

OMPHALINA

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FORAY NEWFOUNDLAND AND LABRADOR

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

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COVER

Wynnella cf. silvicola, Yankee Point, NL, July 15, 2016. Photo: Michael Burzynski.

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Message from the Editor

Solistice greetings!

This looks like an Ascomycete issue. First you get to meet some delightful ascomycete ears. The season will soon be upon us, so please meet them here, and then keep your eyes open for them on your travels. Since we are about to look into them, should you find any, please photograph and collect them, and then let us know.

Then, a couple of small cups on conifer duff. One we figured out, but one requires help. See what you can do.

Before any of these, morels will be poking up. We described them formally, and last season tried to identify them based on our own descriptions. Not always easy. So, Kerry O'Donnell was kind enough to sequence a new batch, just to test the accuracy of our identifications. This enabled us to identify a few characters that seem to be fool-proof, at least in this province. Test them out and see how you do.

And, of course, the first report of lichens from the Pruitt-Murray collection at the Agnes Meyer Ayre Herbarium at MUN. As you all know, these lichens are nothing more than ascomycetes with photobiont partners. The only difference between them and, say, wynnellas, morels, or otideas, is the size of the photobiont.

As you can see, this is not an editorial—just a listing of what is inside, in case you missed the table of contents on the previous page. The editorial appears on p. 18. Our club (FNL) and its newsletter have not been engaged in political activism.

Instead, we have devoted ourselves to the peaceful, satisfying and gentle contemplation of the fungal world in our province, taking joy in discovering our species, seeing how they relate to each other, others elsewhere, and to us. Our belief has been that education and sharing of a common interest

will do more than demagoguery to build a citizenry respectful, appreciative, and protective of the nature of which we are a part. However, I very little in our history to encourage a trust in our governments to do the right thing, especially when it comes to proper custody of our natural resources. Therefore, when we saw the government doing what to us seems to be irreparable damage, we felt a need to deviate from our policy, and make a statement.

I do not like it or enjoy it. Unquestionably, it makes a jarring interjection into an otherwise pleasant journal. We do not intend to make this a regular practice, but are very interested to learn what you think about such matters, so, please, do let us know.

Happy mushrooming!

endrus



Hopping down the Google trail to find *Wynnella cf. silvicola*

Michael Burzynski
with Andrus Voitk

I first came across this mushroom in 1994 in a patch of bearberry at Burnt Cape—on the northernmost tip of the Great Northern Peninsula (Figure 1). Poking out of the low coastal turf was what looked like the top of a partially buried hairless one-eared rabbit. The single fruiting body had the thin cartilaginous feel of a cat's ear, and was dark tea-brown on the concave surface and lighter milky-coffee coloured on the convex side, with a short wrinkled stem. Obviously an ascomycete, it had the colouration of a *Helvella* or *Morchella*, and the cup shape of a *Peziza*. Its most unusual feature was that the “cup” was asymmetrical—slit completely down one side to the stipe, and elongated on the opposite side—producing the striking rabbit-ear shape. After checking a guidebook I identified it tentatively as an *Otidea*.

My second encounter was on August 8, 2007 on the Lighthouse Trail on Cow Head, in Gros Morne National Park. Again a single ascocarp (or ascoma), this time poking out of moss-covered coniferous forest loam (Figure 2). The bedrock was limestone, and the soil around the mushroom was covered with a sprinkle of limestone gravel from the trail.



Figure 1. *Wynnella cf. silvicola*, Burnt Cape, 1994.



Figure 2. *W. cf. silvicola*, Cow Head lighthouse trail, August, 2007.

This mushroom was past its prime and beginning to decay. In the years that followed, every time that I walked the trail I looked, but never saw it there again.

My third meeting with this species did the job. Last year Anne and I were on a rare plant survey at Yankee Point, on the limestone barrens near Flower's Cove. I walked around a clump of trees in one direction and Anne headed around the other way. Just as she called out to say that she had found the plant that we were pursuing, I stepped over what looked like curled brown leaves on a moist mat of vegetation: a small cluster of my "*Otidea*" again, this time in good condition (cover photo, title banner, Figure 3). Its spoon-like shape, contrasting colours, and smooth curves are eye-catching, and the fungus is attractive for its simplicity.

I photographed the clump and took specimens home to dry. I pored through field guides, tentatively wrote

"*Otidea* sp." on the data card, and filed them. Until I was reminded of them again, because we found some *Otidea* in our foray in Labrador. I gave the photographs and dried specimens to Andrus Voitk, who suggested that what I had found might be a species from a completely different genus, *Wynnella* cf. *silvicola*.

Although superficially similar, and long thought to be one genus, the genera *Otidea* and *Wynnella* are now classified within two different families: *Otidea* in Pyronemataceae and *Wynnella* in Helvellaceae. The main macroscopic differences are that species of *Otidea* are brittle and tend to have similar colour on both surfaces of their ascocarps, whereas *Wynnella* is leathery and two-coloured. My specimens, although entirely within the warm beverage colour range, were definitely two-coloured on their opposite surfaces.

There were very few references in my field guides to *Wynnella*, so I did what most people do: fired up Google.

The earliest mentions of this species placed it within the genus *Peziza*.

In 1885, Boudier suggested that the unmanageably large genus *Peziza* should be broken into several smaller

genera, one of which he called *Wynnella*, into which he placed those species with leathery ear-shaped apothecia and spores that contained only a single oil droplet (uniguttulate).¹ Over the following decades the organism bounced around from one genus to another, evident in the list of synonyms that this species has borne: *Otidea silvicola*, *Peziza atrofusca*, *Otidea atrofusca*, *Wynnea atrofusca*, *Wynnella atrofusca*, *Helvella silvicola*, *Peziza auricula*, *Aleuria auricula*, *Otidea auricula*, *Wynnella auricula*, *Scodellina auricula*, *Otidea neglecta*, and *Helvella leporina*.² It is now fully referred to as *Wynnella silvicola* (Sacc.) Nannf.³ Google was not too helpful in explaining the name. The only candidate I could find at the time whom Boudier might commemorate, was A. B. Wynne, a British geologist and amateur painter, but I am not certain. If anybody knows, I should appreciate learning details.

The species name *silvicola* means “forest dweller”.

Although it is so uncommon that it does not even appear in many North American field guides, several reports that I came across suggest that this species is edible.^{10–12} Considering how rare it is in Newfoundland and Labrador, it would be a shame to stop it from shedding its spores—and it is unlikely to become an important ingredient in local cuisine, at least for humans. Not so some others. Like slugs—most of the ascocarps that I saw had notches in their edges and holes rasped through their flesh. Slime trails showed who had been eating them. Wind is probably the most important long-distance dispersal agent for its spores, but snails and slugs are probably a useful local delivery agent.

I have teamed up with Andrus for the more formal description that follows, after which we discuss why we elected to use “cf.” in the name. Watch for this species when you’re hiking next July and August, and with luck we’ll learn more about the distribution of this unusual fungus. For example, other descriptions do not report it as a calciphile. It would be interesting to know whether this species grows outside areas of limestone barrens in this province. Also, it would be very instructive to learn of the NL distribution of partially buried, hairless, one-eared rabbits.

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Figure 3. *W. cf. silvicola*, Yankee Point, July 15, 2016.



Wynnella cf. *silvicola*

MACROSCOPIC (above)

Ascomata solitary to gregarious, 50–145 mm high, 12–88 mm wide, spoon-shaped blade, with blunt tip and inrolled edges that open and expand, tip becoming sharp and folding backwards (recurves).

Hymenium smooth, initially dark reddish brown, becoming nearly

black; purple brown when dried.

Outer surface smooth, tannish-yellowish brown.

Stipe 3–6 × 3–4 mm, ridged, may be slightly lacunose, ochraceous whitish.

MICROSCOPIC (right)

Spores (1 collection, 2 ascomata, 4 spores) ellipsoid to broadly ellipsoid, oblong ellipsoid, slightly inequilateral, with two large guttules, often with several smaller granules, smooth, hyaline, $18.3\text{--}24.1 \times 10.6\text{--}13.5 \mu\text{m}$, average 20.2×11.7 ; average $Q = 3.4$.

Paraphyses 3–4 μm diameter, except for clavate tip about 5–6 μm ; straight, clavate apices often with small constriction, hyaline, with occasional brown encrusted cells.

Asci average $122 \times 17 \mu\text{m}$, 8-spored, operculate, hyaline, nonamyloid.

ECOLOGY

Habitat Described from coniferous forest.^{4,5} In NL found on limestone bedrock, near coniferous forest; Associated plants: various mosses, balsam fir (*Abies balsamea*), white spruce

(*Picea glauca*), green alder (*Alnus viridis*), bearberry (*Arctostaphylos uva-ursi*), capillary sedge (*Carex capillaris*), hyssop-leaf fleabane (*Erigeron hyssopifolius*), dewberry (*Rubus pubescens*), butterwort (*Pinguicula vulgaris*) and dwarf scouring rush (*Equisetum scirpoides*).

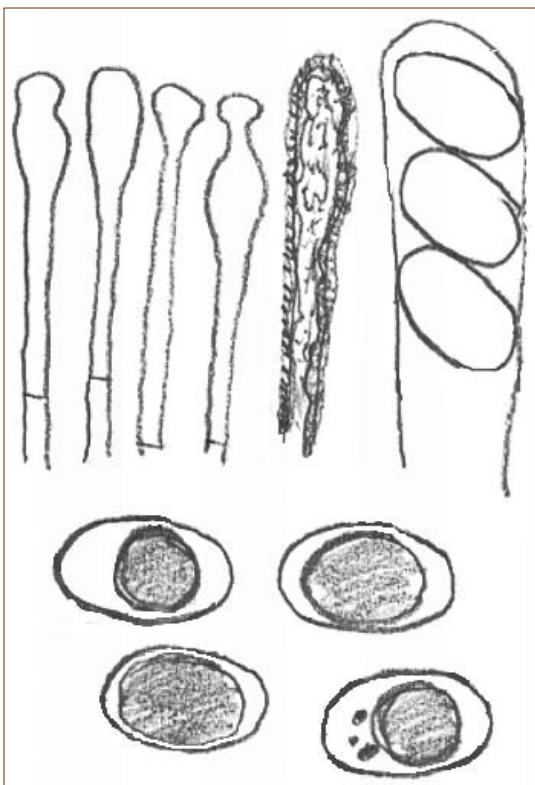
Lifestyle Carbon-nitrogen ratio suggests mycorrhiza,^{6,7} plant partner unknown. **Season** July–August

DISTRIBUTION

Great Britain, Finland, Sweden, Italy, Germany, Austria, Czech Republic, Slovakia, Poland, Romania, Asia (possibly *Wynnella subalpina*), Canada, USA, and Mexico; in the USA known from Alaska, Washington, Oregon, Idaho, Montana, and Colorado; in Canada known from British Columbia, Alberta, Québec, and Newfoundland; in Newfoundland so far known from Burnt Cape, Cow Head, and Yankee Point. Uncommon throughout its range.

COMMENT

Differs from *Otidea* by distinctly two-tone ascomata, ribbed or lacunar stipes, cartilaginous consistency, straight paraphyses, and uniguttulate spores.





Why do we call it *Wynnella* cf. *silvicola*?

“Confer”, shortened “cf.”, is Latin for “compare”. In taxonomy, it is used to indicate a degree of uncertainty about an identification, suggesting that the name used is the best available (but possibly not the most accurate) fit for the organism at hand. For example, consider the photo montage above. On the right are a studio portrait and in situ photo of the same *Otidea leporina*, from Mud Lake, Labrador. On the left are two different in situ photos of *Wynnella* cf. *silvicola*. Superficially all four pictures look alike, so if you did not know more, you might apply either name to both, using “cf.” to indicate their likeness as the best match you could make at the moment.

With such relatively similar species, you can rest assured that interpreting old descriptions and illustrations to determine the correct name will be confusing. The epithet *silvicola* has been applied to species of *Peziza*, *Otidea*, *Helvella* and *Wynnella*, among others, and has not always referred to the same organism. In the middle of the above montage is an illustration from 1763 by Julius Schäffer, the famous German mycologist, of a species he called *Helvella auricula*.¹ Between the jigs and the reels, *Helvella auricula* has become the organism we now know as *Otidea leporina*. Much of the confusion between the names *leporina* and *silvicola* arose from the different interpretations of this image. Some claimed it is an *Otidea*, and some, a *Wynnella*. What do you think?

Well, as it happens, you do not have to take the responsibility for such a weighty decision. At the moment, those who believe Schäffer illustrated *Otidea leporina* are firmly on top, leaving the name *silvicola* for the similar organism that eventually ended up in the genus *Wynnella*. The name *auricula*,

used by Schäffer, has at times been applied to what we now know as *sivicola*, and at other times to what we now know as *leporina*. But, as mentioned, we no longer have to worry about that. Our species is *Wynnella* cf. *silvicola*, and differs from *Otidea leporina* by its cartilaginous flesh, two definite and contrasting colours front and back, presence of a ridged and at times even lacunose stem, straight paraphyses, and uniguttulate spores. For a long time it was considered a *Helvella*, but recent phylogenetic analysis has shown it to be a good separate genus.²

Fine, you may say, it is eminently clear why somebody who did not know of these differences might use the term “cf.” when applying a name to this species, but why do the learned authors still use “cf.”, when they seem to know it all? Well, in this case cf. is not meant to indicate possible confusion with *Otidea leporina*, but with other species of *Wynnella*.

Wynnella, known from at least three continents, began as a monospecific genus, a genus erected for a single species. Indeed, there are cosmopolitan species that seem to spread all over the globe, remaining genetically identical. In many other cases of migration, regional environmental and habitat differences may trigger evolutionary change, resulting in a complex of morphologically similar but genetically differing species in various regions of the world. Therefore, it should come as no surprise to learn that recently a second and very similar species, *Wynnella subalpina*, was described from China.³

The map on the next page shows known locations of selected studied *Wynnella* species. Solid-coloured symbols are of specimens with DNA available. The two green stars in Europe represent the type location



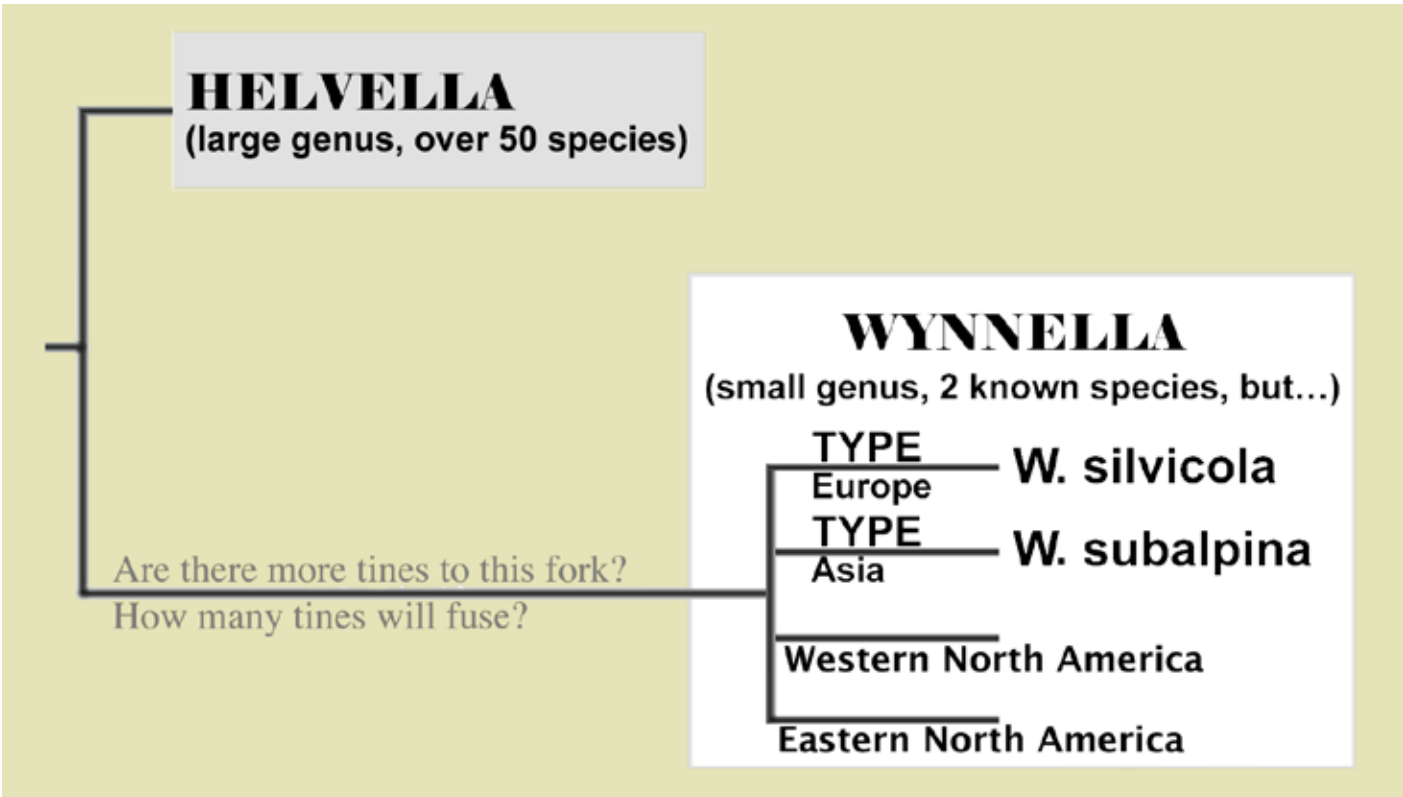
for *W. silvicola* (hollow), and a sequenced Norwegian culture in Oslo (solid). The red square represents a sequenced collection, identified as *W. silvicola*, from Idaho. The two brown circles represent sequenced collections of the newly described species, *W. subalpina*, from China. The blue triangles represent the (unsequenced) NL collection described here, and two from nearby Québec.

Since the species from western North America differs from that in Asia, this is not a genus with a single cosmopolitan species. That makes it more likely that the other locations (Europe and eastern North America) also harbour distinct species. If so, the name *Wynnella silvicola* stays with the European species, leaving both (if they turn out to be two separate ones) North American species in need for new descriptions and names. The potential family

tree is shown below.
We are looking into the distribution question, and should we discover anything of interest, we shall keep you posted. Should you have some collections you would be willing to contribute, please let us know.

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Otidea of Newfoundland & Labrador

Andrus Voitk

Otidea is an uncommon genus in our province. In 14 years we have three collections from our forays and two outside. Review of our collections suggests they represent four species, one known from eastern North America, and the others not.

A recent monograph of the genus,¹ in addition to some good general texts and specialized ascomycete books, made the review of our species a little easier, but still it is not simple to deal with a group you have rarely seen and know very little about.

Reader beware: the possibility for error is even greater than normal.

I have found some collaborators to look into them a bit further, and if something different is discovered, shall let you know.

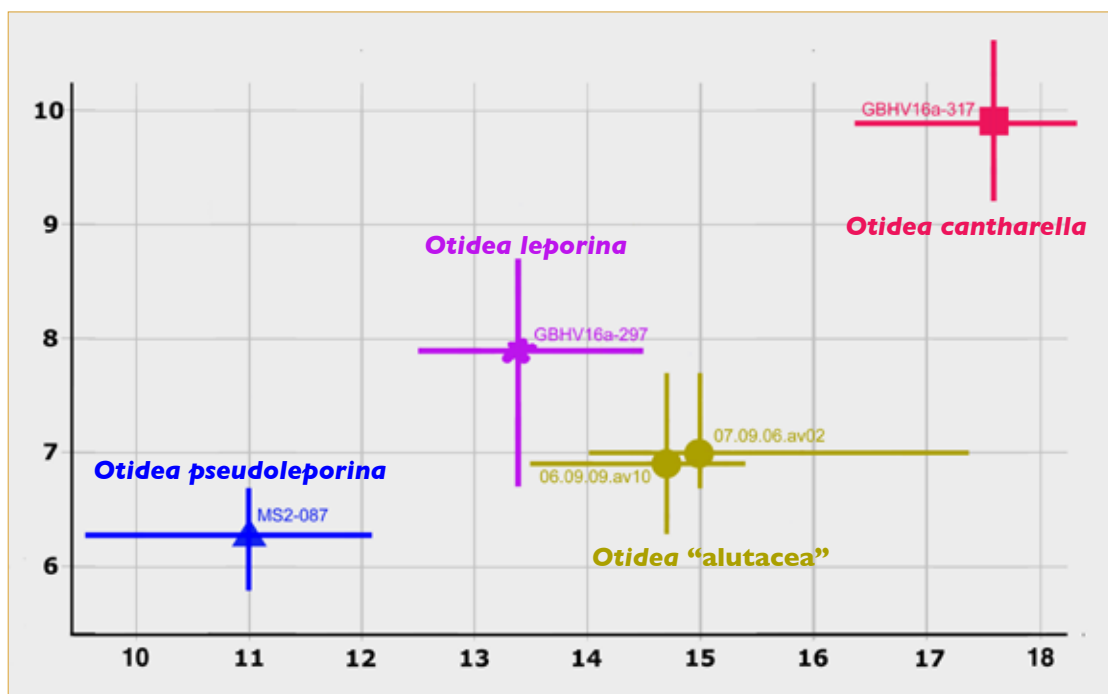
The graph below maps out the spore sizes of our collections. Identification was made by selecting from species with this spore size the one whose macro- and microscopic

characters fit best with our collections.

Otidea refers to ear. The genus is thought to be mycorrhizal. It differs from the only other ear-shaped genus, *Wynnella*, by brittle flesh, more-or-less same-coloured front and back, a smooth, unribbed stem, bent or hooked paraphyses, and biguttulate spores. Illustrated descriptions of our four species follow.

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Otidea leporina

May exceed 50 × 25 mm. Yellowish brown tones. Retains its ear shape through maturity. Stipitate to sessile. Basal mycelium copious, white to cream. Ours was a single ascoma, but reported to be gregarious, often caespitose. Conifer associate. Distribution: common in Europe; also found in both

east and west North America. *Leporina* refers to rabbit.

This is the species thought to be depicted by Schäffer (see p. 7).

Same fruiting body in situ and in the lab. Photos: Michael Burzynski & Roger Smith.



Otidea cf. pseudoleporina

Around 20 × 15 ± 5 mm. Primarily yellowish tones. Ear-shaped in youth, becoming cup shaped with maturity, cup retaining the split down one side. Stipitate to sessile. Basal mycelium copious, white to pale yellow. Usually gregarious, may be caespitose. Conifer associate.

Distribution: hitherto only known from western North America.

Differs from *O. leporina* by smaller size, becoming cup-shaped with maturity, yellower colour, and small spores.

Photo: Roger Smith.

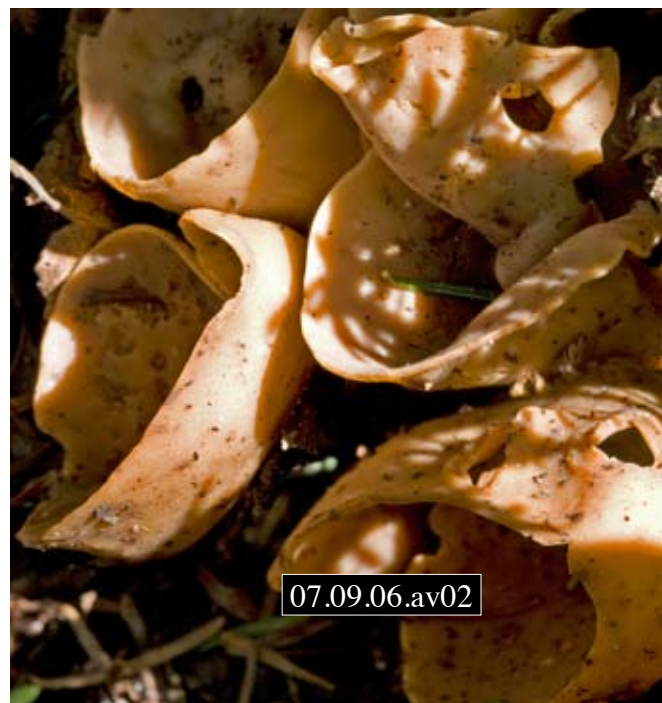


Otidea cf. cantharella

May exceed 50 × 35 mm. Yellowish colour gives rise to the epithet, referring to the colour of *Cantharellus cibarius*. Stains pinkish to reddish brown with injury. Ear-shaped in youth, becoming cup shaped with maturity, cup retaining at least partial split down one side. Characteristically stipitate. Basal mycelium

copious, white to pale brown. Gregarious, often caespitose. Conifer associate. Thus far only known from Europe; no other stipitate small yellow species described with this size spores, although the spores of ours were a little smaller than described for the typical European species.

Photo: Roger Smith.



Otidea "alutacea"

Eurasian species, part of a complex with at least six clades. This one fits best with one of the clades hitherto only known from western North America. Photos may suggest two species of similar size, shape and spore size—about 25 × 25 mm, cup-shaped at

this stage of development, and nearly sessile. Left cream-coloured specimen is solitary, comes from birchwoods, whereas the right tan one is almost caespitose, from coniferous woods.

Spore size close to Eurasian species.



The Bishop's Sketchbook



Any takers to identify Glynn's find:

small cups on cones and needles
 of two-needle pine?

Reward!



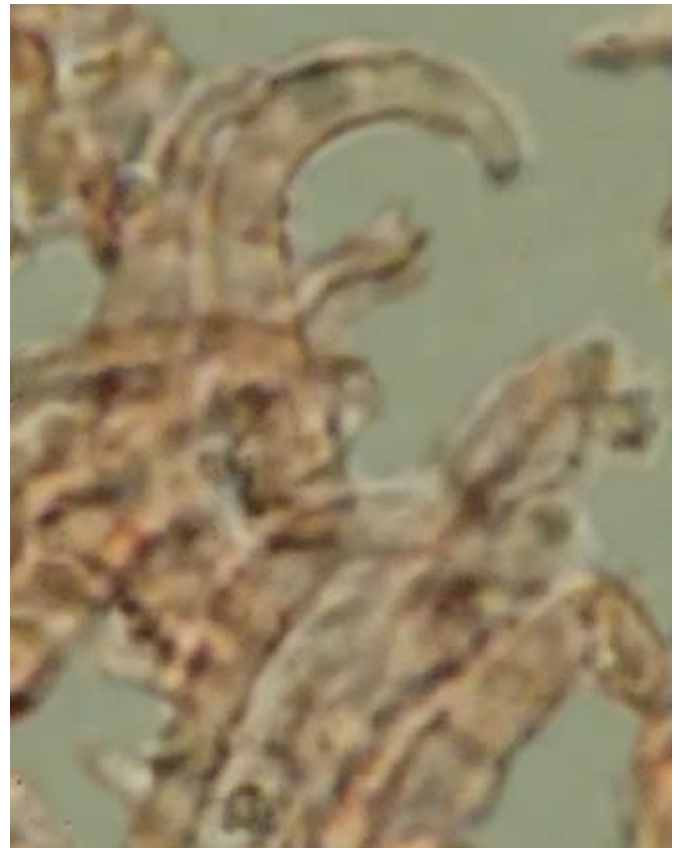
Hamantocanthoscypha laricionis

Andrus Voitk

It is very difficult to write about this species with my current memory reserves: the name is so long that I need to check it four times during typing.

To give you an idea of its size, the substrate is a cone of Norway spruce (a little bigger than a white spruce cone), and the diameter of the largest cup is just shy of 1 mm. How can you identify anything like that, you ask? Well, very few wee white cups grow on cones of Norway spruce: *Hamantocanthoscypha laricionis* was one of three I could find in Thompson's book [OMPHALINA 4(6):9]. Aided by an active imagination, you can see that the cups have an uneven edge, caused by hairs on the rim. At this size, the loupe is not of much help, but under the microscope the hairs have a diagnostic hook at the end (see microphoto). The size and shape of asci, paraphyses and spores also fit. How to identify something like that is now answered. The answer to why one would want to takes a little longer.

Norway spruce is not native, and was planted at this site in 1951. Was the *H. laricionis* already there, or did it also immigrate—one year before the author came to Canada?





Which morel is this?

Andrus Voitek
Michael Burzynski
Kerry O'Donnell

After several years of studying our morels, we finally identified them to species, and described them, so that we—and you—can tell them apart.^{1,2} As often, when you put something down, you wonder if it really works as well as you thought. We decided to test the accuracy of our distinguishing characters this past morel season.*

The time could not have been better, because morels were confusing in the spring of 2016. First of all, they were a bit late, so that their fruiting times overlapped: the early *Morchella laurentiana* appeared at the time we usually saw the later *M. eohespera*, while the latter was not too much delayed. In sites of small sporocarps, big ones appeared, and in sites of one fruiting, there were two, both findings at least suggesting the possibility of different species. Then we found new sites. Some, that should be one species, seemed to have some characters of the other. In addition, some specimens and photographs were sent to us for identification. Understandably, we could not do much with morels from elsewhere, where there may be several species totally unfamiliar to us. But we also had difficulty with our own two species. That is right—only two species. Our third, *M. importuna*, differs recognizably from the others by appearance and growth habit in newly mulched flower beds.

We found that some characters were not as reliable

as we should like. For example, relative acuity of the peak was not a useful distinguishing feature. We had always thought that only the stem of *M. laurentiana* was bent at ground level, but now we found a field of presumptive *M. eohespera* with similarly bent stems.

One macroscopic and one microscopic character stood out as reliable: the number of compartments in the valleys between vertically longitudinal ridges, and the presence of capitate cells in the ridges. Both characters are illustrated on the next page. Molecular studies confirmed our identifications, based on these two criteria.

For those of you, who merely wish to enjoy a gourmet delight, this is not crucial information—both taste fine. But for those of you who enjoy testing your observational powers and pit yourselves against worthy odds, this information may be a delight. Why not start by identifying the species in the title banner?

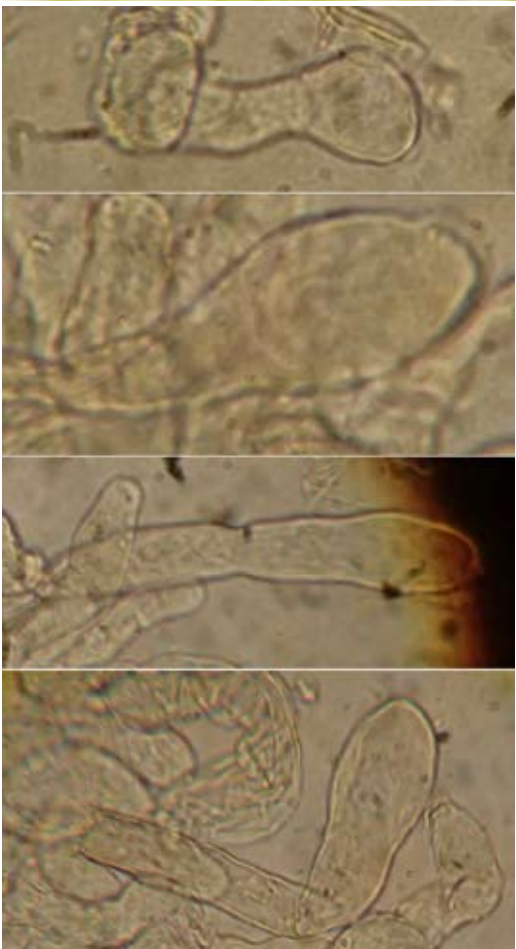
Acknowledgments

We thank Tina Leonard for collecting some specimens and Gail Doehring for assistance with sequencing.

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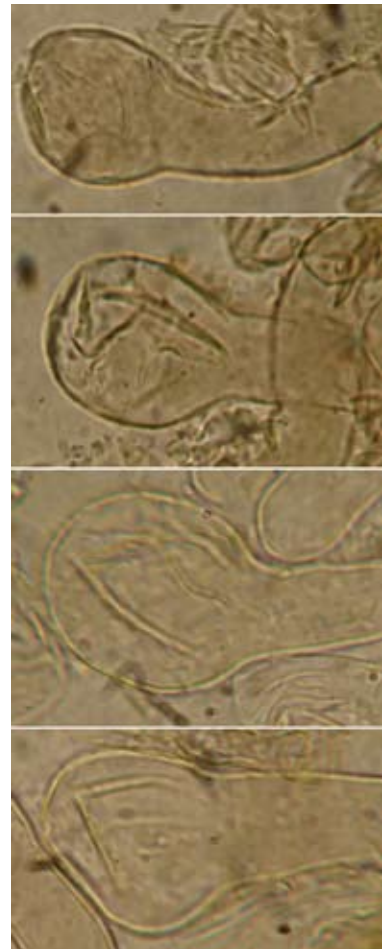
* Mention of trade names or commercial products in this publication is solely for the purpose of providing specific information and does not imply recommendation or endorsement by the Victorian government or the U.S. Department of Agriculture. USDA is an equal opportunity provider and employer.




Morchella laurentiana on the right and M. eohespera on the left.

Above: Macroscopic difference. Similar fruit bodies chosen intentionally. The valleys between the black ridges of M. laurentiana have very few compartments: some run the whole distance uninterrupted, and two to three are the norm. M. eohespera usually has three or more compartments in a longitudinal valley, rarely, if ever, two, and never one. Always examine several specimens to get a feel for the population.

Below: Microscopic difference. Capitate cells (round terminal ends, like table tennis paddles) of the ridges found only in M. eohespera, never in M. laurentiana. These differences are rather obvious in the photos, because best examples were selected. Actually, this is a very difficult finding, which often requires considerable search to find such capitate end cells. Not common, they can easily be missed on a quick search. Also, the difference between a club-like end and one resembling a ping-pong paddle may be subtle at times.





Lichens from the Pruitt-Murray collection

Tegan Padgett
Rachel Wigle
Yolanda Wiersma

In the previous issue of *OMPHALINA* (vol. VIII, no. 1), we described how three boxes of unidentified lichen specimens came to the Agnes Marion Ayre Herbarium in St. John's, NL, who collected them, and why we were asked to identify the specimens fifty years later. Here we report our first three, all rather common, lichen specimens from the Pruitt-Murray collection.



Photo: Roger Smith



Photo: Andrus Voitk

Icmadophila ericetorum (L.) Zahlbr

Also called fairy puke or candy lichen and found on the 2016 HV-GB foray, *Icmadophila ericetorum* is a pale, mint-green, crustose lichen with light pink fruiting bodies (apothecia), the only species of its genus found in North America. It could be confused for *Dibaeis baeomyces*, but as pointed out by Jim Cornish, has flatter apothecia and prefers a rotting wood substrate.¹ *Icmadophila ericetorum* has two

secondary metabolites, thamnolic and perlatolic acid, which fluoresce under UV light. Fairy puke has been found on one of the oldest coastal Redwood giants, Terex Titan, observed over 27 meters up.²

Photos: Left, Pruitt-Murray collection; Middle, 2016 HV-GB foray; Right, in situ, Mt Ignoble, Western NL. Note variation in colour, and good preservation of the 50-year-old collection.

***Stereocaulon paschale* (L.) Hoffm.**

Stereocaulon is a genus of gray-white, shrub-like (fruticose) species with a solid stems (podetia), from which arise miniature leaf-like structures (phyllocladia), and gray-black granular clusters of cyanobacteria (cephalodia). *Stereocaulon paschale*, commonly called Easter foam lichen—also found on the 2016 HV-GB foray—is distinguished by foam-like clusters of phyllocladia. Distributed in the southern boreal region, it lives on soil and mossy rocks. This lichen makes two secondary metabolites, lobaric acid and atranorin, which have been studied for antioxidant, antimicrobial, and anticancer properties,³ as well as wound healing abilities.⁴

Photos: Upper, Pruitt-Murray collection; Lower, 2016 HV-GB foray. The fresh specimen shows apothecia (a), brown disc-like structures at podetial ends, where spores are produced, and cephalodia (c), black granular structures containing blue-green algae (cyanobacteria).

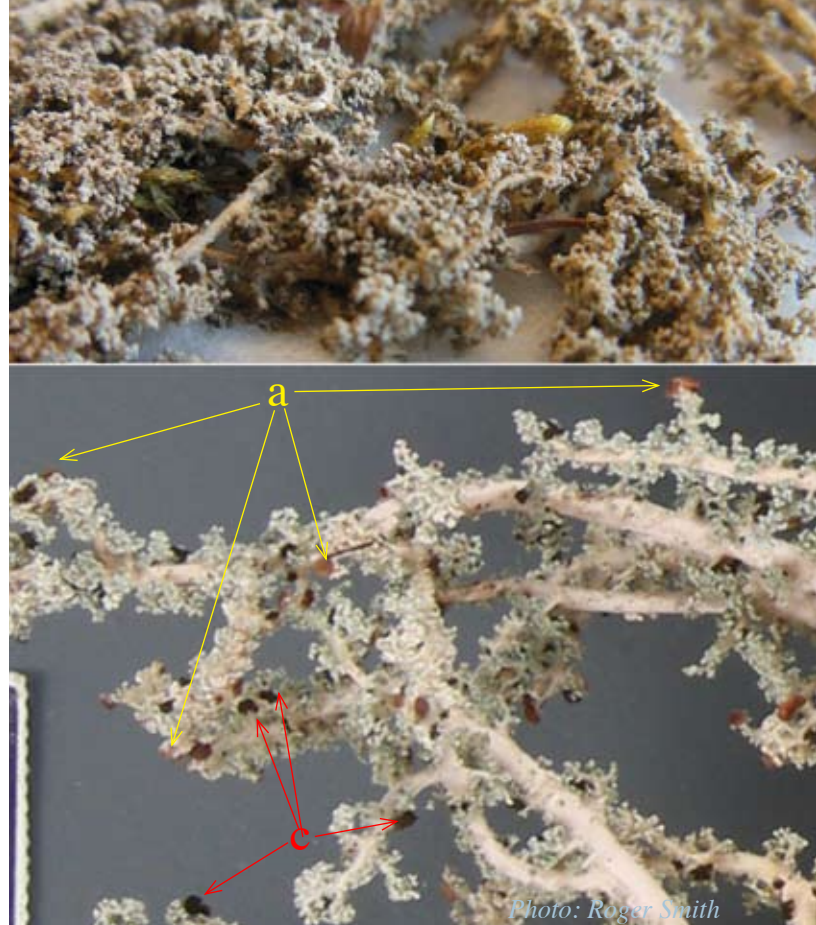


Photo: Roger Smith



Photo: Roger Smith



Photo: Andrus Voitk

***Vulpicida pinastri* (Scop.) J.-E. Mattsson & M. J. Lai**

Also called powdered sunshine lichen and found on the 2016 HV-GB foray, *Vulpicida pinastri* is a yellow leafy (foliose) lichen found mainly on conifer branches near the ground, but also on shrubs, wood, and rock. Its distinguishing features are small upturned greenish-yellow lobes, bright yellow edges, and a yellow inner layer (medulla). Because it produces a toxin, vulpinic acid, this lichen was used to poison foxes and wolves by being stuffed into animal bait carcasses, along with powdered glass.⁵ Vulpi + cida = fox + killer.

Photos: Left, Pruitt-Murray collection; Middle, 2016 HV-GB foray; Right, in situ, Central NL. Again, note good preservation of colour and characteristics of

dried specimen over 50 years.

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IN MEMORIAM OUR PARTNERS

It is with great sadness that we report that greatly appreciated, long-term supporters of Foray Newfoundland and Labrador have been split apart, decimated, or have completely disappeared. For the background, please read Doug Ballam's article, "RIP, Parks & Wildlife divisions" <<http://theindependent.ca/2017/03/02/r-i-p-parks-and-wildlife-divisions/>>—the inspiration for our title.

In the last few weeks, the provincial government has deeply cut the staff of *Wildlife Division* (still reeling from the March 2013 cuts); has divided *Parks and Natural Areas Division* between

two departments; and the future of the *Centre for Forest Science and Innovation* appears murky. In fact the entire *Department of Environment and Climate Change* has disappeared as an entity. Their remains have been buried inside larger departments with far different interests and priorities. From both an economic and conservation point of view, it is distressing that Provincial Parks have been taken out of the *Department of Environment* and put back into the *Department of Tourism*.

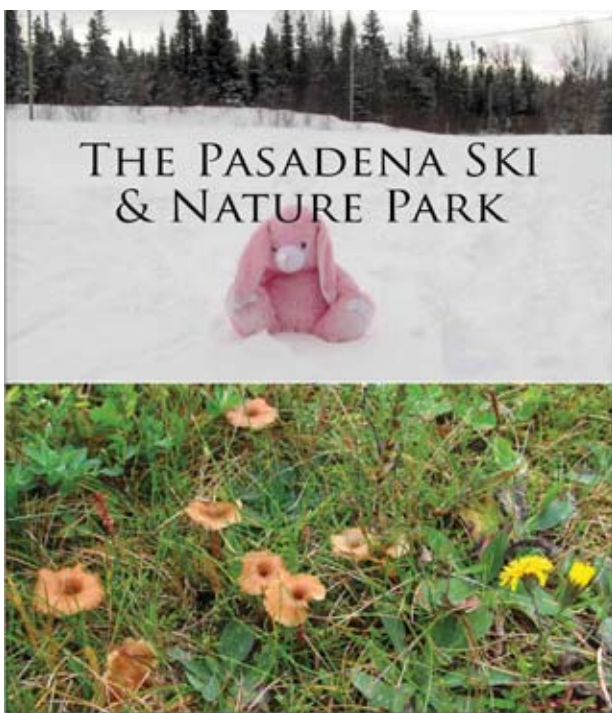
Knowledgeable, professional, dedicated teams who have worked together for years have been broken up; managers who were also some of this province's most experienced field biologists have been declared redundant; and entire conservation programs have been shut down or rendered ineffective. And the worst may not yet be over, with the provincial budget to be brought down on April 6, we may see more damage to these vital programs. The shortsightedness of these sorts of cuts and reassignments

could lead to the destruction of the most important resource that this province has not yet given away.

This province is huge, and was once awash in resources that should have made it rich. However, the cod fishery has been "managed" almost to extinction, our forests were traded for short-term profits, and most of our hydroelectric resources are now owned by Québec. NL must be one of the very few jurisdictions in the world, where having hydroelectric resources is a liability. From the vast profits of offshore oil, the province receives drips—we were not as clever or as far-sighted as Norway in using oil to finance a wealthy future.

Nature is the only valuable sustainable resource that we have left. This province very successfully uses nature to attract visitors from around the world. Each year we see more, and wealthier, visitors who want to experience our magnificent natural environment, a rapidly decreasing commodity worldwide. If we take care of it, we can continue to use it forever. But to do that we must invest in the study, care, and protection of this resource

Like the cod fishery, our natural environment can be destroyed by mismanagement. We must protect our rarest habitats, we must continue to monitor and manage



Andrus Voitek & Henry Mann
Newfoundland

Everybody knows where Pasadena is, but not everybody knows that it has a Ski and Nature Park (PSNP). Legend has it that the first settler in the area had married a lady from someplace called Pasadena, and out of high regard for his wife, decided to name their new

community after her birthplace. We used the word "legend" to start off the previous sentence, because we have been able to confirm all of this story, except for the apocryphal existence

of a Pasadena outside Newfoundland and Labrador (NL). The NL Pasadena whereof we speak, of course, is real enough—any doubts you may have about its existence can be set right by any of

the plants and animals of this province, and we must help people learn to use the natural areas around them in a sustainable way. Unfortunately, with these recent cuts, we are losing the staff and organizations responsible for this work. These are direct cuts to science and conservation—we have lost many of the people who actually did the work, *not* mere managers.

If you feel as concerned as we do about these changes—about the loss of experienced and dedicated scientists, about the loss of most government units dedicated to conservation and habitat protection, and about the burial of the surviving staff in large departments where they will not be valued or heard:

Write a letter or e-mail to your MHA, and another to the Premier. Your letters need not be long and involved, but simply state your concern about the losses that our province will suffer from these cuts. Request a reply.

How the cuts affect Foray Newfoundland & Labrador

Since our first foray in 2003, FNL enjoyed support from our provincial partners, both financial and in-kind. This support helped us to attract world-renowned mycologists and lichenologists as identifiers, experts who otherwise would never have visited our province. Our collections and their identifications have contributed an enormous amount of knowledge provincially and globally, and it was done at a very little cost. We have always felt that our work was valued by our partners. However, due to these changes and cuts, future years may see significantly different forays. The scientific component—expert identifications, specimen collection for our herbarium, academic study of our finds, the discovery of new species, and the investigation of relationships of various fungi to each other and their habitat—may disappear.

To our partners: we will not forget your generosity, your commitment, or your dedication to a government that, with these cuts and changes, has served you—and us—so badly. It was a pleasure to work with you in different capacities, and we thank you deeply and sincerely for your support of FNL since its inception. What we have been able to discover about the fungi and lichens of this province would not have been possible without your help. We wish you the best, and hope that we will somehow have the chance to work together again.

Andrus Voitk, Michael Burzynski

The illustrations on this and the previous page are of articles published about three different kinds of our protected areas in FUNGI, an American wide-circulation commercial mushroom journal. Our natural heritage is appreciated well outside our borders—a resource we cannot afford to leave untended.

GROS MORNE NATIONAL PARK

From Temperate to Tundra in 2,000 Feet

Michael Burzynski
Newfoundland & Labrador, Canada

Even without fungi, Gros Morne National Park would be an amazing place. I've known the park intimately for almost thirty years—I worked there as a vegetation biologist, and I've been involved with Foray Newfoundland and Labrador since Andrus Voitk organized the first event in the park in 2003. I'd like to tell you why this medium-sized national park on a peninsula on an island in the cold North Atlantic is well worth a mycological visit.

To get right down to it, I think that Gros Morne is the most beautiful place in eastern Canada. The park has an area of 697 square miles (1,805 km²). Its coast borders the Gulf of St. Lawrence, and ranges from high cliffs to cobble and sand beaches. Inland from the shore is coastal lowland covered with bogs, ferns, lakes, and mixed forest. Rising from the lowland along a steep escarpment is the Long Range plateau—the granitic roots of an ancient mountain range, heavily carved

by ice into glacial troughs and deep fjords. The coastal edge of the highlands is above treeline, and the top of the plateau is a landscape of countless small lakes and ponds, rock barrens, and patches of dwarfed forest. Accorded together in this small area are granitic soils, limestone outcrops, peatlands, and serpentine barrens. Arctic species live both atop the highlands and in the 750-foot-deep (230 m) waters of the East Arm of Bonaventure Bay.

Post-glacial history has helped to create the mix of species in the park about 5,000 years ago. The warming trend forced Arctic plants that had reached the island up onto cool hilltops and north-facing cliffs. Then climate started to cool down again. Temperate species that had colonized the island were squeezed into warm, protected hollows. Coniferous forest and wetlands covered everything else.

The park is within the boreal forest region, but its cool, moist coastal climate reduces the chance of forest fires dramatically. There has not been a recorded fire of more than a few acres in the last 200 years. Because of that, the forest is dominated by



Western Brook Pond is a glacial trough that was once a true fjord. Its 2,300-foot-high (700 m) granitic cliffs plunge another 540 feet (165 m) below the surface of the fresh water. Photo: Roger Smith.

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The arctic mycota of Signal Hill

Andrus & Maria Voitk

Signal Hill dominates the skyline of St. John's, the oldest city in Canada, and overlooks the Narrows, a constricted strait entering the protected St. John's Harbour. Its strategic location gives it military significance: the last battle of the Seven Years' War was fought there September 15, 1762, and it has been of importance during both World Wars, last as

your smartphone, that in 1901, sending three dots, Morse code for the letter S, across the Atlantic was a miracle of earthshaking proportions, an accomplishment that had never been done before!

Steeped in the heritage of battle and communication, Signal Hill was named a National Historic Site in 1951. As such, it became a protected area, thus also preserving the natural history of this elevated coastal barren. Much of the land is bare rock, with areas of ericaceous heath in larger cracks and exposed depressions, small patches of wetlands and ponds, interspersed with small swaths of grassland, sedge thicket and tuckermore in more protected parts. In addition to history, stunning views and dramatic winds, Signal Hill provides



Figure A. View over the Narrows, connecting St. John's with the Atlantic Ocean.

a base for US anti-aircraft guns during WW II. Its commanding view also made it an ideal communications site. The name, Signal Hill, was given it by Lieutenant Colonel William Amherst, victor of the Battle of Signal Hill, because of the signalling with flags from the hilltop to ships and troops.

On the 12th hour of the 12th day of the 12th month in the 1st year of the 20th century, Guglielmo Marconi received the first transatlantic radio signal, sent from Poldhu, England, to Signal Hill in the New World, 3,425 km to the west. Think, the next time you send or receive text, photos or videos with



Figure B. Zoomed view of the protected harbor and the city of St. John's.

examples of tundra-like habitats, readily accessible to people in urban St. John's.

On October 23, 2016, we took a leisurely 2.5 km walk around

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THE MAIL BAG

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

Thanks and congratulations, Andrus!
A nice summary of the “basidiolichens” of NL!
A note on the Pruitt & Murray article. I knew both of them. I have some of their lichen duplicates from Labrador. Pruitt even invited me to apply for an assistant professorship in Univ. of Alaska to study caribou ranges in Alaska, but I was not ready to go. I stayed in the Murray’s house in Fairbanks in 2011 for a week. They had a big herbarium at home but I don’t know whether they kept their NL collections there (anyway, now placed at the herbarium ALA). I should ask.

Best wishes,

Teuvo Ahti

Back in my flying days, I tried hard to get a chance (via a hoped-for girlfriend) to fly her father’s PBY, the one used in filming the movie South Pacific. I did not get a second date with the girl and I did not get to fly the plane, but I did get to sit at the controls. The appearance was strikingly different than the PBY in your photograph in the recent Omphalina. It had bubble windows behind the wings for the gunners. The windows had been turned into cocktail lounges in the plane I was in.

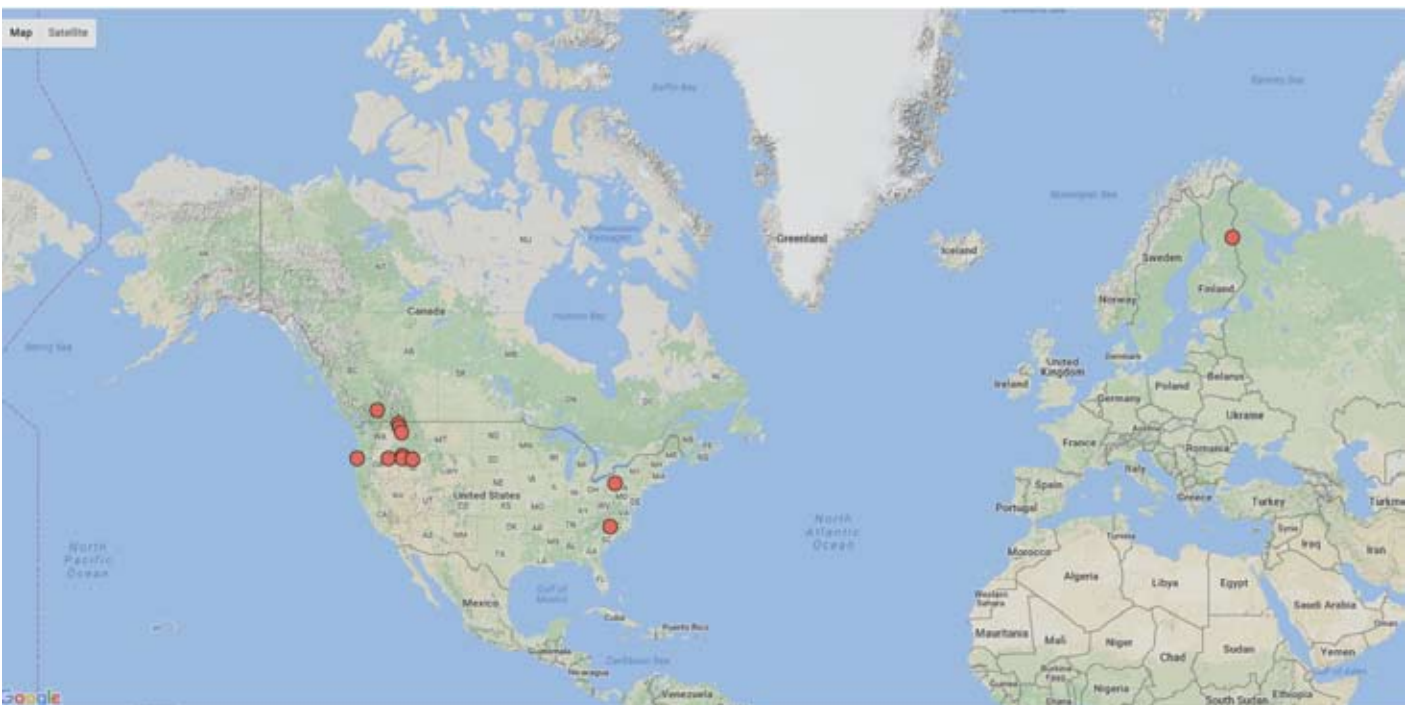
Micael Beug

The latest edition of **OMPHALINA** is always welcome! Thanks for the erratum on Multiclavula—as well as other attractive articles. Good news on finding a home for the foray specimens.

John McCarthy

19 collections of *Multiclavula corynoides* in the MyCoPortal. Not only a western species. See map below. The MyCoPortal knows all...

Andy Miller



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