in the genus *Cladonia* (including subspecies, varieties and forms), 11 species with cyanobacteria as the primary photobiont, and five species of stubble (calicioid lichen and fungi).

There were **23 new records** for the Foray in 2018: *Alyxoria varia*; *Bryoria bicolor*; *Chaenotheca balsamconensis*; *Cladonia chlorophaea* s.s.; *Cladonia macilenta* var. *bacillaris*; *Cladonia terrae-novae* f. *cinerascens*; *Coccocarpia palmicola*; *Graphis elegans*; *Lecanactis abietina*; *Lecanora cinereofusca*; *Lecidea lapicida*; *Lecidea* cf. *euphorea*; *Melanelixia glabratula*; *Mycoblastus* cf. *caesius*; *Mycoblastus sanguinarioides*; *Parmeliella parvula*; *Lepra trachythallina*; *Rhizocarpon reductum*; *Thamnomia vermicularis*; *Usnea rubicunda*; and *Usnea subfloridana*. Two additional species are new records to the province (Arsenault et al., in prep.).

Five of the most interesting and diverse lichen collection sites are described below. Other sites visited during the 2018 Foray are listed last. For the cumulative 2018 Foray lichen list, refer to the included table.

Hawke Hills Ecological Reserve

The collection site in the Hawke Hills Ecological Reserve (“Hawke Hills”) was the most diverse site we visited in 2018, with 35 lichen species collected (Fig. 1). The area is an open heath–barren environment with tuckamore islands and some sphagnum depressions. Occasional glacial erratics provide additional rocky substrata for *Arctoparmelia* and *Umbilicaria* species. Interestingly, Hawke Hills was one of the locations with greater lichen richness (35 species) than mushroom diversity (32 species).

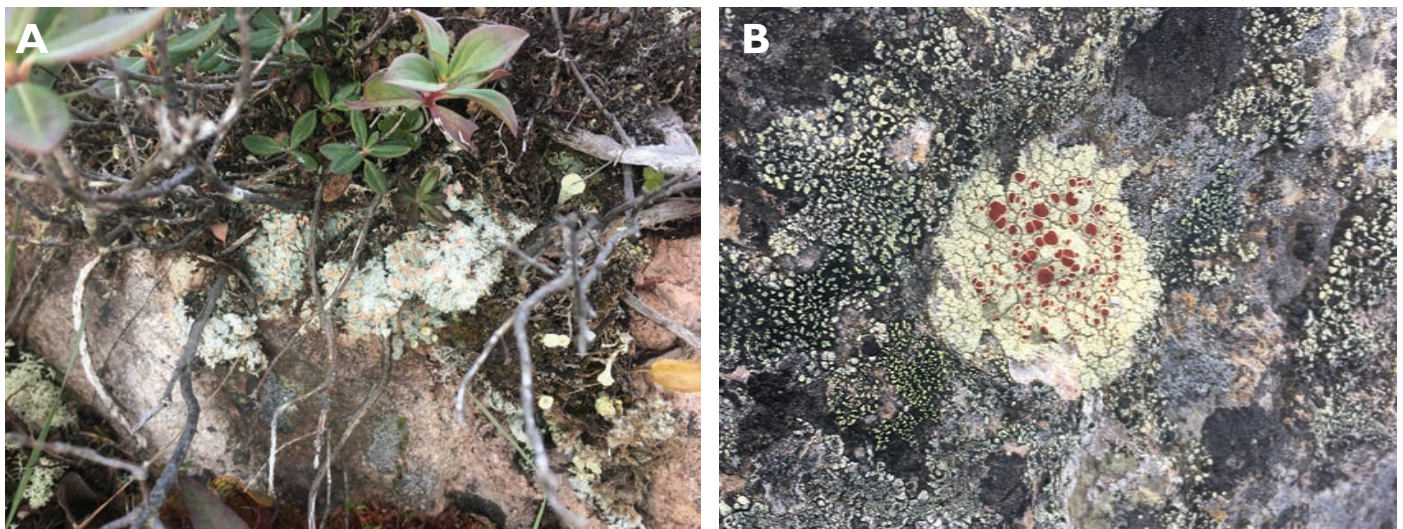


Figure 1: A) The mint green crust with pink apothecia, *Lcmadophila ericetorum* (fairy puke lichen), growing on soil among herbs and shrubs; B) the pale-yellow lichen crust with red apothecia, *Ophioparma Ventosa*, growing among various lichen species of *Rhizocarpon* on exposed rock. All photos: C. Deduke.

Cape St. Mary's

Renowned as a birder's paradise, Cape St. Mary's also yielded much lichen richness (27 species; Fig. 2), but not as many mushrooms¹ (12 species; Fig. 2A). The site is a heath-barren environment with abundant grass cover, located above steep coastal cliffs. Fog, salt spray, and abundant nitrogen from bird droppings make this a very productive

site for *Xanthoria parietina* (Fig. 2B). There is little shelter from the wind or weather—only within the tuckamore islands and junipers, as well as at the base, or in between, occasional erratic boulders. Twenty-seven species of lichens were collected and identified.

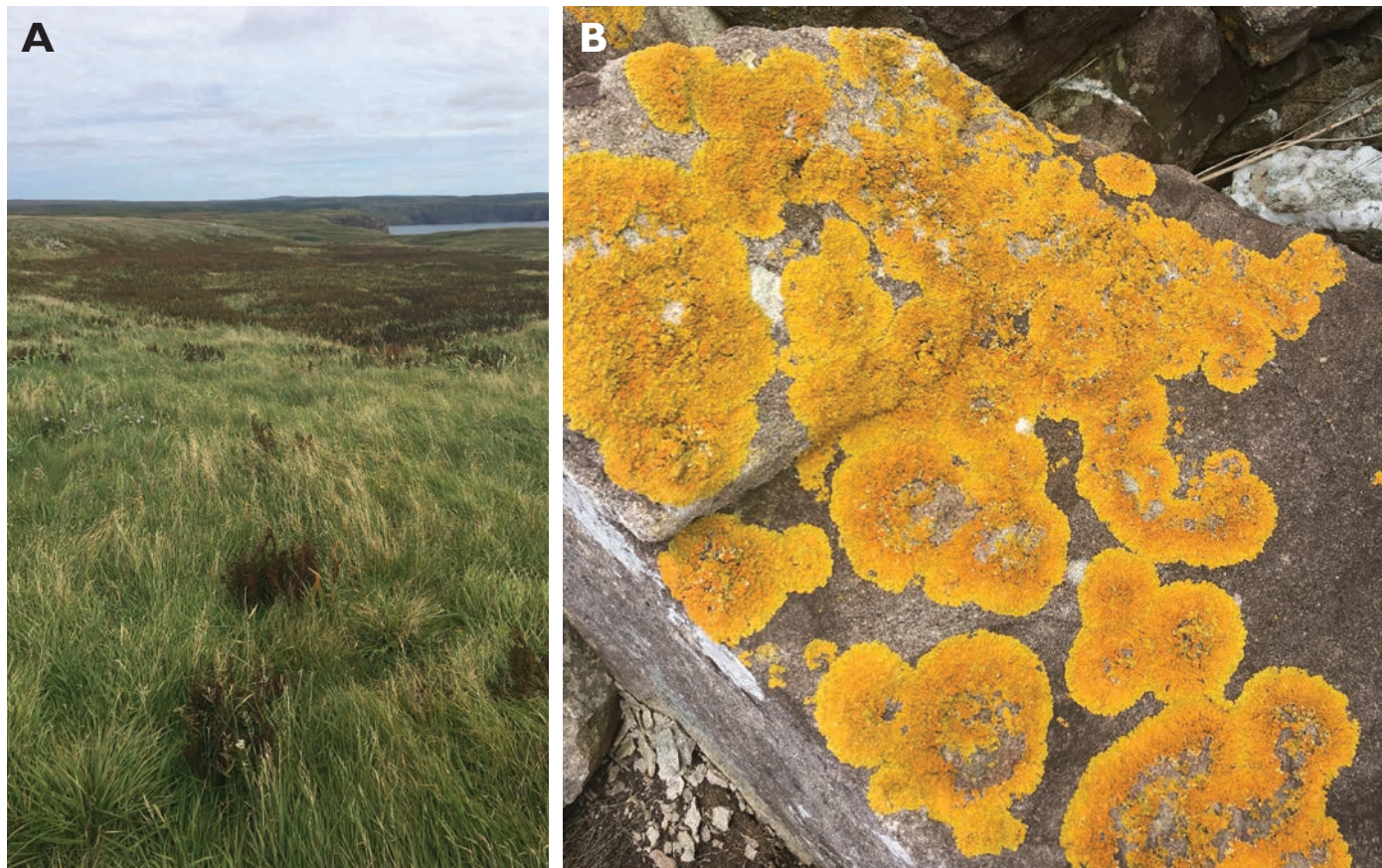


Figure 2: A) Habitat photo showing the heath-barren environment and coastline of Cape St. Mary's; B) the lichen *Xanthoria parietina* growing on the coastal rocks in Cape St. Mary's. All photos: C. Deduke.

Sir Robert Bond Park

Sir Robert Bond Park is a rich site for lichens despite being in a small urban setting. The species richness slightly surpasses that at Cape St. Mary's, with 28 different species identified in 2018. The Park also hosts the greatest diversity of cyanolichens (Fig. 3). The Park is located within a predominantly mixed-wood forest with abundant sycamore maples (*Acer pseudoplatanus*). Several unique collections to the Foray were found here.

A COSEWIC species of special concern was also found growing on the maples: *Pectenium plumbeum* (= *Degelia plumbeum*),

or Blue Felt lichen. This species is also listed as vulnerable under Newfoundland & Labrador's Species at Risk². It is the second time *P. plumbeum* has appeared on the Foray's list, the first time was in 2012 during the Terra Nova Foray. Some opportunistic collections of *P. plumbeum* were made from bark found on the ground that had sloughed off the trees. Our readers are reminded that **species of special concern such as *P. plumbeum* should not be collected**, and photos are generally the best method to document these species.

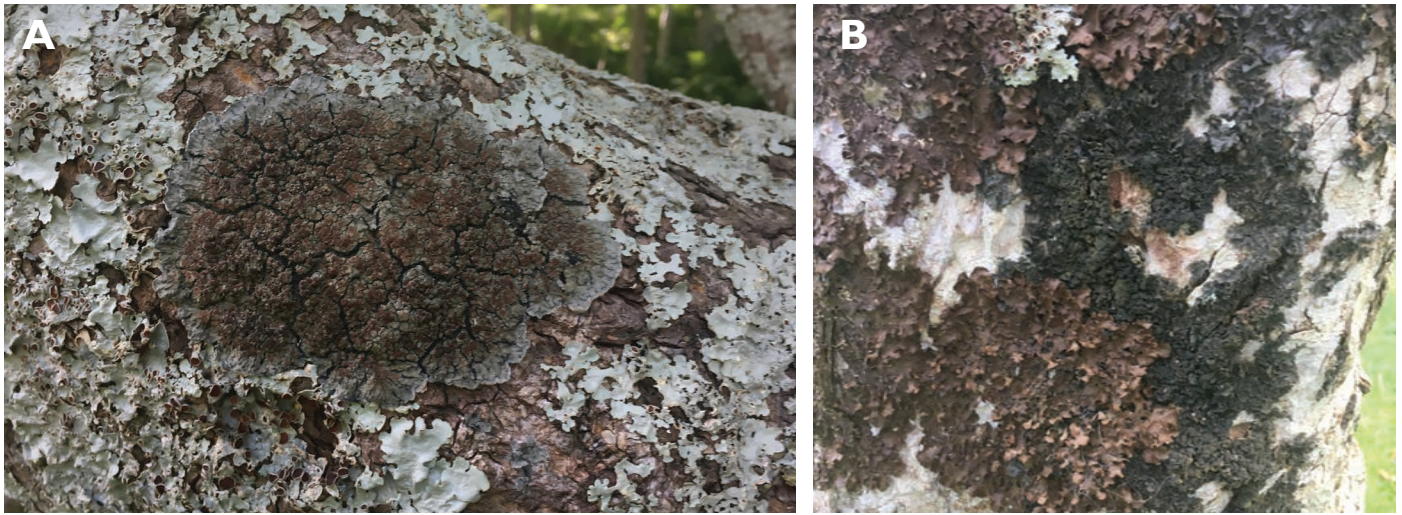


Figure 3: A) *Pectenaria plumbea*, the Blue Felt lichen, growing on the trunk of sycamore maple (*Acer pseudoplatanus*); B) *Nephroma parile* (brown foliose lichen) and *Leptogium cyanescens* (blackish-grey foliose lichen). All photos: C. Deduke.

Salmonier Wilderness Area

Salmonier Wilderness Area is located outside of the Salmonier Nature Park. It is predominantly a coniferous forest habitat, with *Abies balsamea* as the dominant conifer species (Fig. 4). At this site, we collected 25 different lichen species. A less disturbed location than many other places visited, Salmonier Wilderness Area had the greatest richness of calicioids, and yielded a number of new species for the cumulative Foray list, including: *Cladonia chlorophaea* (s.s.); *Cladonia macilenta* var. *bacillaris*; *Coccocarpia palmicola*; *Lecanactis abietina*; *Mycoblastus* cf. *caesius*; and *Parmeliella parvula*.

Butter Pot Provincial Park (Campground)

Butter Pot Provincial Park (Campground) was the location of this year's Mycoblitz. A great effort was put into lichen collecting, with a total of 23 different species discovered at the site. The second Foray record for *Cladonia merochlorophaea*, a chemical relative of *Cladonia chlorophaea*, was made during the Mycoblitz.

Lichen Species Collected at Other Sites:

Butter Pot P.P. (Kelly Pond) 4: *Cladonia borealis* (TM); *Cladonia maxima* (CPL); *Cladonia pleurota* (CPL); *Tuckermanopsis americana* (CPL).

Burry Heights 2: *Alectoria sarmentosa* (CPL); *Bryoria bicolor* (CPL).

Hall's Gullies 2: *Ramalina dilacerata* (CPL); *Sphaerophorus globosus* (CPL).

Prison Camp Road 7: *Cladonia rangiferina* (CPL/TM); *Cladonia stellaris* (CPL); *Cladonia stygia* (CPL); *Hypogymnia incurvodes* (CPL); *Mycoblastus sanguinarius* (TM); *Sphaerophorus globosus* (CPL); *Tuckermanopsis americana* (CD).

Roadside Stop 1 (Bog) 4: *Hypogymnia physodes* (CPL); *Parmelia squarrosa* (CPL); *Platismatia glauca* (CPL); *Usnea longissima* (CPL).

Roadside Stop 2 (Bog) 7: *Cladonia cristatella* (CPL); *Cladonia* cf. *phyllophora* (CD); *Cladonia rangiferina* (CPL); *Japewia subaurifera* (CPL); *Lopadium disciforme* (CPL); *Mycoblastus sanguinarioides* (CPL); *Ochrolechia frigida* (CPL).

Roadside Stop 3 (Construction area) 10: *Cladonia arbuscula* (CPL/TM); *Cladonia cristatella* (CPL); *Cladonia gracilis* subsp. *turbinata* (CPL); *Cladonia pyxidata* (CPL); *Cladonia rangiferina* (CD); *Hypogymnia tubulosa* (CPL); *Ramalina dilacerata* (CPL); *Rhizocarpon reductum* (CPL); *Stereocaulon tomentosum* (CPL); *Tuckermanopsis americana* (CPL).

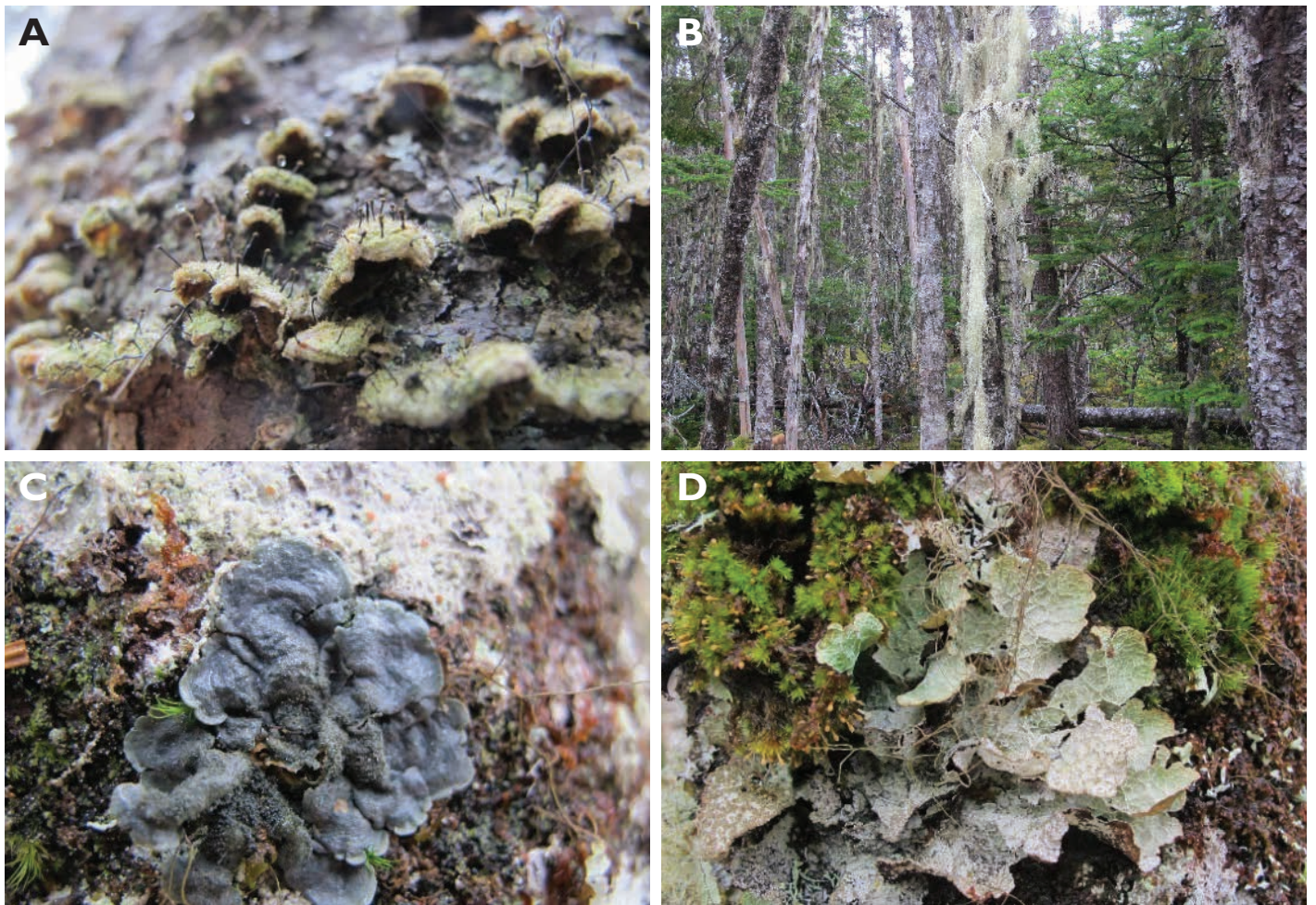


Figure 4: A) *Chaenotheca balsamconensis* growing on *Trichaptum abietinum* on a balsam fir snag; B) Abundant *Usnea longissima* on trunks and branches of conifers; C) *Coccocarpia palmicola* on a bed of *Frullania asagrayana*; D) *Platismatia norvegica* on balsam fir. All photos: A. Arsenault.

Foray 2018 Summary

Overall, Foray 2018 was successful for lichen collection. Of the 120 species identified, 19% (23) were new records to the Foray. Lichen diversity surpassed non-lichenized fungal diversity at both Cape St. Mary's and Hawke Hills. As always, there was heavy representation by *Cladonia* species; 33 species were collected for this genus. A second sighting of *Pectenium plumbeum*, the Blue Felt lichen, was a notable find. Two new provincial records were recorded and a note introducing them will be forthcoming (Arsenault et al., in prep.).

Acknowledgements

Thank you to John McCarthy for his help with new record determinations for Newfoundland.

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Lichen Species Collected During Foray 2018*

	Butter Pot P.P. (Campground)	Cape St. Mary's	Hawke Hill Ecological Reserve	La Manche P.P.	Salmonier Nature Park	Salmonier Wilderness Area Trail	Sir Robert Bond Park	Witless Bay Line	Other Sites
<i>Alectoria sarmentosa</i>	CPL			CPL		CPL	CPL	TM	CPL
<i>Alyxoria varia</i>							CPL		
<i>Arctoparmelia centrifuga</i>			CPL					CD	
<i>Arctoparmelia incurva</i>			CPL					CD	
<i>Baeomyces rufus</i>		CPL							
<i>Biatora pycnidata</i>				TM					
<i>Bryoria americana</i>				TM					
<i>Bryoria bicolor</i>	CPL		CPL	CPL	CPL			CPL	CPL
<i>Bryoria trichodes</i> subsp. <i>trichodes</i>							TM		
<i>Buellia stillingiana</i>							CPL		
<i>Calicium lenticulare</i>					CPL	AA/ TM			
<i>Cetraria aculeata</i>		TM	CPL /TM		CH				
<i>Cetraria islandica</i> subsp. <i>crispiformis</i>		TM	TM		TM				
<i>Chaenotheca balsamconensis</i>				CD/ CPL	CH				
<i>Chaenotheca brunneola</i>						TM			
<i>Chaenotheca cf. chrysocephala</i>						AA			
<i>Cladonia amaurocraea</i>		CPL							
<i>Cladonia arbuscula</i>	AA/ TM	AA/ CPL	TM						CPL /TM
<i>Cladonia bellidiflora</i>								TM	
<i>Cladonia borealis</i>									TM
<i>Cladonia boryi</i>		CPL	CD/ CPL					YW	
<i>Cladonia cenotea</i>	CPL								
<i>Cladonia chlorophaea</i>						TM	TM		
<i>Cladonia coccifera</i>			TM						
<i>Cladonia cornuta</i> subsp. <i>groenlandica</i>	TM								
<i>Cladonia cristatella</i>									CPL
<i>Cladonia digitata</i>					CPL				
<i>Cladonia furcata</i>		CD/ CPL							

	Butter Pot P.P. (Campground)	Cape St. Mary's	Hawke Hill Ecological Reserve	La Manche P.P.	Salmonier Nature Park	Salmonier Wilderness Area Trail	Sir Robert Bond Park	Witless Bay Line	Other Sites
<i>Cladonia gracilis</i> subsp. <i>gracilis</i>	CPL								
<i>Cladonia gracilis</i> subsp. <i>turbinata</i>									CPL
<i>Cladonia grayi</i>			TM			TM			
<i>Cladonia macilenta</i> var. <i>bacillaris</i>						TM			
<i>Cladonia maxima</i>	CD/ CPL				CPL				CPL
<i>Cladonia merochlorophaea</i>	TM								
<i>Cladonia mitis</i>		TM							
<i>Cladonia multiformis</i>		CPL							
<i>Cladonia ochrochlora</i>	CPL			CPL /TM	CPL		TM		
<i>Cladonia</i> cf. <i>phyllophora</i>									CD
<i>Cladonia pleuorta</i>	AA/ CPL		CPL			CPL			CPL
<i>Cladonia pyxidata</i>		CPL /TM							CPL
<i>Cladonia rangiferina</i>	CPL /TM	CPL	CPL						CD/ CPL /TM
<i>Cladonia rei</i>	CPL				CPL				
<i>Cladonia squamosa</i>					CPL	CPL			
<i>Cladonia stellaris</i>	CPL /TM		TM					TM	CPL
<i>Cladonia stygia</i>			TM					CPL	CPL
<i>Cladonia terrae-novae</i>			CPL						
<i>Cladonia terrae-novae</i> f. <i>cinerascens</i>		TM							
<i>Cladonia uncialis</i>		CPL		TM				CPL	
<i>Cladonia wainioi</i>			TM						
<i>Coccocarpia palmicola</i>						CPL			
<i>Dibaeis baeomyces</i>	CPL								
<i>Flavocetraria nivalis</i>			CPL						
<i>Graphis elegans</i>							CPL		
<i>Graphis scripta</i>	CD			CPL			AA/ CPL		
<i>Hypogymnia incurvoides</i>				CPL		CPL			CPL
<i>Hypogymnia physodes</i>				CPL			CPL		CPL
<i>Hypogymnia tubulosa</i>			CPL	CPL	CPL		CPL /TM		CPL
<i>Hypogymnia vittata</i>						CPL			

	Butter Pot P.P. (Campground)	Cape St. Mary's	Hawke Hill Ecological Reserve	La Manche P.P.	Salmonier Nature Park	Salmonier Wilderness Area Trail	Sir Robert Bond Park	Witless Bay Line	Other Sites
<i>Icmadophila ericetorum</i>			CPL		CPL	CPL			
<i>Imshaugia aleurites</i>						CPL			
<i>Japewia subaurifera</i>									CPL
<i>Lasallia papulosa</i>	CPL	CPL		CPL					
<i>Lecanactis abietina</i>				CPL		CPL			
<i>Lecanora cinereofusca</i>							CPL		
<i>Lecidea cf. auriculata</i> var. <i>auriculata</i>		TM							
<i>Lecidea cf. euphorea</i>							TM		
<i>Lecidea lapicida</i>								CPL	
<i>Lepra panyrga</i>			TM						
<i>Lepra trachythallina</i>				TM					
<i>Leptogium cyanescens</i>		CPL					AA/ CPL		
Lichenicolous fungi on <i>Arctoparmelia centrifuga</i>			CPL						
Lichenicolous fungi on <i>Cladonia</i> <i>cf. boryi</i>		CPL							
<i>Lobaria pulmonaria</i>		CPL					CPL		
<i>Lobaria quercizans</i>							CPL		
<i>Lopadium disciforme</i>					AA	AA			CPL
<i>Loxospora elatina</i>						CPL	TM		
<i>Melanelia hepatizon</i>								TM	
<i>Melanelixia glabratula</i>							TM		
<i>Mycoblastus cf. caesius</i>						CPL			
<i>Mycoblastus sanguinarius</i>						CPL			TM
<i>Mycoblastus sanguinarioides</i>									CPL
<i>Nephroma laevigatum</i>							AA		
<i>Nephroma parile</i>							AA		
<i>Ochrolechia frigida</i>		CPL /TM	CPL /TM			TM			CPL
<i>Ophioparma ventosa</i>			CPL					CPL	
<i>Parmelia saxatilis</i>		CPL /TM	CPL						
<i>Parmelia squarrosa</i>	CPL	CPL		CPL				CPL	CPL
<i>Parmelia sulcata</i>	CPL	CPL					CPL	CPL	
<i>Parmeliella parvula</i>						TM			
<i>Pectenium plumbea</i>							CPL		
<i>Peltigera membranacea</i>							CPL		

	Butter Pot P.P. (Campground)	Cape St. Mary's	Hawke Hill Ecological Reserve	La Manche P.P.	Salmonier Nature Park	Salmonier Wilderness Area Trail	Sir Robert Bond Park	Witless Bay Line	Other Sites
<i>Phaeocalicium compressulum</i>	CPL			CD					
<i>Platismatia glauca</i>	AA		CPL	CD/ CPL	CPL		CPL /TM	CPL	CPL
<i>Platismatia norvegica</i>	CPL				CPL	CPL			
<i>Porpidia macrocarpa</i>		TM							
<i>Ramalina dilacerata</i>				CPL			CPL		CPL
<i>Ramalina farinacea</i>							CPL		
<i>Ramalina roesleri</i>				AA	CPL				
<i>Rhizocarpon geographicum</i>		TM	TM						
<i>Rhizocarpon cf. hochstetteri</i>			TM						
<i>Rhizocarpon reductum</i>		TM		TM					CPL
<i>Sphaerophorus fragilis</i>			CD /TM						
<i>Sphaerophorus globosus</i>		CPL	CPL			CPL		CPL	CPL
<i>Stereocaulon tomentosum</i>									CPL
<i>Stereocaulon vesuvianum</i>			TM						
<i>Thamnolia vermicularis</i>			CPL						
<i>Thelotrema lepadinum</i>						TM			
<i>Tuckermanopsis americana</i>			CPL	CD					CPL
<i>Umbilicaria muhlenbergii</i>			CPL						
<i>Umbilicaria polyphylla</i>			TM						
<i>Umbilicaria proboscidea</i>				CPL					
<i>Umbilicaria torrefacta</i>			TM						
<i>Usnea dasopoga</i>	AA						TM		
<i>Usnea filipendula</i>				CPL					
<i>Usnea longissima</i>					CPL	AA	CD		CPL
<i>Usnea rubicunda</i>							CPL		
<i>Usnea subfloridana</i>				CPL					
<i>Vulpicida pinastri</i>	CPL		CPL						
<i>Xanthoria parietina</i>		CPL							
Total Number of Species:	23	27	35	24	17	25	28	16	

*Identifier's Initials: AA = André Arsenault; CD = Chris Deduke; CH = Claudia Hanel; CPL = Carlos J. Pasiche- Lisboa; TM = Troy McMullin; YW = Yolanda Wiersma. Multiple initials indicate that multiple collections exist for the site and individual collections were identified by different people. **Bolded species names** indicate new Foray records.

Forage to Fork

with Shawn Dawson of Barking Kettle

Finding boletes on the Avalon is always a real treat! Finding them before the slugs have had their way with them, however, has always been a challenge. This season they are flushing much earlier than usual; it's been an unusually cool and wet July. Fresh porcinis (*Boletus edulis*, translated as "little pigs" in Italian) are great sliced and grilled, lightly sautéed in butter, roasted, or marinated. And they are one of the only wild mushrooms that I like to eat raw! When cooked well, they release a lot of water and become soft, which makes them great for sauces or stewing.

Stewed porcinis is a Tuscan recipe that I've always wanted to try. In the recipe on the next page, I've put my own Newfoundland spin on it by replacing the nepitella (*Calamintha nepeta*, a minty-flavoured Mediterranean herb) in the recipe I found with wild basil that I harvested on the edges of a steep, wet, rocky trail in Pouch Cove. To me, it tastes like a cross between mint and oregano. I also incorporated some tender black spruce (*Picea mariana*) tips and fresh parsley from the garden. I served this dish to some guests from Germany at my friends' B&B last week and got a great response. I seriously recommend trying this recipe if you can find some boletes before the slugs do!



no, this isn't a bolete.



- Shawn Dawson

Stewed Porcini Mushrooms:

- Ingredients
- * 1 lb of fresh Boletes
 - * Handful of Wild Basil leaves
 - * A Few Black Spruce tips
 - * 1/4 cup olive oil
 - * 2 cloves of peeled & minced garlic
 - * 1 diced tomato
 - * A few sprigs of fresh parsley



- Firstly, cook wild basil and minced garlic, & spruce tips in oil until they brown up.
- Then you add sliced boletes and cook on high until they release their water.
- Next, add tomatoes and put on med-low heat. Cook until mushrooms and tomatoes stew together.
- Lastly, add fresh parsley, salt and pepper for taste and serve.





view A
↙

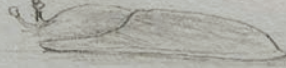
Amanita

yellow to buff, white base
edge of road and woods
wants lighter colour than



A

no bulb



Stropharia



The Bishop's Sketchbook



OMPHALINA Vol X, No 2

Russula



Amanita

Foray Matters



Diderma peyerimhoffi, photo: A. Ronikier

Foray 2019 Finds Time for Slime and Urban Fungi

The Foray returns to the Avalon Peninsula this year, but at mid-month (**September 13, 14, and 15**) instead of at the end of the month, when we sampled there last year. We do this in order to inventory the same part of the province at different times during the growing season, and since the weather is so different each year, we trust that there will be different growing conditions from one year to the next, and different fungi in fruit when we are there.

Two new things will happen during this Foray: we will be joined by a researcher who specializes in an often-overlooked group—the unfortunately named slime moulds (myxomycetes), and we will be sampling several urban sites in the City of St. John’s where many species of introduced trees and shrubs are growing in a human-altered landscape. Both of these bring the possibility of adding new fungi and lichens to our cumulative species list. During past forays we have usually had to discard slime moulds because most years primarily only Tony Wright was willing to try to identify them. This year we will purposefully search for them, collect them, and culture them. Even if they are not mature enough to key out, DNA analysis will identify what they are.

Last year, during the *Suillus* Foray, the team of Rytas Vilgalys, Van Cotter, and Nhu Nguyen collected scores of DNA samples of many different species for their work with their chosen boletes. This year we hope to be as thorough with the slime moulds. Unfortunately they are small (bring reading glasses, if you use them), and, true to their name, they are often slimy and *VERY* fragile. A small plastic collecting box, like the tackle boxes used by fishermen, is the best tool for collecting fragile specimens. If you can bring one, it will be a great help during field trips.

Since the end of last year’s foray, more and more information is coming in about the material that identifiers brought back with them, or which was sent to other experts. We will keep you updated with new identifications as we receive them.

We had a lot of fun last year, and I hope to see you this year at Burry Heights Camp this September!

Michael Burzynski

President, Foray Newfoundland and Labrador

FORAY 2019 TRAILS & LOCATIONS

- 1 - Brother Brennan Centre**
- 2 - Area south of Salmonier Nature Park**
- 3 - Butter Pot Provincial Park**
- 4 - La Manche Provincial Park**
- 5 - Pippy Park: Parkers Pond Road area**
- 6 - Pippy Park: Long Pond & Fluvarium**

- A - Burry Heights Camp & Retreat**
- B - Bowring Park Mycoblitz (Friday)**



Bowring Park Mycoblitz

by Helen Spencer

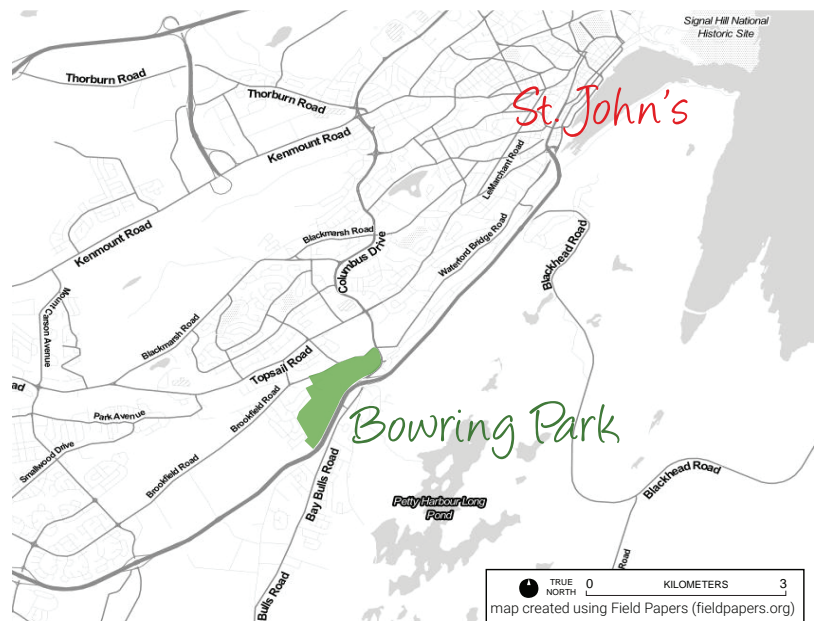
For many Newfoundland Foray participants the mycoblitz on Friday afternoon is the fun start to a busy week-end. We always meet at a lovely location, often a provincial park, and spread out to gather as many different fungi as possible, bringing them back to the Foray host site for sorting and identification. For those new to Forays, it's very exciting to be suddenly immersed in the world of fungus and mycologists at the mycoblitz.

This year, for the first time, the mycoblitz will be at an urban location, Bowring Park (305 Waterford Bridge Road) in St. John's. We hope that by exploring an established urban park we will find species of fungus that we haven't yet found on any of our forays. There are many trees and shrubs that are not native to Newfoundland in urban environments, and hopefully some of their associated fungi have found their way there too.

A history of Bowring Park, including a list of some of the trees that have been planted over the last century, can be found at http://www.bowringpark.com/usr/documents/history_of_bowringpark.pdf. A brief review tells us that these 50 acres of land were obtained from the Newfoundland Government in 1847 and initially developed into farmland. Later it was bought by the Bowring Brothers and donated to the city to be turned into a park which officially opened in 1914. The park has formal gardens, tree plantings, several kilometers of trails that wind through woods, gardens, lawns, beside rivers and ponds. The old Newfoundland Railway passes through the park and there are sports fields as well as a conservatory and an old slate quarry. In short, it's a fun place to explore, and the variety of habitats should produce high biodiversity overall, and locations where we ought to find lots of lovely mushrooms.

Join the Mycoblitz

Meet at the main parking lot at Waterford Bridge Road (yellow **P**) on park map, lower left) at **11:00 am SHARP!** This will be a 3-hour event (bring a lunch) allowing adequate time to travel to Burry Heights to register/prepare for the evening events.





FORAY WORKSHOPS

FUNGI IN THEIR NATURAL HABITATS

Lichen Walk and Talk

Join forest ecologist André Arsenault in a stroll through the boreal forest and learn about the fascinating features and habits of lichens.

Mushroom Walk and Talk

Join mycologist Renée Lebeuf in a wander through the boreal forest and learn about the wonderful world of mushrooms.

Photographing Mushrooms

Roger Smith, the Foray's long time official mushroom photographer, will give a short presentation on basic techniques and then take you out in the field for some hands-on practice. There will be an emphasis on using point and shoot cameras (including cell phones), but DSLRs and macro lenses will also be covered.

FUNGI AS FOOD

Pick for the Pot

Bill Bryden, wild mushroom cultivator extraordinaire, will accompany you in the woods as you search out edible wild mushrooms to take home with you.

Cooking with Mushrooms, from soup to nuts

Create a superior chanterelles soup, a wild mushroom and cashew paté and mushrooms preserved in oil with writer and mushroom enthusiast Robin McGrath. Max 12 participants (1 hour)

Preserving the Harvest

Professional forager, Shawn Dawson, will demonstrate some techniques for keeping your mushrooms beyond the foraging season. Max 12 participants (1 hour)

FUNGI AS ART

Watercolour workshop

Paint delightful watercolour images of mushrooms under the guidance of botanical artist Glynn Bishop. Cost \$40 (\$32 for paints and \$18 for book) or bring your own. Max 12 participants.

Dying with Mushrooms

Learn some techniques for dying yarn using mushrooms with Lisa VanNostrand, art and science teacher and co-owner of Newfoundland's craft business "Posie Egg Emporium". \$10 fee for materials. Max 12 participants (2 hours)

LEARN YOUR FUNGI

Table tours with an expert

Spend an hour with a mushroom expert as they share their knowledge of the mushrooms identified during the Foray excursions. There will be four 1-hr table tours available, each with one of four on-site experts.



FORAY NEWFOUNDLAND AND LABRADOR

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

Salmonier Line, September 13, 14 & 15, 2019

Space is limited, so registrations are accepted on a **first-come firstserved** basis. 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**. Print and sign both pages of this registration form and send, with your payment, to

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

We can accept payment by cheque (made out to "Foray NL"), cash, or e-transfer (add recipient: info@nlmushrooms.ca; use password ForayNL).

Registration

Name: _____

Street: _____

City: _____ Province/State: _____ Code: _____ Country: _____

Tel: () - _____ e-mail: _____

Participation fees (in Canadian dollars)

Adult (includes registration fee, accommodations for two nights, meals (reception, two breakfasts, Saturday bag lunch, Saturday supper, Sunday lunch), workshops (except materials), lectures, trails, and other activities)..... \$265.00 _____

Youth 13 to 17 pay 50% (Children 12 or younger participate for free)..... \$130.00 _____

Database Team: Students - no fee; Non-student team veterans 50%* \$130.00 _____

Your membership in Foray NL is included in the participation fee. Membership lasts until the following year's foray.

Workshop Fees

Watercolour Workshop with Glynn Bishop. Limited spaces allotted on a first-come first-served basis. If the session is full, your fee will be refunded; fee is \$42.00 (paints \$26 and book \$16); no fee if you bring your own..... + _____

Dyeing with Mushrooms with Lisa VanNostrand. Fee is \$10 for materials..... + _____

Other workshops are available for registration on-site in September. A small fee may be associated with some workshops and can be paid at the Foray.

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.

TOTAL \$ _____

Special needs/wishes:

Dietary or other needs

Please Note: We often take photographs of Foray participants during events to use on our websites and in our newsletter, Omphalina. As a registered member attending Foray NL, we presume that you agree with our use of a photograph containing your image. If you do NOT wish a photograph of you to be used in this way, please contact us at info@nlmushrooms.ca.

* We request that database team members who have organizational support please pay the full participation fee, if possible—Foray NL has very limited sources of funds. Contact M. Burzynski if you have questions: 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 NEWFOUNDLAND & 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: _____

Photo Release Statement

Please Read Carefully

Unless specifically requested otherwise, by attending the Foray 2019, I hereby grant to Foray Newfoundland and Labrador (“Foray NL”) in Rocky Harbour, NL, the right to reproduce, use, exhibit, display, broadcast, distribute, and create derivative works of the photographed and/or filmed images of me, taken for use in connection with the activities of Foray NL or for promoting, publicizing, or explaining Foray NL and its activities.

This grant includes, without limitation, and without reimbursement, the right to publish such images in Foray NL online communications, our electronic journal (“Omphalina”), and PR/promotional materials, such as event advertisements, fundraising materials, and any other Foray NL published materials. These images may appear in any of the wide variety of formats and media now available to Foray NL, as well as those that may be available in the future, including but not limited to print, broadcast, video, and electronic/online media.

Version: July 29, 2019



This year the Foray is hoping to have a mushroom inspired arts and craft table!

Interested Foray participants are invited to bring along a few mushroom-related crafts to sell. The Foray will provide the tables, does not charge any commission on sales, and will not take responsibility for any theft or damage. Artisans interested in selling their creations will need to register and provide an estimate of how much table space they require, as space is limited. Please direct Foray Market registrations and other inquiries to Rachelle Dove (rachelledove709@gmail.com) with subject line “Mushroom Crafts”.

Our Partner Organizations



People of Newfoundland and Labrador, through

Department of Tourism, Culture, Industry & Innovation
Provincial Parks Division

Department of Fisheries & Land Resources
Wildlife Division
Center for Forest Science and Innovation



People of Canada, through

Parks Canada
Gros Morne National Park



The Gros Morne Co-operating Association



Memorial University of Newfoundland

St. John's Campus
Grenfell Campus



Tuckamore Lodge

WANT TO LEARN MORE ABOUT THE MUSHROOMS AND LICHENS OF NEWFOUNDLAND?



with Guest Faculty*

SEPTEMBER 13–15, 2019

BURRY HEIGHTS CAMP & RETREAT
CENTRAL AVALON PENINSULA, NL

Renée Lebeuf

Carlos J. Pasiche Lisboa

Greg Thorn

Anna Ronikier

*current to date of publication; others TBA

MORE INFORMATION + REGISTRATION: WWW.NLMUSHROOMS.CA



Foray Faculty Greg Thorn explains some of the finer aspects of the Burry Heights lawn mushrooms



Some of the stunning scenery on the Avalon Peninsula



lichen diversity on display