SOCIÉTÉ MYCONB SOCIETY

Funga Scripta

SUMMER 2024
VOLUME 3, ISSUE 3

NEWSLETTER OF THE NEW BRUNSWICK MYCOLOGICAL SOCIETY

INSIDE

—

Neoboletus species found by Toni Doucette

Upcoming Events and News

Guided Walks: Spring Schedule

Fast track your mushroom learning by joining MycoNB experts on guided walks this season! **FREE for members. $20 for non-members.** To become a member, visit https://myconb.org/contribute/membership/.

MONCTON

- **Thursday, September 5 at 6pm:** Mapleton Park Rotary Lodge

FREDERICTON

- **Saturday, August 24 at 10am:** Odell Park

SUSSEX

- **Saturday, September 21 at 10am:** Sussex Bluffs Trail

SAINT JOHN REGION

- **Saturday, October 19 at 10am:** Black Beach Trail

For up-to-date info on upcoming walks, please visit the Myco NB Society's Facebook page.

MycoNB Foray:

Save the Date!

SAT, SEPTEMBER 14

Fundy National Park

Salt & Fir Lodge

This event is FREE for members!

CONNECT ON FACEBOOK

Société MycoNB Society Forum (New Brunswick mycological society)

MEET OUR TEAM

PRESIDENT Jessika Gauvin

VICE-PRESIDENT Anthony Brooks

CHIEF SCIENCE OFFICER Alfredo Justo

SECRETARY Brad Robichaud

TREASURER Michele Fullarton

MEMBERSHIP COORDINATOR Jared Scratch

SOCIAL MEDIA DIRECTOR Holly Jones

OPERATIONS DIRECTOR Samantha Steeves

NEWSLETTER COORDINATOR Matthea Schumpelt

BOARD MEMBER AT LARGE Jonathan Allport

Special thanks to Kendra Driscoll for reviewing and proofreading the newsletter!

Fungi Foray in Fundy!

Speakers, hands-on mushroom identification, sequencing specimens—oh my!

Join the MycoNB Society for the Annual Foray in Fundy National Park! We will have special permits to collect specimens for study and sequencing, so you don't want to miss out! Follow these steps to attend:

1. Become a Member

Individual, student, and household membership options can be purchased on the MycoNB website.

2. Sign Up for the Event

Sign up for the foray through Eventbrite. No purchase will be required to receive an event ticket.

3. Create an iNaturalist Account

Before the event, please create an iNaturalist account if you don't have one:

Desktop:

1. Go to iNaturalist.org/signup.
2. Fill in the fields, then click "Create an Account".
3. Remember your **username** and provide it during the foray registration period.

Full Instructions:
Click here to read Holly's post on our Facebook page!

Mobile:

1. Download iNaturalist on your phone, then open the app.
2. Top right side: Click the three-bar menu symbol.
3. At the top, select "Log in/Sign Up".
4. Log-in page: At the very bottom, look for "New to iNaturalist Canada? Sign up now!" Select this option.
5. Fill in the fields, then click "Sign Up".
6. Remember your **username** and provide it during the foray registration period.

Adventures in Mushroom Sequencing

TONI DOUCETTE | Saint John, NB

Helvella species found by Toni Doucette
https://www.inaturalist.org/observations/235943187

My adventures in mushrooming continue!

It's hard to believe that in just one year, I have progressed from being unable to identify a *Russula* and having zero knowledge of the existence of an app called iNaturalist to logging over 1,500 observations and participating in a mycological survey for Atlantic Canada as a citizen scientist! My intention was to devote all free time this year to hunting and learning, so when the call for submissions came for free unlimited samples from 2024 to be sent into Mycota for DNA sequencing, I saw it as the perfect chance to make my time and efforts count in the world of mycology!

Specimen Photography and Collection Tips

Each and every opportunity I get, rain or shine (hunters know the value of rain!), I'm out in local woods, diligently searching for new specimens to photograph and collect.

It's important to take quality pictures of mushrooms in their natural state so that other mycophiles from around the world can see important identifying features of your collection to compare to their own samples or simply to grow their knowledge base. The following guidelines may be helpful:

- Keep the specimens intact (i.e., do not detach the stem from the cap.
- Provide in-situ photos (i.e., the specimen in its natural state and habitat). Interior light will alter colours.
- Take photos from multiple angles, including the top of the cap, the fertile surface (underside), the stipe, the attachment of the gills to the stipe, the stipe base, etc.
- If possible, gather as many of the same mushroom as possible to document the stages of growth and show variation among species!

To organize my finds, I take a case with dividers (e.g., a tackle box) to keep my mushrooms sorted as I go along.

Inocybe species found by Toni Doucette
https://www.inaturalist.org/observations/235943187

Logging Specimens

When I get home, I log new observations into iNaturalist. I print off vouchers which are specific to each collection I'd like to submit. I dry my samples for 12 to 24 hours (you can cut big mushrooms in half for ease of drying) and place each sample in an unlabelled zipper sandwich bag with the completed voucher form. It's important to fill out as many fields as possible on the vouchers but certain ones are mandatory for processing. The final step is to fill out the Collection Information spreadsheet to catalogue all of your specimens. Despite a few challenges along the way, such as lost mushrooms (some dried mushrooms are so tiny!), mushrooms that become mouldy because I failed to dry them properly, as well as getting specimens mixed up and having to toss them (sadly!), I believe I've come up with a system that works well for me.

Leucopholiota species found by Toni Doucette
https://www.inaturalist.org/observations/234405534

I'll be very excited when I submit my mushrooms for DNA sequencing to Alfredo Justo at the New Brunswick Museum and equally excited for results to come in from Mycota.

I look forward to sharing interesting findings with you all! I also can't wait to see the diversity that exists here in New Brunswick!

Come Join Me!

Participating in the Atlantic Canada mycoblitz is easy! Just follow these steps:

1. Print voucher slips & post to the iNaturalist Project with voucher number.
2. Dry specimens.
3. Record the information on an Excel sheet (Use this Collection Information template).
4. Mail them to Alfredo Justo* at the NB Museum for DNA sequencing.
5. Email your spreadsheet to acmushrooms@gmail.com

You can collect as many mushrooms you want to sequence all through 2024!

*Alfredo Justo
New Brunswick Museum, Collections & Research Centre
228 Lancaster Ave.
Saint John, New Brunswick
E2M 2K8

Follow Toni's iNaturalist Observations

You can find Toni on iNaturalist as **gigglegirlfunga** and check out the many specimens she has recorded and collected for the Atlantic Canada census!

A. *Paxillus* species - https://www.inaturalist.org/observations/236635646
B. *Pholiota squarrosoides* - https://www.inaturalist.org/observations/236293203
C. *Gyroporus cyanescens* - https://www.inaturalist.org/observations/236288629
D. *Cortinarius* species - https://www.inaturalist.org/observations/236158784
E. *Amanita flavoconia* - https://www.inaturalist.org/observations/234420845

Want to join? If you have any questions on how to participate, email acmushrooms@gmail.com.

Fragrant Fungi: Why Smell Matters

MATTHEA SCHUMPELT | Newsletter Coordinator | Miramichi, New Brunswick

I've got a confession to make: I have a secret hobby besides fungi that very few know about (GASP!)—and it's all about *perfumes*.

In the past few months, I've gone down a fragrance rabbit hole, sampling whatever I can get my nose on, from Chanel and Guerlain to Le Labo and Byredo. When I'm not in the woods looking for mushrooms, you'll find me in airport duty-free shops and department stores sniffing my way through fragrances to fill my unsatiable need to know what things smell like. Naturally, this journey through fragrance has made me even more aware of the smells around me, like the honey-sweet powderiness of milkweed flowers, the vegetal astringency of tomato leaves, the warm aromatics of pine needles in the sun, and so on.

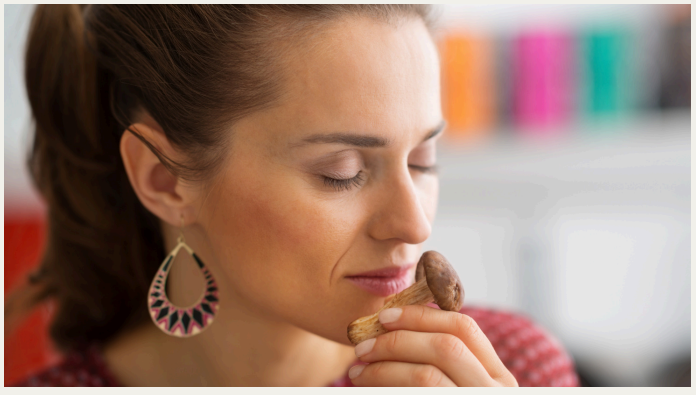
As such, scent can be powerfully evocative: It can recall a childhood memory or a certain person in our lives. It can awaken positive and negative feelings or transport us to places we've visited—even the *idea* of a place we'd like to visit.

So, what does this have to do with *mushrooms*?

We mushroom hunters use macroscopic characteristics to identify fungi out in the field. These are features visible to the naked eye, which include (but are not limited to):

- cap colour, decoration, shape
- underside structure (gills, pores, teeth?)
- gill attachment, spacing, depth, colour, width
- colour of spores dropped on gills, cortina remnants, stipe, and even on overlapping mushrooms of the same kind
- stipe texture, decorations, presence/lack of veil, annulus, or volva

Most beginners will focus on these visible features yet often forget there are two other senses that can help with ID: taste (which we will not go into today) and *smell*.



"Didja Smell It?" – Jessika Gauvin

According to T. Boniface (2021), "[s]ometimes identifying a toadstool first from other characters, and then noting its smell is the best way to remember it." I find this to be very true: Just seeing a picture of a stinky *Russula* (foetid *Russula* group) will immediately recall to mind its sickenly-sweet/rotting marzipan smell.

Yes, smell can help you identify a mushroom, especially when macroscopic clues aren't enough to help distinguish a mushroom from a similar one. Take for example two often-confused fungi: *Collybia nuda* (wood blewit) and white-purple *Cortinarius*. Should you suspect it to be a blewit, you would look for the absence of a web-like cortina or cortina remains and look for beige-buff spores lining closely spaced gills. You would take note of its colour, cap shape, in-rolled margins, and overall stature. However, some *Cortinarius* can masquerade as blewits: Before turning rusty-brown, the gills can look suspiciously beige-buff like those of the blewit. Also, tricky Corts may lose all evidence of their cortina while sharing similar physical features with blewits, making ID difficult. This is where smell can help!

Left: *Collybia nuda*; Right: Two *Cortinarius iodes/iodeoides*. Photo by Patricia Larkin, posted to Compare and Despair Facebook group

In a case like this, give your specimen a deep whiff off the cap and the gills. If it has all the characteristics of a blewit *and* smells fruity and sweet like frozen orange juice or Fruit Loops, then you most likely have a blewit. In contrast, various species of purple and purple-white *Cortinarius* can have different odours: dried apples or pears (*C. traganus*), rotten potatoes, (*C. camphoratus*), or cedar wood (*C. violaceus*) (NBM, n.d.).

Mind you, the smell test is not foolproof: mushrooms purported to have a distinct scent may not smell at all due to age, growing conditions, or the fact that it's misbehaving. Another caveat is that some of us just don't have a very developed sense of smell: How many of us randomly sniff things with the intention to develop scent memory? Despite these limitations, however, there's still value to smelling your mushrooms. It'll hone your senses as you continuously expose your nose to more and more odours and samples.

Developing Your Sniffer

Scent memory can be elusive and difficult to pin down, so remembering the smell of a mushroom can take time, exposure, and more exposure, just as it takes repeated wear of a perfume to get to know its various notes. It's like knowing the smell of CK One right away because everyone wore it from the mid 90s to the early 2000s (if you're as old as me). Some smells are so prevalent and recognizable that you can recognize them instantaneously. But, if you're trying to make sense of a smell you've never smelled before, this is where it takes time.

Get to Know Fungal Fragrances!

Good field guides will not only include the physical characteristics of a mushroom, but its odour as well. In these sections, you may notice some interesting terms, including spermatic (yes, sperm!), phenolic (chemicals/disinfectant), cucumic (melons/squashes), and farinaceous (like raw flour or flour dough). There are many more terms, but your best bet is to just get out there and smell your mushrooms! Here are some fungi that often give off distinct and identifiable scents:

- *Tricholoma magnivelare* (matsutake): spicy cinnamon plus stinky socks
- *Cantharellus* (golden chanterelles): fruity, apricot-like
- Foetid *Russulas*: sickeningly sweet almond extract or maraschino cherries
- *Collybia nuda*: frozen orange juice or Fruit Loops
- *Gymnopilus luteus*: cinnamon or anise
- *Pleurotus populinus*: anise
- *Hydnum suaveolens*: anise or peppermint
- *Lactarius helvus* (candy caps): maple syrup
- *Lactarius camphoratus*: curry
- *Craterellus fallax*: fruity, woody, earthy
- *Catathelasma ventricosum*: cucumber rind and/or raw dough
- *Lactarius glyciosmus*: coconut
- *Pleurotus levis*: cured meats; sweet, spicy
- *Lanmaoa pallidorosea*: beef bouillon

This is by no means a complete and exhaustive list. There are many fungi with distinct odour, so the next time you come across a mushroom, give it a sniff! And since smell memory (and sometimes memory in general) can be fleeting, consider creating an iNaturalist account (instructions on p. 3) to record your odorific and macroscopic observations for your personal mushroom development.

So whether you're smelling your dog's Frito paws, trying on the new Burberry Goddess Intense eau de parfum, or nose-deep in the gills of a mystery mushroom, take note of the odours you encounter. While some are more pleasant than others, honing your nose and attuning yourself to the smells around you is an easy way to further your mushroom knowledge and learning!

References/Further Reading

Boniface, T. (2020, January). The use of odours in the identification of mushrooms and toadstools. *Field Mycology, 21*(1). 28–30. https://www.sciencedirect.com/science/article/pii/S1468164120300116

New Brunswick Museum (NBM). (n.d.). Essays on fungi. *The Mycology Web Pages*. http://website.nbm-mnb.ca/mycologywebpages/EssaysOnFungi/Collecting_mushrooms_for_scientific_study/Odour.html

Preserving and Cooking Chanterelles

SHEILA FURLONG | Moncton, NB

New Brunswick is a chanterelle haven, with many varieties waiting to be discovered. These mushrooms are perfect for beginner foragers, and their versatility makes them a favourite among experienced ones too. Chanterelles pair beautifully with white wine and complement fish, poultry, and pork dishes. Their delicate flavour shines in both sweet and savoury recipes, especially when coaxed out by fats like heavy cream and butter.

Preserving Your Bounty

Chanterelles are easy to preserve, lending themselves well to pickling and lacto-fermenting. For a simple option, sauté them in butter with herbs like basil, parsley, chives, tarragon, or oregano—then freeze.

Drying is not recommended, as it can diminish their flavour and texture. If you do want to try this method of preservation, you can powder dried chanterelles for added depth in soups, stews, and casseroles, or soak them whole or chopped in vodka to create a flavourful infused liquid that is perfect for stock and sauces.

Now, let's elevate your pasta, potatoes or chicken dishes with this decadent and aromatic sauce, showcasing the earthy charm of chanterelle mushrooms.

Creamy Chanterelle Sauce

Ingredients:

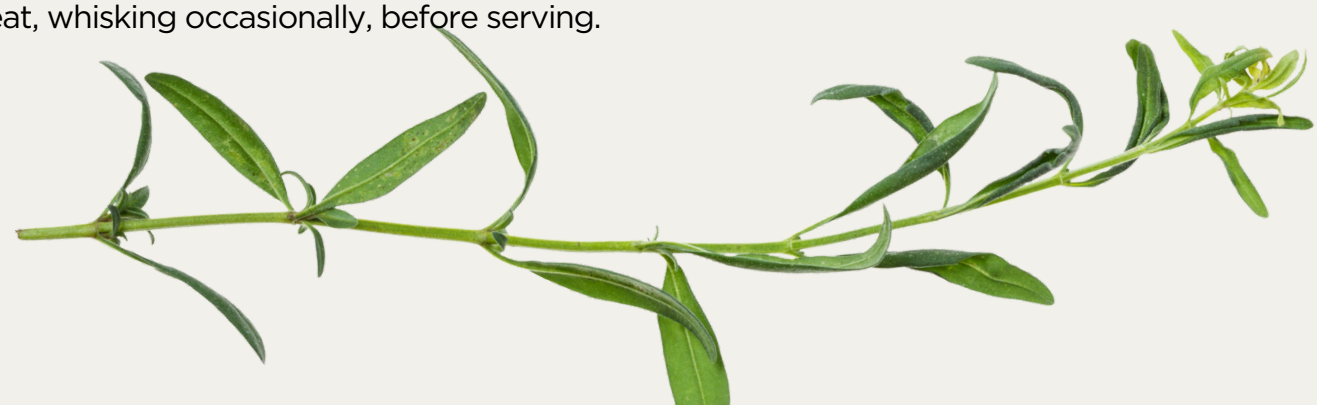
- 2 tablespoons unsalted butter
- 2.5 to 5 cups chanterelle mushrooms, cleaned and sliced
- 2/3 cup heavy cream or whipping cream
- 1/2 cup chicken or vegetable broth, or chanterelle-infused vodka
- 1 large shallot, minced
- 1 clove garlic, minced
- 2 tablespoons fresh parsley, minced
- 1.5 teaspoons flour
- 1 teaspoon Worcestershire sauce
- freshly ground black pepper
- salt
- splash of lemon juice

Instructions:

1. Melt butter in a large frying pan over medium heat. Add shallots and cook, stirring occasionally until translucent (about 5 minutes). Add garlic and cook for an additional minute.
2. Push the onion mixture to one side of the pan. Increase heat to high and add chanterelles. Cook for 2 minutes, stirring occasionally.
3. Sprinkle flour over the mushrooms and cook for 30 seconds, stirring constantly.
4. Gradually pour in cream and broth (or even chanterelle-infused vodka). Stir to combine, scraping up any browned bits.
5. Add Worcestershire sauce and cook for 2 minutes, stirring occasionally.
6. Remove from heat. Season with a splash of lemon juice, and salt and pepper to taste. Stir in parsley.

Optional: Let it Meld

For an even richer flavor, let the sauce sit for 30 minutes to an hour before serving. This allows the flavours to meld together and the sauce to thicken slightly. Reheat gently over low-medium heat, whisking occasionally, before serving.



Preparing Your Edible Mushroom Finds

ANNA RODRIGUEZ | Fredericton, NB

Have you ever tried deep frying your edible mushroom finds? Breading and deep frying mushrooms is an excellent (and often overlooked) method of preparation. When deep fried, hedgehog mushrooms taste kind of like peanut butter, and lobster mushrooms become a little reminder of the sea. Where sautéing doesn't do the trick to soften lobsters, deep frying will make them very palatable.

Since the amount of mushrooms will affect how much batter you'll have to make, here's an approximate guide to breading and deep frying:

1. Heat the oil in your deep fryer. The temperature depends on the deep fryer, but I usually fry mine between 350 to 400 F.
2. Mix all-purpose flour with salt (about 1 cup flour to 1/2 tsp salt in a bowl).
3. In a separate bowl, make an egg mixture by beating 2 large eggs with a couple splashes of cream or milk.
4. In a third bowl, pour in Italian-seasoned breadcrumbs. (I personally love the added taste of these spices in Italian breadcrumbs, but you could go with plain. I also love making homemade breadcrumbs, but any type of breadcrumbs will do the trick!)
5. Next, roll your mushrooms in the flour, then in the egg mixture. Lastly, roll your mushrooms in the breadcrumbs and coat evenly.
6. Deep fry your mushrooms until golden brown. This should only takes a few minutes.

If you still don't like the taste of cooked mushrooms, consider drying and grinding them up to make a spice. This way, you get the benefits of the mushrooms without the texture and up-front flavour. Make your own spice blend or add your mushrooms to a blend you already have.

A cost-effective way I dry my mushrooms is air-drying with drying racks. Amazon.ca has amazing five- to six-tiered drying racks fit lots of mushrooms. I use it year-round and place it in the room with my woodstove in the winter.

Top: *Craterellus fallax* (black trumpets)
Middle: *Cantharellus sp.* (chanterelles)
Bottom: *Entoloma abortivum* (shrimp of the woods)
Photos by Anna Rodriguez

Anna's Mushrooms Finds

Top left: *Hydnum* (hedgehogs); Right: *Hericium coralloides* (coral tooth)
Bottom left: *Ganoderma tsugae* (reishi); Right: *Inonotus obliquus* (chaga)
Photos by Anna Rodriguez

Hello, Late Summer Mushrooms!

JESSIKA GAUVIN | MycoNB President | Moncton, NB

As we head into late summer and into fall, keep an eye out for some of these beautiful edible mushies. As always, never rely on just one feature but look for multiple criteria.

Boletus edulis

Boletus edulis, also known as the king bolete, fruits in spring, summer, or early fall. It is characterized by the following:

- Reddish-brown cap surface
- White inner flesh
- White pores that turn yellow and then green as the mushroom ages
- Fine, white net pattern on the stem (reticulation)
- Flesh and pores do not change colour when bruised.

Lookalike:

Boletus huronensis – dense, heavy yellow flesh that stains faintly blue. Grows under hemlock. Ingestion of this mushroom is associated with gastrointestinal distress.

Agaricus campestris

Agaricus campestris, also known as the meadow mushroom, fruits in spring, summer, and fall. It is characterized by the following:

- Crowded, pink gills when young
- White flesh
- Pink gills when young; chocolate-brown gills when mature from chocolate-brown spores
- Mild, pleasant smell
- Short, chunky stem

Note: These rules work on most Agaricus as they can be hard to narrow down to species. These rules do not apply to Agaricus in the Pacific Northwest.

Lookalike:
Agaricus xanthodermus group: stains neon yellow and smells like chemicals (phenol/model glue)

Craterellus fallax

Craterellus fallax, also known as the black trumpet, fruits in mid to late summer and early fall. It is characterized by the following:

- Black, leathery flesh
- Fragrant, earthy smell
- Entirely hollow stipe
- Growing from the ground
- Usually grows in clusters

Note: There are several varieties of black trumpets; most have a smooth fertile surface. One variety has ridged gills.

Lookalikes:
Rotten, blackened mushrooms that have a bad smell and are slimy.

Hydnum sp.

Hydnum, also known as hedgehog mushrooms, fruit in late summer and fall. They are characterized by the following:

- Spines on the underside
- Spines are cream coloured
- Spines should come off easily when poked
- Wildly varies in shape and size but always grows from the ground with a pronounced stipe

Note: There are multiple species of *Hydnum* with cap colours ranging from pale tan to more orange. However, spines of *Hydnum* should always be cream coloured.

Lookalikes:
Many, including *Sarcodon* and *Hydnellum*, but none dangerous; they are simply too fibrous to eat. Being able to brush spines off with the finger is key: Lookalikes' spines will not come off.

Laetiporus sp.

Laetiporus, also known as chicken of the woods, fruit from early to late summer. They are characterized by the following:

- Orange or yellow in colour
- Clustered stack of shelf mushrooms
- Growing directly on wood
- Soft and spongey texture
- Pores on the underside

Note: *Laetiporus* species are toxic raw and must be well cooked. However, some people can't tolerate them even when well cooked. Caution is advised.

Lookalikes:

- *Hapalopilus nidulans* - does not grow in a stack.
- *Omphalotus illudens* (jack-o-lanterns), which have gills, have been mistaken for chicken of the woods due to the fact that both mushrooms are orange.

Snapshots of Summer Species

FLO THE POET | Harvey, NB

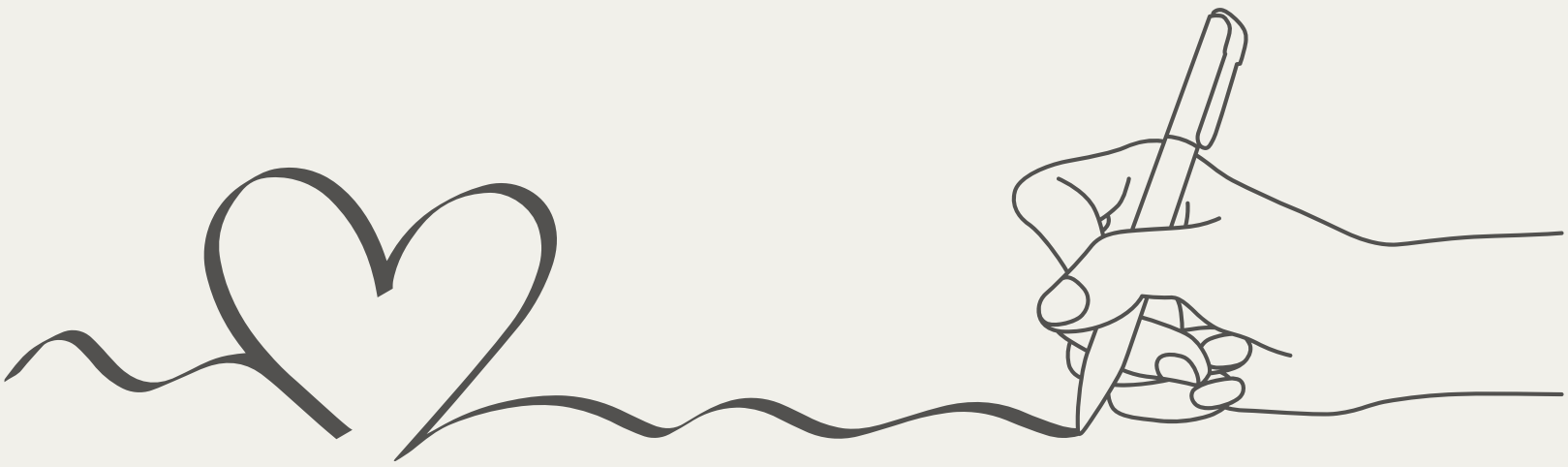
Centre: *Omphalotus illudens*
Top left: *Amanita sect. Phalloideae* (Destoying Angels group). Right: *Ramariopsis kunzei*
Bottom left: *Leotia lubrica*. Right: *Cantharellus* sp.
Photos by Flo the Poet

CONTRIBUTE TO THE NEWSLETTER!

Funga Scripta is always looking for submissions!
Topic ideas include (but are not limited to):

- Stories from MycoNB events
- Highlights on NB fungi
- Scientific processes related to fungi
- Personal accounts or stories related to mushrooming
- Poetry/prose, art, photography
- Most interesting fungus you've found
- Recipes and tips for storing mushrooms

Send your submissions to
newsletter@myconb.org



Funga Scripta is the newsletter of the
mycological society of New Brunswick, Canada.

The MycoNB Society is a federally-registered non-profit and volunteer-managed association of amateur and professional mycologists and others with an interest in wild fungi based in New Brunswick, Canada.

Donations are important contributions that support the mycological activities of the Society across New Brunswick. If you would like to make a donation, please visit
Myconb.org/contribute/donate