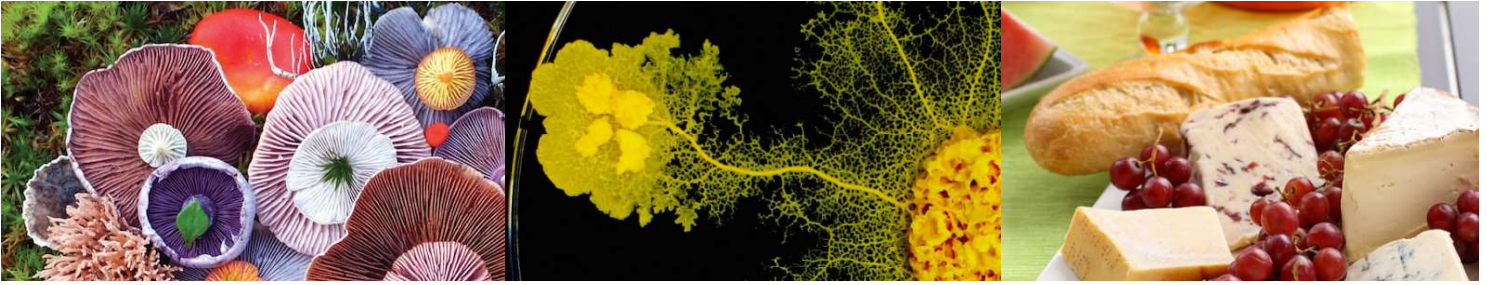


EVPP / BIOL 408-002

Mushrooms, Molds and Society

Spring 2024

M 4:30-7:10pm Innovation Hall 129, Fairfax Campus



Nature Medley, by Jill Bliss on my ModernMet.com; Physarium Polycephalum by Audrey Dussutour, CNRS, on Quanta Magazine; Cheese plate by Julie Ruble, WillowbirdBaking.com

Instructor: Dr. Natalie Howe
Office hours: online as requested
Email: nhowe4@gmu.edu

Course Description and Learning outcomes:

In this course we will explore the diverse and intriguing world of the fungi; how we interact with the fungi every day and how they shape the world around us in seen and unseen ways. Students will:

- Find and use a variety of sources including scientific sources, popular sources, and alternative ways to knowing to increase understanding of biology, ecology, and uses of fungi.
- Demonstrate understanding of fungal diversity, physiology, and role in ecosystem processes and society.
- Join a community of mycology enthusiasts who consider, appreciate, and communicate a variety of perspectives on how the lives of fungi relate to other fields.

Course Website:

Blackboard 9.1 will be used for this course. You can access the site at <http://mymasonportal.gmu.edu>. Login and click on the “Courses” tab. You will see EVPP/BIOL 408 course; username and passwords are the same as your Mason email account) You must have consistent access to an internet connection in order to complete the assignments in this course through Blackboard. Announcements, readings, lecture slides, assignments and discussion boards will be posted on Blackboard. Students should check Blackboard and their Mason email regularly for updates.

Required texts: None

Recommended readings are posted every week. Other recommended texts include:

- * Shelldrake, Merlin. 2020. How Fungi Make Our Worlds, Change our Minds, and Shape our Futures.
- * Anna Lowenhaupt Tsing 2015. The Mushroom at the End of the World
- * Keewaydinoquay Peschel 1998. Puhpohwee for the People: A Narrative Account of Some Uses of Fungi Among the Ahnishinaabeg



Course Work (Approximate)

Weekly items:

- **Class Participation** (10%). Much of the course is discussion-based and requires your input in order to be a robust and exciting experience, so students should come to class prepared with a discussion question about the topic.
- **Blackboard discussion board** (10%). The online discussion board is an important way to connect mycology with your interests and to find sources that support your ideas.

Assignments:

- **Fungus of the Day** (5%). Once, during the semester, you will start the class with information on a fungus you find intriguing.
- **Sources Worksheet** (5%). Since previous writers and speakers influence our current knowledge and future questions, it's important that our class discussions acknowledge those contributions. So we start the class with exercises that familiarize you with methods of citing sources.
- **Fungi Worksheets** (5% each x 3 worksheets, total 15%). These in-class activities will give you hands-on experience in some of the main aspects of fungal diversity.
- **Herbarium Worksheet** (5%). This activity is a way to reflect on the GMU herbarium and the importance of natural history collections in general.

- **Wikipedia editing** (5%). Students give back to the online community and elaborate on a topic in mycology not currently covered in Wikipedia
- **Mycologist Profile** (5%) This 2 page paper is a chance for you to explore some contributions of academics and non-academics to the field of mycology.

Semester-long projects:

- **GMU mycoblitiz inaturalist project** (20%). Document the biodiversity around you using i-Naturalist. All students should document 20 taxa for full credit, and we will have prizes at the end of the semester for more observations.
- **Science Communication Project** (15%). You reflect on existing science topic related to mushrooms, and will make an alternative scientific communication approach (infographic/poster, website, video) on a topic of your choosing that demonstrates understanding of the topic and that clearly and compellingly conveys the material to members of the public. This assignment includes a 2 page paper and a presentation.

Week Structure:

I think of this course in 2 parts: the “in-class” time (whether it’s online or in person) where we engage with each other and talk about mycology (a total of 3 hours per week), and the “out of class” time where you learn on your own, by reading and writing assignments (minimum 3 hours per week). I think the space where you learn on your own can be the most productive and rewarding part of the class, but I also think, since you can schedule it “whenever”, it can often get passed over for more obvious commitments. So I wanted to propose what I think is a good way to stay on top of all the parts of the class so you learn about mushrooms, molds, and society in as low-stress a way as possible.

- Reading - make an outline of the main points, and pick out one or two questions you have for classtime. There are also other optional readings if you’d like to go in depth on a topic.
- Assignments - Complete your major discussion board the Friday before class, and add discussion responses by Thursday the next week and turn in the weekly assignment on blackboard on Friday.
- In class - review the slides ahead of time, so you’re ready with questions on confusing parts, so that we can have an interactive, dynamic class experience
- Slides – I ask you to look over slides before class, so we can discuss the parts you find most interesting in class.

Course Schedule (subject to change: updated version [online](#))

Class meeting elsewhere in yellow

Week	Date	Topic	Reading due Monday	Items due Friday*
1	Jan 22	Introductions to each other and the course	Fungi in ecosystems – overview (Tsing)	Sources assignment
2	Jan 29	Basidiomycetes – lab	Naming, Counting Fungi (Blackwell, Roach)	Basidiomycetes Lab reflection
3	Feb 5	Ascomycetes & Zygomycetes lab	Biodiversity (Money)	Ascomycete Worksheet, Install R program
4	Feb 12	Assessing fungal diversity – Intro	Wood Fungi (Boddy)	Fungal Diversity Worksheet, Share Jigsaw Articles
5	Feb 19	Mycorrhizae and climate change mural	Mycorrhizae Jigsaw Readings	Inaturalist account started
6	Feb 26	Lichen walk	Lichens (Sheldrake)	Share Science Communication Idea
Spring Break: March 4-8				
7	Mar 11	Mushroom workshop	Fungal Food and Medicine (Yadav & Negi)	Wikipedia Draft Article due
8	Mar 18	Forest Mushroom Walk	Science and Listening (Kimmerer, Kearns)	10 observations on Inaturalist, Share Jigsaw Articles
9	Mar 25	Fungal Pathogens of Plants and Animals	Fungal Pathogens Jigsaw Readings	Wikipedia Final Article Due
10	Apr 1	Human diseases / environmental justice	Human Disease (Kaintz, Greenfield)	Share science communication idea
11	Apr 8	Industrial uses of fungi lecture/discussion	Fungal Futures (Sheldrake)	Mycologist Profile
12	Apr 15	Science communication projects	Research for Sci. Communication presentation	Finish I-naturalist
13	Apr 22	Herbarium Tour - Exploratory Hall 1109	Fungal conservation (Allen, Liboiron)	Herbarium Worksheet
14	April 29	Fungus picnic		

Discussion board and fungus of the day assignments will be due on different days for different students.



Hygrocybe appalachensis by Walter on NJMA(FB)



Mycena sp. by Juan Rodriguez on NJMA (FB)

Course Policies and Expectations

1. Respect: We expect all participants to treat each other with respect, and will discuss the details of that expectation in the first meeting of the class.
2. Attendance: Class attendance is important for building our mycology community, but your health comes first (mental and physical health), so please let Natalie know if you'll miss class meetings
3. Grading: The letter grade will be determined at the end of the semester by the percentage of points you earn during the semester according to the following scale: 100-90%= A 89-80%= B 79 -70%= C 69-60%= D 59% or below = F
 - a. Grades will be posted on Blackboard.
 - b. Due dates: Some assignments have due dates on the syllabus, and for other assignments, different students will have different due dates for those projects. If you need extensions, or have a conflict or other issue, let Natalie know ahead of time.
4. Communication:
 - a. Office Hours: Natalie will be available by appointment to meet with students on Mondays before class, 4-4:30pm
 - b. E-mail: This is my primary form of personal communication with students please let me know if you prefer communicating a different way
 - c. Students may communicate outside of class on a discord or other channel.



Xylaria liquidambar on a Liquidambar styraciflua by Byron Meade (FB) Kentucky, USA



Myogymnia and Lachnellula by Jeff Hollett (FB) Newfoundland, Canada



Cladonia by Darrel Thompson on Lichens Connecting People (FB)

University Policies

1. Disability Accommodation:

Disability Services at George Mason University is committed to providing equitable access to learning opportunities for all students by upholding the laws that ensure equal treatment of people with disabilities. If you are seeking accommodations for this class, please first visit <http://ds.gmu.edu/> for detailed information about the Disability Services registration process. Then please discuss your approved accommodations with me. Disability Services is located in Student Union Building I (SUB I), S 2500. Email: ods@gmu.edu | Phone: (703) 993-2474.

2. Academic Integrity

Students at George Mason University should maintain a high standard of honesty in scholastic work. Please be familiar with the University Honor Code and the guidelines regarding academic integrity. Among the conduct issues addressed are acts of academic dishonesty, including plagiarism or cheating on assignments, examinations, or other academic work, or without prior approval of the instructor, and submitting work already done for another course. Students should avoid all forms of academic dishonesty. See: <https://oai.gmu.edu/mason-honor-code/> for specific details.

3. Sexual Harassment, Sexual Misconduct, and Interpersonal Violence

George Mason University is committed to providing a learning, living and working environment that is free from discrimination and a campus that is free of sexual misconduct and other acts of interpersonal violence in order to promote community well-being and student success. We encourage students who believe that they have been sexually harassed, assaulted or subjected to sexual misconduct to seek assistance and support.

As a faculty member and designated “Responsible Employee,” I am required to report all disclosures of sexual assault, interpersonal violence, and stalking to Mason’s Title IX Coordinator per university policy 1412. If you wish to speak with someone confidentially, please contact the Student Support and Advocacy Center (703-380-1434), Counseling and Psychological Services (703-993-2380), Student Health Services, or Mason’s Title IX Coordinator (703-993-8730; cde@gmu.edu).