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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

Squamanita pearsonii, 27 Sep., 2017, Deadman's Pond, Gander. Photo: Pieter van Heerden. Photo also shows *Cystoderma amianthinum*. Can you spot it? If not, read inside to find out where it is.

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CONTENT

Message from the Editor

Happy new year, 2018! Greet the ever-increasing light with joy. And my personal apologies for forgetting to wish you the best of the season in December, when darkness was giving way to light. It was on my list, but I had no idea where I put the list. So, in all the excitement of getting the Foray Report out…

Most people become interested in mushrooms because of an interest in collecting for the table, and for many, learning a few common, good and safe edibles is the extent of their intellectual pursuit of these organisms. Their more dispassionately curious fellows, for whom edibility becomes just a starting point of a long journey ever deeper into the mysteries of this kingdom, often have a way of making the mycophagists feel somewhat inadequate or somehow lower on the scale of human nobility. Well, this issue about mycophagous fungi is written expressly to bolster the mycophagists' bruised sense of self-worth.

Fist, there is the principle of misery loving company: when your fellow man looks down on you because of your belief, behaviour or interest, it is always nice to learn that others also display this same belief, behaviour and interest. And there must be a an especially sweet sense of irony to learn that the other group interested in eating mushrooms is another group of mushrooms! For you can bet your bottom dollar that none of the mushrooms described in this issue have the least interest in taxonomy, biochemistry or phylogenetics. Their only interest is to have the equivalent of a good bellyful of food, and specifically, mushrooms.

For many of us, these are our colleagues, and for some, our competitors. For the latter, this issue helps them to "Know thine enemy" in the art of warfare of mycophagists.

Happy mushrooming!

Squamanita pearsonii

Pieter van Heerden, Greg Thorn, Andrus Voitk

A single specimen of *Squamanita pearsonii* was collected on 27 September, 2017, near Deadman's Pond, Gander, in a boggy area on the edge of an old growth forest of mostly black spruce and balsam fir, within a meter of a group of *Cystoderma amianthinum*. This is the first report of this rare species in Newfoundland.

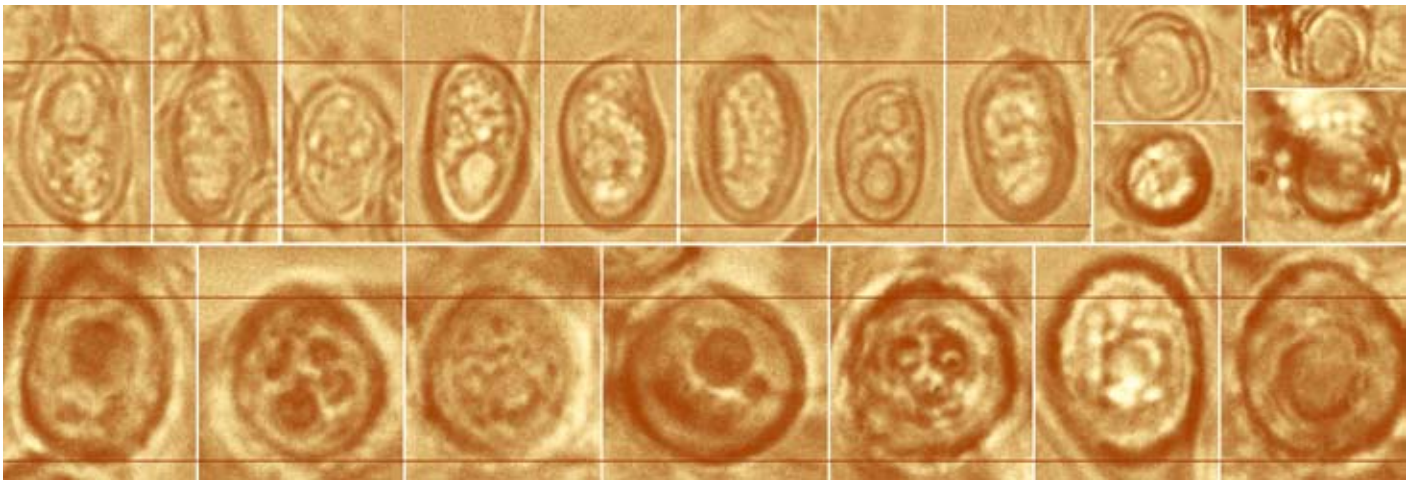
The genus *Squamanita* consists of 12–15 rare mycoparasitic species. Each species seems to be an obligate parasite of another specific living species of Agaricales (10 identified so far), deforming the host sporophores into a "gall". The host can be deformed beyond visual recognition, or, like *S. pearsonii*, can maintain some of its macroscopic features, giving the impression that the *Squamanita* is "grafted" onto the stem of the host.

The first species of the current *Squamanita*, *S. odorata*, was placed in *Lepiota*,[1] then *Coolia*, a genus named for Catharina Cool, author of *L. odorata*, then *Tricholoma*, until Imbach erected *Squamanita* for these species in 1946.[2] The genus was reviewed by the Dutch mycologist, Cornelis Bas (1928–2013), in 1965, with the addition of several new species, including *S. pearsonii*.[3] Bas stated that they all seem to be growing from "protocarpic tubers" with abundant thick-walled chlamydospores on the surface or just underneath the cortical layer.

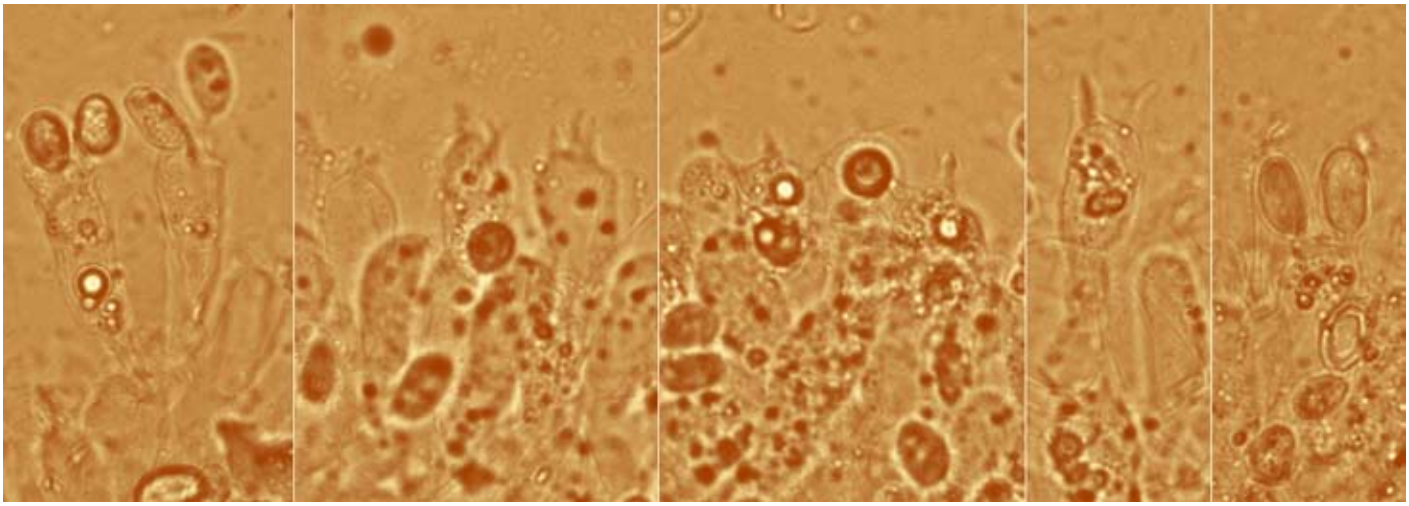
In a revealing review, Redhead and collaborators outline early clues leading to the eventual realization that *Squamanita* is a mycoparasitic genus.[4] For example, *S. paradoxa* was first described as a *Cystoderma*, and in his description of *S. odorata*, Bas mentioned that its smell reminded him of the smell of a *Hebeloma.* (We may marvel at his nose, because now we know that this species is, in fact a parasite on *Hebeloma mesophaeum*.[5]) In 1974 Watling mentioned that an amateur collector from Great Britain, P. James, had described a "*Lepiota amianthina* with a mutant cap" among *Cystoderma amianthinum*.[6] Reid was the

first to suspect that *S. paradoxa* might be a parasite on *Cystoderma amianthinum*,[7] and the parasitic nature of *Squamanita* was confirmed by Nagasawa et al., who identified the presence of *Phaeolepiota aurea* sphaerocysts in the protocarpic tuber of a *Squamanita*.[8] Finally, Redhead et al. officially explained the parasitic nature of *Squamanita* and showed that the basal bulb, or "protocarpic tuber", belongs to the host and not the parasite, calling it a "gall".[4]

Four years later Bas and Thoen replaced the term "protocarpic tuber" with "cecidiocarp" (cecidium = gall, karpos = fruiting body) for the host structure from which one or more *Squamanita* basidiomata may develop.[9] Depending on the species involved, the cecidiocarp may resemble a distorted bulbous tuber without any resemblance to the host, an aborted stipe appearing as a slightly swollen base, a fibrillose annular zone, or a rudimentary pileus. The host tissue remains viable with partial fertility and morphology, and forms when the *Squamanita* mycelium, containing chlamydospores, infects the host. Chlamydospores, found on the surface or just underneath the cortical layer of the cecideocarp, are produced by the mycelium of the *Squamanita* in the cecidiocarp. According to Redhead et al., chlamydospores may remain dormant to infect a new host when the host species again produces fruiting bodies. Of the 30 mycoparsitic agarics and boletes that seem to be obligate parasites, *Squamanita* and *Asterophora* are the only genera that produce chlamydospores. To get a conceptual idea of the nature of chlamydospores, look up the discussion and illustration of clamps in Omphalina 8(6):17, 2017. Clamps are small projections of a cell, which transfer nuclear material



Above: Upper: *Basidiospores. Note double walls. Hyaline, with granular content, usually binucleate. Four spores on left are end-on views, to show difference from the round chlamydospores.* ***Lower:*** *Chlamydospores. Triple walls (inner light, middle dark, and not as easy to see outer hyaline. Photo resolution leaves something to be desired, but in most views the irregular or rough (rather than smooth) surface of the middle wall is evident; this is due to the warty ornamentation of this layer. Distance between lines, 8 µm.*
Below*: Basidia. Most are 4-spored, but some with two or three sterigmata can be seen.*



to a new neighbouring cell. Now imagine a somewhat similar process producing small bits of cell tissue containing nuclear material, which, instead of acting as conduits to other cells, become pinched off as strong capsules of genetic material that spread and await favourable conditions to permit new growth and reproduction.

Macroscopically, our specimen resembled Bas' description of *S. pearsonii*, but had an acute cap, mindful of *S. umbonata*, and also bore some similarity to *S. paradoxa*. We have no experience with these or other species of *Squamanita*, but based on their descriptions, *S. umbonata* can be excluded because it has an Inocybe host, more bulbous cecidiocarp, and significantly different microscopic appearance. Similarly, compared to *S. pearsonii*, *S. paradoxa* has a slightly more robust habit, a lighter and less scaly pileus, and at least a partial ring at the junction of the stipe and cecidiocarp, rather than a smooth transition. The basidiospores of both are quite similar, but the chlamydospores of *S. paradoxa* have two smooth-walled layers (no warts), whereas those of *S. pearsonii* have three layers with a warty middle layer. The chlamydiospores of our specimen had a triple wall and were warty. Our morphologic description is based on our single specimen, but other facets of the description are an amalgam of available information.

Upper stem and white gills of S. pearsonii. Note thin cap flesh.

***Squamanita pearsonii* Bas**
MycoBank number 459793

Photos: see cover, title banner and this page.

GENERAL: Small dark bluish brown shaggy mushroom, about 5 cm tall, cap diameter 2.5 cm, growing near *Cystoderma amianthinum*, with visibly engorged lower half of stem, orange at its bottom.

MACROSCOPIC **Pileus**: Acutely convex, violet-grey with dark purple, fibrillose, narrow pointed scales, appressed and scattered at the margin and erect and crowded towards the centre of the disk. **Gills**: Whitish, distant, 1-3 lamellulae between each pair. **Stipe**: Scaly, tapered, gradually expanding toward the base, concolourous with the pileus, becoming dull yellow toward the base. **Context**: white, odour sweet and pungent. **Sporeprint**: white.

MICROSCOPIC **Basidiospores**: ellipsoid to elongate, sometimes subovoid, 7.5-9.5 × 4.5-6.0 (ave. 8.0 × 5.2) µm, smooth, double walled, with a very small apiculus, mostly hyaline (pigmented spores not seen), dextrinoid. **Basidia**: 4-spored, a few 2 & 3-spored. **Cystidia**: absent. **Clamps**: abundant at the base basidia and stipe. **Chlamydospores**: 7.5-12.0 × 7.5-9.0 (ave. 9.9 × 8.3) µm, hyaline and subovoid to brownish-yellow and globose, 3-layered, with a middle dark warted layer between two hyaline layers.

BEHAVIOUR **Ecology**: Parasite on *Cystoderma amianthinum* with which it fruits synchronously, i.e. host and parasite fruit at the same time. Need for synchronous fruiting may be part of the reason for the rarity of the genus. A species seems to recur in the same area but can disappear for many years between occurrences. The exact mechanism by which the host gets infected is still unclear. **Abundance**: Rare. The Global Biodiversity Information Facility portal lists only five recordings of *S. pearsonii* since 2004, two from Denmark and three from the United Kingdom.

This is the first report from NL, where its host, *Cystoderma amianthinum*, is common. Even the more common *Squamanita* spp., for example *S. odorata* and *S. paradoxa,* appear on Red-lists of different countries as critically endangered to threatened. In some countries forests where *Squamanita* species have been found are protected from logging; for example, three hectares of forest in Norway became protected after finding *S. fimbriata* there.[10] (Imagine closing a segment of forest to logging in our province because "some rare mushrooms grows there"!) **Habitat**: mixed forest, depending on host's preferences. **Season**: Summer, fall; usually the season of the host. **Distribution**: Known from Europe (Scotland, Wales, Denmark, Germany, Spain, Switzerland)[11], North America (Washington[4], NL), Japan[12].

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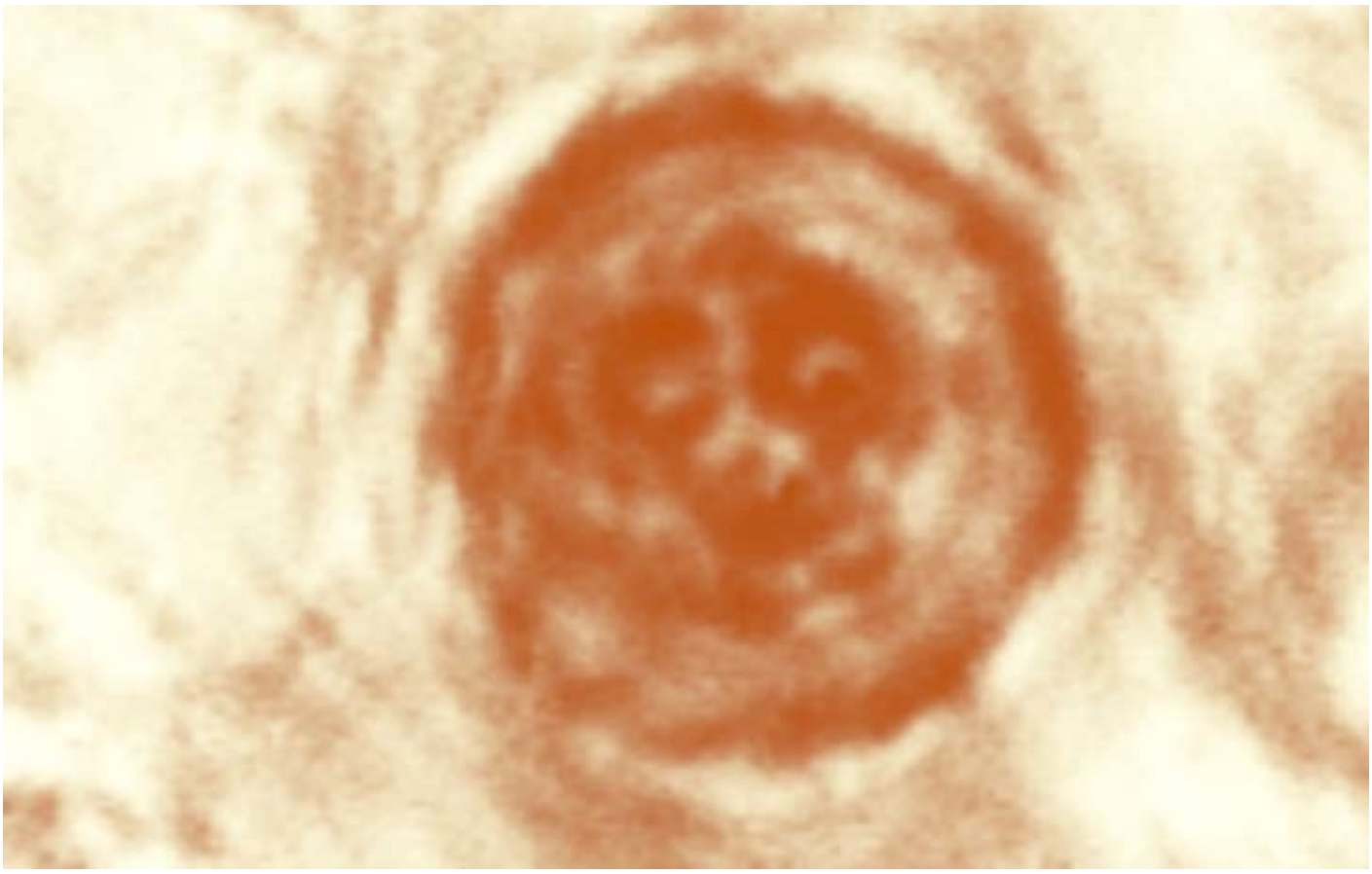

Smiley-face chlamydospore of Squamanita pearsonii *bidding you prosperous mycophagia for 2018.*

Mycomycophagists

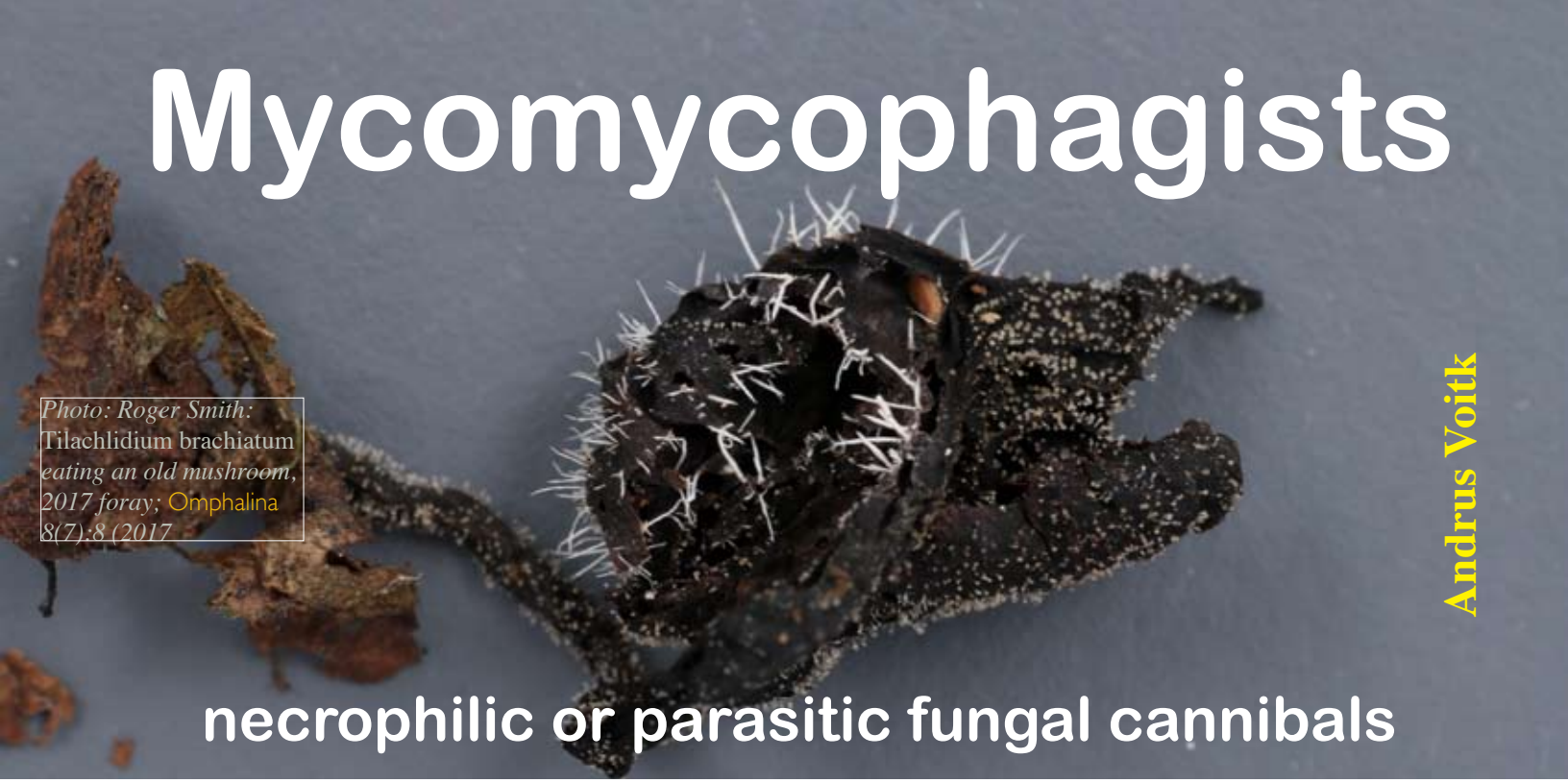

Photo: Roger Smith: Tilachlidium brachiatum *eating an old mushroom, 2017 foray;* Omphalina *8(7):8 (2017*

Andrus Voitk

necrophilic or parasitic fungal cannibals

As we have learned so often on these pages, one of the two things mushrooms do, is to decompose and eat organic matter. If the organic matter is living, the diners may be called parasites, and if it is dead, we call them saprobes. Both perform a service, breaking down the organic matter and releasing its building blocks for the formation of new living organisms. We have also learned that some decomposers are generalists, but most have specialized to a specific organic substrate and some have restricted their voracity to a single species, with which they evolve together, so that the mushroom can be identified if you know the host. Or v.v.

While we have considered eaters of many organic substrates—wood and duff being the most common—so far we have mentioned some mycophagous species in passing, but have not considered them as a group: which mushrooms digest and break down which mushrooms. This article will attempt a superficial overview of this group. You will immediately note that "group" is used to lump a very diverse collection of organisms, both morphologically and phylogenetically, into one pile, according to their dietary preferences. You will be amazed at the number of radically different

Figure 1. Appearance of the colony may identify some of the microascos fruiting on conks. For example, a green imperfect stage of Hypocrea rufa *is well known. However, Michael Beug tells me that* H. rufa *is very uncommon in North America, the name usually misapplied to a list of similar species as long as his arm. Rufa means red, making green logical; other green species get their green from envy that they are not called red when they are green.*

Figure 2. Clavulina coralloides *infected by* Helminthosphaeria clavariarum. *Only a little gray is seen on the specimen on the Left, but the swollen tips with blunting or disappearance of the typical cock's comb tufts is evidence of systemic infection. The specimen on the Right (photo, Michael Burzynski) is completely covered and disfigured.*

fungi, who have discovered the same food source—their brethern. As with other substrates, some seem to be generalists, some limited to a group, and some are very exclusive, eating only one species of mushroom: if you know the host, you know the diner, or if you know the diner, you will know the host, even if the poor chap has become unrecognizable in the process.

Many of these mycological mycophagists are microscopic in size, meaning that you may not see an individual fruiting body with your naked eye. But when they cluster around a good dining spot, they may become visible, possibly even recognizable, by their collective appearance, much like a colony on a culture medium. A good place to see such microfeasts is the tube surface of old polypores. Figure 1 shows unidentified microscopic ascomycetes that have overrun the pore surface of an old *Fomes fomentarius*, completely covering the poremouths.

Why are most of these found on the tube layer, not elsewhere? Well, the major building block of all organic matter is Carbon (C). However, for the production of genetic material, Nitrogen (N) is needed. Many fungi have evolved very clever and complicated mechanisms to increase their N supply. But it need not be so complicated or clever. If N is needed to make genetic material, it must be plentiful inside genetic material. So, why not go where genetic material is concentrated? The hymenium (fertile surface) of all fruiting bodies is full of spores and sporulating structures (basidia or asci). That is where genes are, and that is the place to dine, if N is on your menu. And if significant side benefits are better protection from sun, wind and rain, as well as a convenient launching pad for your own spores to be carried by the wind, what could be better? Simple.

Several fungi behave in the same way on other mushrooms. For example, a common sight is *Helminthosphaeria clavariarum* on *Clavulina coralloides* or *C. cinerea* (Figure 2). By the time it becomes evident at the base of the stem, the infection is systemic, and in no time is it eating away all over the hymenium. Whereas the group on polypores decomposes dead conks, *Helminthosphaeria* grows on living *Clavulina*. Like a true parasite, it eats its host and then uses the host's structure to disperse its own spores.

Hypomyces is a genus familiar to all human mycophagists because of *H. lactifluorum*, the parasite that turns a pedestrian (possibly

Figure 3. Some of our Hypomyces *species.* ***A:*** H. lactifluorum *on probable* Russula brevipes. *Note distorted development with absent or blunted gills.* ***B:*** H. chrysospermus, *a yellow to white parasite of boletes. You think you see gills? Yes, the host is* Paxillus involutus, *a gilled mushroom in the Boletales.* H. chrysospermus *is a formidable taxonomist, so do not argue with it.* ***C:*** H. hyalinus, *a whitish to translucent parasite of* Amanita *species, magnified to show the ostia. The ring is at the upper end of the photo.* ***D:*** H. leotiicola. *We have the green-capped* L. viscosa *and the yellow-brown-capped* L lubrica, *and on occasion one with greenish cap and stem, often identified as* L. atrovirens. *While the latter may well be a good species elsewhere, here* Hypomyces *can be implicated most of the time. It may be difficult to decide from the colour, but mushrooms with green stippled stems usually seem weak and sick, are often limp or fallen over, more compatible with a parasitized state.*

Figure 4. Spinellus, *possibly* fusiger. *There are several* Spinellus *species, most famous for growing on species of* Mycena, *especially* M. haematopus.*The agaric on the photo was not identified, but is not* M. haematopus. *If you look closely, you will see that the infected mushroom has fallen down, the stem pointing downwards, cap lowermost*.

even inedible) *Lactarius* or *Russula* into a delicacy. The species was described on these pages[1] and is illustrated along with a few others in the genus, in Figure 3. The infection seems to be systemic, carried to the surface from underground hyphae together with the developing fruiting body. The fruiting body becomes markedly distorted, making gills and other structures unrecognizable. Therefore, it has been difficult to recognize the host with sufficient certainty to identify it in each instance. As a result, several host species are often postulated. For some species it may be so; for others it may just be a reflection of our ignorance. A project: DNA identification of the host(s).

You get the idea that there are myriads of different small fungi that decompose other fungi. Indeed. The last in the microscopic group, now bordering the macroscopic, that I wish to introduce, is *Spinellus fusiger* (Figure 4). This is a mould attacking some species of *Mycena*. Several species of *Spinellus* are involved, and I am not aware of the degree to which they specialize.

S. fusiger is worth knowing just because it is the subject of the funniest mushroom description that I know.[2] Do yourself a favour and look up the reference on the net: Tom Volk at his absolutely sparkling best. Or did he have a particularly funny student? Whatever, the

Figure 5. Collybia tuberosa. *We have three* Collybia *species in the province (*C. cirrhata, C. cookei, C. tuberosa*), all growing on old, dead mushrooms.[3] see the reference for pictures of them, including the very uncommon* C. cookei. *Sometimes the mushroom remains are not visible. They seem to favour russulas and lactariuses in particular, but are also quite fond of the Thelephorales. We have found them on* Polyozellus *and* Hydnellum *with relative frequency. The collection on the photo is growing on an old* Hydnellum scrobiculatum. *Collybias are saprobes.*

combination worked to produce a classic in mycohumour.

A bit more macroscopic mycophagous fungi that we have encountered in NL are three species of *Collybia* (Figure 5),[3] *Asterophora parasitica* (Figure 6),[5] *Entoloma pseudoparasiticum* (Figure 7),[4] and *Entoloma abortiva* (Figure 8). Of this number, *E. pseudoparasiticum*, found on living chanterelles, may be the only one who is neither saprobe nor parasite—possibly

Figure 6. Asterophora parasitica *The name says it: this is a parasite. It seems to have infected the mycelium systemically, and once a host fruiting body is formed, grows inside it and fruits on top, putrefying the host. I first saw the species at Killdevil in 2003; it is still there—this photo is from 2015—seeming to limit itself to* Russula adusta.

Figure 7. Entoloma pseudoparasitica. *Despite its name, probably not a parasite. There is no macro nor microscopic evidence that it has caused injury to its host, the golden chanterelle, and may just use that particular genus for unknown reasons, maybe to reach higher for spore dispersal. Anybody curious? Another riddle to solve.*

just a fellow traveller. The largest parasite in this line-up is *Entoloma abortivum* (Figure 8). Its fruiting bodies do not grow on the host. Instead, it does its parasitizing at arm's length. Its hyphae grow through *Armillaria* species and distort their fruiting bodies.

For a change of speed, consider who eats old pyrenomycetes. Many species from diverse genera seem to specialize in this diet. One of the prettiest is *Merismodes anomala* (Figure

Figure 8. Entoloma abortivum. *The gray mushroom is the* Entoloma. *Its hyphae parasitize* Armillaria *species, distorting their fruiting bodies, not unlike those of other species we have seen, parasitized by other species. It is not so much a matter of size, but rather probably fruit bodies seem to have a limited way to respond to such stress.*

Figure 9. Merismodes anomala. *This is a relatively common species, fruiting on dead branches attached to living hardwood, found most commonly during spring thaw. If you examine the branch carefully, or cut it across a clump of* Merismodes, *often you will detect last year's pyrenomycetes as its substrate. This one is on old remains of the mountain alder pyrenomycete*, Melanconis marginata.

9). It grows in great clumps, but usually the pyrenomycete substrate can be made out, either nearby or beneath it, if cut across. The little cups are usually closed, but if you leave them in a cool place in an enclosed box with some moisture, they may open up for you to produce a most beautiful picture.

This brief overview of some mycophagous mushrooms encountered in our province is by no means complete. However, it should give you an idea of the diversity of organisms and diverse ways they can feed off each other.

Not that unlike our own species.

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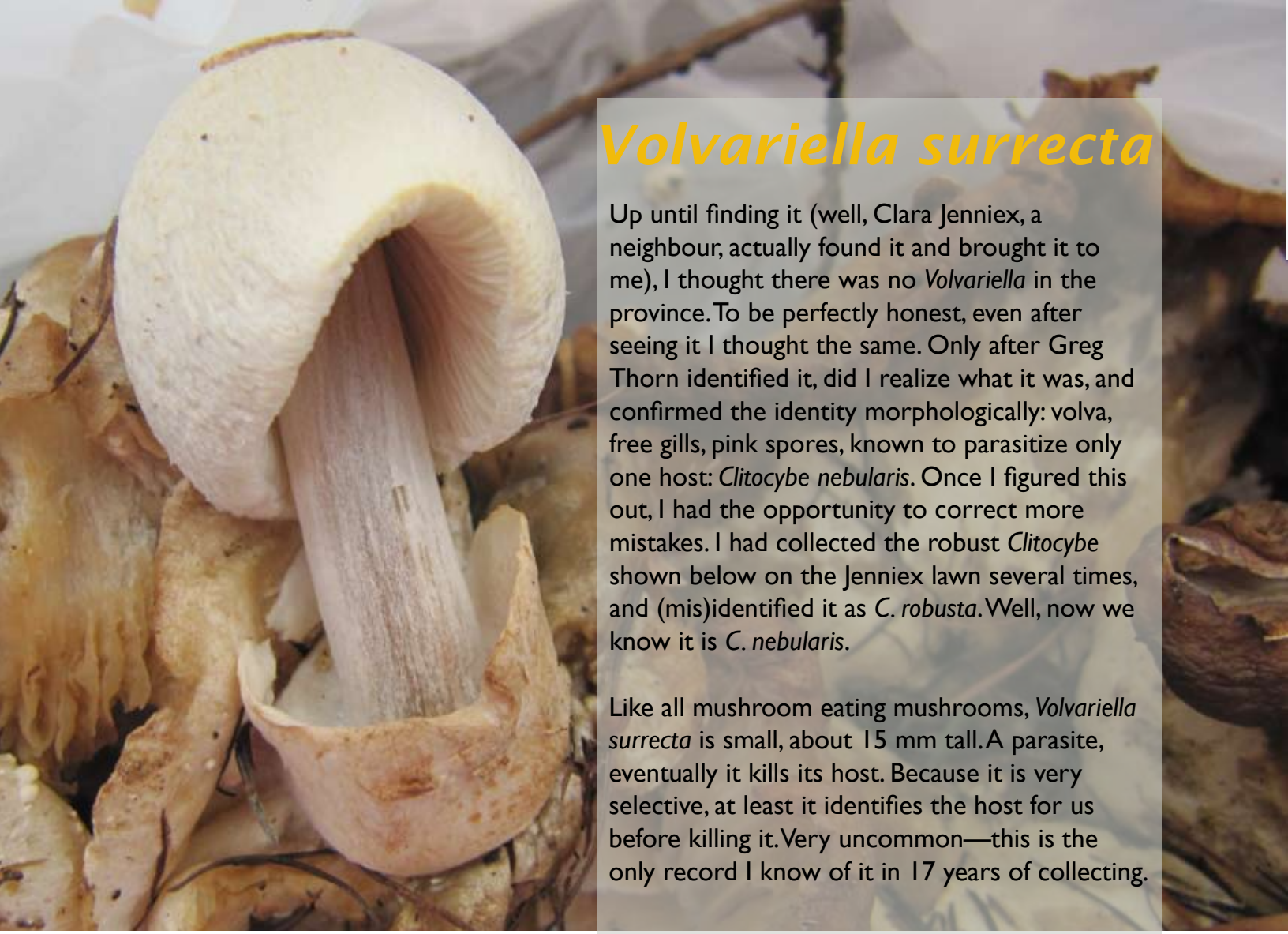


Volvariella surrecta

Up until finding it (well, Clara Jenniex, a neighbour, actually found it and brought it to me), I thought there was no *Volvariella* in the province. To be perfectly honest, even after seeing it I thought the same. Only after Greg Thorn identified it, did I realize what it was, and confirmed the identity morphologically: volva, free gills, pink spores, known to parasitize only one host: *Clitocybe nebularis*. Once I figured this out, I had the opportunity to correct more mistakes. I had collected the robust *Clitocybe* shown below on the Jenniex lawn several times, and (mis)identified it as *C. robusta*. Well, now we know it is *C. nebularis*.

Like all mushroom eating mushrooms, *Volvariella surrecta* is small, about 15 mm tall. A parasite, eventually it kills its host. Because it is very selective, at least it identifies the host for us before killing it. Very uncommon—this is the only record I know of it in 17 years of collecting.

Clitocybe nebularis is a robust, whitish *Clitocybe* with a white to light tan cap, often with a cloud-like pattern (nebularis = cloudy). Not uncommon, but not commonly recognized (by me, that is). A leaf litter saprobe, at times found in great arcs.

Andrus Voitk

The Bishop's Sketchbook

Lichens from the Pruitt-Murray collection

Nr 5

Tegan Padgett
Rachel Wigle
Yolanda Wiersma

Here we report two specimens found with calligraphically written names, but no date, location, or collector. They are presumed to be part of the 1967 Labrador expedition (see Omphalina vol. VIII, no. 1) and possibly the start of an identification process that stopped after a couple specimens. They are in the genus *Cetraria* and *Flavocetraria* which are similar in appearance but easily distinguishable by a difference in colour. Other not so obvious differences can be found in the anatomy of the thallus cortex and the shape of the conidia (asexual fungal spores). Both lichens are ground lichens that have some importance to humans, and one of them was found on the HV-GB Foray 2016.

Cetraria islandica (L.) Ach.

Commonly called true Iceland lichen, *Cetraria islandica* is a fruticose, brown-coloured lichen, often with rolled up lobes. Key features of *C. islandica* are the ciliate lobe margins and varied placement of pseudocyphellae (small openings exposing medulla) as opposed to the marginal placement of *C. laevigata*. This *Cetraria* species is distributed in boreal to arctic heath habitat and specifically found on the forest floors, often in pine forests. The important chemical test for identification of *C. islandica* is the PD test (p-phenylenediamine crystals in ethanol) which usually yields an obvious, unmistakable red on contact with the medulla (photo next page), as opposed to a negative PD reaction in *C. ericitorum*.[1] *Cetraria islandica* is one of the few lichens eaten by northern Europeans. It was ground up and added to flour to make bread or porridge, or added to mashed potatoes, giving it the name bread moss in Norway.[2] Although common, it was not found on the HV-GB Foray 2016.

Flavocetraria nivalis (syn. *Cetraria nivalis*) (L.) Karnefelt & Thell

Flavocetraria nivalis which is in the Snow Lichen group and commonly called crinkled snow lichen, is a fruticose lichen with yellow lobes full of depressions and divided dichotomously. It does not have lobes that curl inwards but instead are flatter—a distinguishing feature from *F. cucullata*. Typical habitat for *F. nivalis* is in open heath close to treeline or on tundra soil and it is distributed circumpolar arctic, boreal, and alpine.[1] Because there are no lichen substances present in the medulla, the only chemical test for this species is a KC test with a positive reaction (yellow) from the presence of usnic acid in the cortex. The Qollahuaya Andean people of Midwest Bolivia have used *F. nivalis* for altitude sickness and heart problems by consuming it as a tea.[2] This lichen was found on the HV-GB Foray 2016.

References

1. Hinds JW, Hinds PL: Macrolichens of New England. New York Botanical Garden Press, New York. 2007.
2. Brodo IM, Sharnoff SD, Sharnoff S: Lichens of North America. Yale University Press, New Haven. 2001.

Book review

Zoe Brake

Timber Press
ISBN 978-1-6046-9634-9
Softcover, 600 pp, >550 colour photographs
2017

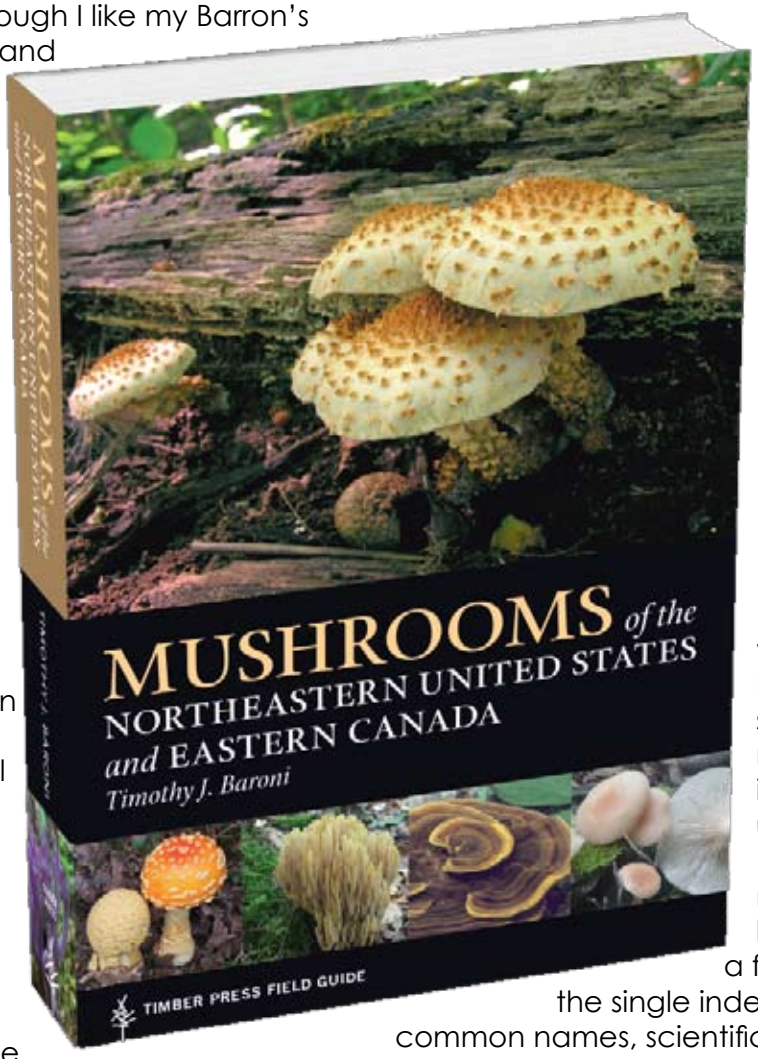
At time of writing, CAD 32.77, incl. shipping, from Amazon.ca

MUSHROOMS OF NORTHEASTERN UNITED STATES AND EASTERN CANADA

Timothy J. Baroni

This beautiful book was given to me on condition I use it during outings in the 2017 season and report on its usefulness as a field guide for identifying the mushrooms I encounter in Newfoundland and Labrador. I welcomed the task, because although I like my Barron's Mushrooms of Ontario and eastern Canada, published in 1999, I had hoped to find an updated guide for the next few decades.

During my schooling I was fortunate to have a few professors who clearly made a special—and successful—effort to make their material accessible and informative. Perusing this book, I recognized Dr Baroni as one such dedicated educator. He put forth information in a concise, systematic, and logical manner and format, perfect for every level of forager. Measuring just a shade over 21 x 15 cm, it is neither a coffee table book nor a pocket book, but at 1 kg, just squeaks by the limit for carrying into the field in backpack or mushroom basket—a successful compromise between readable print, large photos and ample room for information on the one hand, cost and portability on the other. Glossy covers and pages are designed to repel water, avoid absorbing smears from handling staining and slimy mushrooms, and withstand wiping clean.



I think this is the clearest field guide I have come across so far. Open the cover for a pictorial key to the main mushroom groups: gilled, toothed, pored, puffballs, corals, jelly, etc. Keys inside help negotiate each group logically and with confidence. Inside the back covers are equally useful illustrations of various descriptive terms used for mushrooms, and a good glossary helps to understand the special language of mycology. The introductory sections (geographical scope, fungal toxins, fungal biology, review of fungal structures, tips about collecting and identifying, a very helpful page of brief but helpful section about microscopy) are informative and understandable. Brevity may be a minus for a textbook, but is a definite plus for a field guide. I liked the single index, containing common names, scientific names and other pertinent topics or words. I did miss listing species names independently, not only as the full binomial. At times I remember only the genus or only the epithet, and would appreciate to be able to find a mushroom with either.

As it should be, the vast majority of its 1,000 grams is dedicated to descriptions, most of the time one species per page. Photos

are generous and of good quality. The print resolution, maybe a little less ideal, is probably adequate for a field guide. Descriptions follow a standard with scientific name (including authors), common name (when in common usage only), synonyms, followed by a very brief capsule description. You may think synonyms are more apt in a technical taxonomic text, but with the upheaval in name changes necessitated by new phylogenetic revelations, they are useful for finding species previously known by older names. The index also is helpful here, listing the synonyms as well as the current names. Clearly a very big effort has been made to be as current as possible. Macroscopic description is followed by habitat, range and a brief microscopic description. The comments section is valuable, discussing, among other things, similar species.

As you see, I liked this book very much and could not help feeling a certain fondness for the author and his attempts to help me use his book with maximal comfort, ease and benefit. But the acid test, how did it perform in the field? I do not feel good saying this (and in my first draught avoided doing so), but it did not work nearly as well for me as I had expected. Most of the time, I could get to the right genus on a new find, but not to the species. When I tested it with species that I did recognize, apart from very common or iconic species, the same happened. Puzzled, I opened the book at four random places: three of the four turned out to be a species not known to grow here, and for those three, it took 4, 6 and 6 pages before I got to one of our native species. Comparing our provincial species list to the species covered by the book would be more accurate, but this quick test probably identified the problem. The book is as fine as I say it is, but it does not cover the mycota of Newfoundland and Labrador! It is a mistake to equate Newfoundland and Labrador with eastern Canada ecologically. We have a different climate and much less diverse plant life than even most of nearby Nova Scotia. With this comes a different mycota: many of the species found on the mainland do not grow here, and many others, that have been able to adapt to our harsher environment, are not found in the more hospitable mainland.

Should you buy this book? My enthusiastic endorsement is yes, if you live in a region with the mycota covered therein. Next to a live mushroom expert, this book is one of the best companions to help you identify wild mushrooms. But if you live in Newfoundland and Labrador, you may wish that an erudite educator such as Dr Baroni would publish a similarly excellent clear and simple 500 species field guide specific to our region. Budding authors, are you listening?

Omphalotus illudens
(Schweinitz) Bresinsky & Basl

JACK O'LANTERN MUSHROOM

SYNONYMS *Agaricus illudens* Schweinitz, *Clitocybe illudens* (Schweinitz) Saccardo, *Lentinus illudens* (Schweinitz) Hennings, *Panus illudens* (Schweinitz) Fries

Large bright orange mushroom growing in bouquetlike clusters from fused stem bases; gills orange, crowded, decurrent; found on hardwoods stumps, at the base of standing trees, or from buried wood, especially oak

CAP 3–20 cm wide, broadly convex with low broad central bump, becoming plane and eventually somewhat funnel-shaped with age, bright orange or yellowish-orange, becoming dull orange with some brown hues in age, glabrous, moist or slightly greasy or dry, smooth and opaque. **FLESH** orange, thick. **GILLS** bright orange or becoming paler orange, sometimes beaded with orange liquid drops, decurrent, close or crowded. **STEM** 9–20 cm long, 10–40 mm broad, equal or often tapered downward, orange or pale orange, longitudinally fibrous-striate, dry. **SPORE PRINT** creamy-white. **ODOR** and **TASTE** not distinctive.

Habit and habitat densely clustered in bouquetlike fashion with the stem bases fused, on various hardwood trees, especially oak, right at the base of standing trees (usually dead ones or stumps), also from buried wood. July to November. **RANGE** widespread.

Spores globose or subglobose, smooth, colorless, not amyloid, 3–5 µm.

Comments If you find a bouquet of these poisonous mushrooms that cause nasty gastrointestinal distress, do not eat them, but do take them to the bedroom. Put them on aluminum foil on your dresser or where you can see them when you wake up in the middle of the night. Point the gills in your direction—they glow a soft greenish light called bioluminescence, basically the same light put out by fireflies. Compare with the American golden chanterelle, *Cantharellus flavus*, which is a delicacy, but do not make the mistake many have by confusing the two.

Example of full description page (reduced in size): beautiful photo(s) and ample description. This randomly chosen page illustrates a species not native in NL. This image and image of cover, previous page, supplied by the publisher.

THE MAIL BAG

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

ERRATA

Errors, last issue, in the data associated with our faculty:

Irja Saar—affiliated with the University of Tartu, not the Estonian University of Life Sciences

Vello Liiv—affiliated with the Estonian Mycological Society, not the Estonian University of Life Sciences

Greg Thorn—was participant in 2015, not absent, as reported

Dear Michael & Andrus:

A fine issue of OMPHALINA, and excellent foray report! Great job as stand-in editor! Who says it has to be an act? It was particularly nice to see input from newbies along with the regular contributors. As always, the foray was enjoyable and a wonderful learning opportunity—or re-learning for those of us of a certain age. And yes, although I have missed a few forays - 2003, 2006, 2009, 2014—with regrets for the friends and mushrooms I did not see—2015 was not one of them. I just did not take quite such a conspicuous spot in the Foray Photo as I did this year:).

Although it might be a lot harder to track down all their names, a similar compendium and thank you to the database team members over the years would be a great addition next year.

It was also VERY good to hear that Lorelei Norvell has returned to health and mycology from a serious illness.

All the best for the upcoming holidays and 2018.

Cheers,

Greg

OUR PARTNER ORGANIZATIONS

People of Newfoundland and Labrador:

- 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

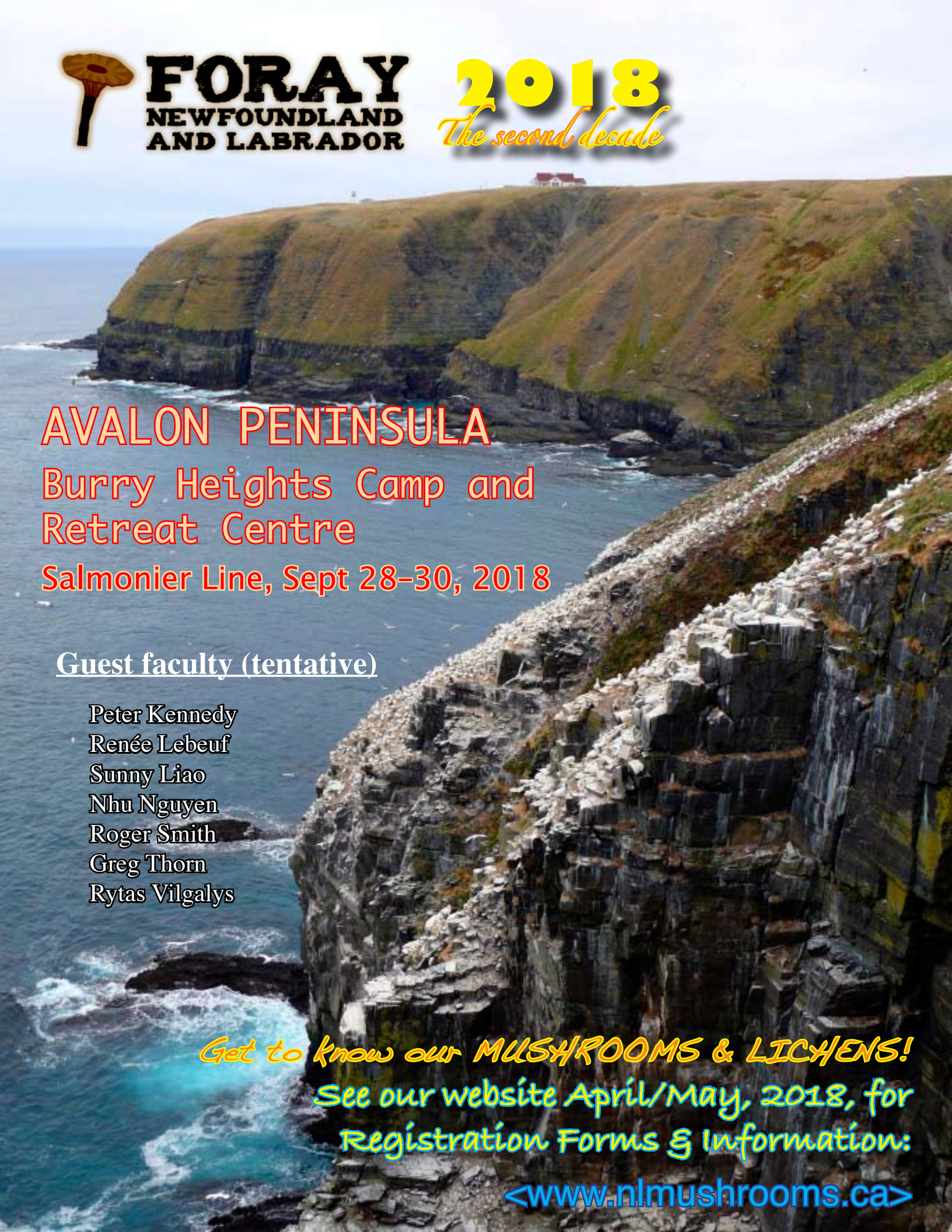
- Parks Canada
  - Gros Morne National Park

The Gros Morne Co-operating Association

Memorial University of Newfoundland

- St. John's Campus
- Grenfell Campus

Tuckamore lodge



FORAY NEWFOUNDLAND AND LABRADOR

2018
The second decade

AVALON PENINSULA

Burry Heights Camp and Retreat Centre

Salmonier Line, Sept 28-30, 2018

Guest faculty (tentative)

Peter Kennedy
Renée Lebeuf
Sunny Liao
Nhu Nguyen
Roger Smith
Greg Thorn
Rytas Vilgalys

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See our website April/May, 2018, for
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