**Note from the presenter,** [**Ioni Wais**](about.me/ionatan)**:**

Thank you all for coming out on such a blustery night, attending this strangely-named presentation, and giving me an hour of your time. Below are a handful of slides, with accompanying captions. Short of the image sources, I haven't included a bibliography (given time constraints, and the fact that my research is ongoing) but upon request, I would be happy to pass on sources for particular facts/ideas encountered in my presentation, along with and further resources to explore at your leisure.

Many thanks to Barbara Sherriff and Michael Stewart for your correspondence, to Sherri Wretham for sending out event updates, to Andrew Bryant for tech support, and to all other MNC volunteers who helped make this happen.

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**1-Corn Smut, Fairy Rings and Ergotoxicosis: Looking at plant diseases under a different lens.** Plant diseases are a fascinating subject because they teach us about biology and cultural perspective. The study of plant diseases is called phytopathology; the anthropology of plant diseases is called ethnophytopathology. ([IMG Source](http://the-darkest-of-lights.tumblr.com/image/136995209711))

**2-The Plant Disease Triangle.** Central to phytopathology (the study of plant diseases) is the Plant Disease Triangle. It is composed of a host (e.g. *Zea mays*), a pathogen (e.g. *Ustilago maydis*) and environmental conditions (e.g. rainy *growing season*) that lead to the development of disease.

**3-Cultural perspective.** Disease is often thought about as a particular abnormal condition—a disorder of a structure or function—that affects part or all of an organism... but what does it mean for something to be abnormal, or to be a disorder? Are we injecting our own bias into science?

**4-Corn Smut (*Ustilago maydis*).** In Canada and USA, corn smut is treated with fungicides and other methods in an attempt to eradicate it from fields. Its common name implies its undesirability. ([IMG Source](http://herbarium.wisc.edu/news.htm))

**5-Biology of smut fungi.** The life cycle and biology of fungi are fascinating! Much to the demise of farmers, they are fantastic at replicating! ([IMG Source](http://www.apsnet.org/edcenter/intropp/lessons/fungi/Basidiomycetes/Pages/CornSmut.aspx))

**6-Huitlacoche.** It turns out Corn Smut is actually edible. Not only that, it's delicious and nutritious! For many farmers, it can be more lucrative than growing uninfected corn...try "Corn Truffle" on for a change. ([IMG Source](http://www.svims.ca/ff1503.pdf))

**7-Fairy rings** are another fungal phenomenon thought about as a pest, especially in lawns and golf courses. ([IMG Source](http://www.missouribotanicalgarden.org/gardens-gardening/your-garden/help-for-the-home-gardener/advice-tips-resources/pests-and-problems/diseases/fairy-rings/lawn-mushrooms.aspx))

**8-Fruiting Bodies (Mushrooms).** What the apple is to the tree, the mushroom is to the fungus. These structures serve for propagation, and are made of dense hyphae. The bulk of the fungus exists underground, in a network of hyphae known as the mycelium. ([IMG Source](http://cashmancuneo.net/fungi.htm))

**9-Fairy Rings** appear throughout Western European culture in art, folklore, mythology, and theatre. In today's age, they are common in video games, often serving magical or decorative purposes. ([IMG Source](https://commons.wikimedia.org/wiki/File%3AFairies_dancing_in_a_ring_woodcut.png))

**10-Removing fairy rings** from lawns and turfgrass is notoriously difficult. Come to think of it, the maintenance of lawns and golf courses in general is an uphill battle, originating as a way to show off status. ([IMG Source](http://royalstdavidsgolflinksteam.blogspot.ca/2014_09_01_archive.html))

**11-Lund Community Centre, working with King Stropharia.** Much like the fairies in European folklore which invite us to dance ourselves into madness, mushrooms invite us to put away our lawnmowers and join the beautiful dance of diverse and resilient ecology. (Photo: I.W.)

**12-Rye Ergot (*Claviceps purpurea*)** is fascinating to think about from a biological and historical perspective. ([IMG Source](http://www.botany.hawaii.edu/faculty/wong/BOT135/LECT12.HTM))

**13-Rye Ergot's life cycle** has secured it a place in our food supply for perpetuity. In Canada, Rye may contain up to 0.05% ergot sclerotia and still be considered top-grade. ([IMG Source](http://adlib.everysite.co.uk/adlib/defra/content.aspx?doc=100057&id=100058))

**14-Rye Ergot was a cause of devastating human disease** throughout the Dark Ages. In certain parts of Europe, mass outbreaks of ergot poisoning occurred every 5-10 years! The latest documented case was in 1951, as told in the story of *The Day of St. Anthony's Fire*. ([IMG Source](http://www.louvre.fr/en/oeuvre-notices/beggars))

**15-The identiry of this mysterious disease** was finally linked to rye ergot poisoning in 1670, and rye ergot was finally identified as a fungus in 1853. Hip-hip-hooray for science! ([IMG Source](https://en.wikipedia.org/wiki/Ergot))

**16-The scientific study of rye** **ergot** would bring forward such discoveries and isolations as histamine, acetylcholine, and vitamin D2. Its unique chemical backbone (lysergic acid) led to the development of drugs for the treatment of Parkinson's Disease, labor-inducing drugs, drugs for migraine relief, drugs for cancer of the pituitary gland, and LSD—which would go on to change the course of psychiatry and shape the counterculture movements of the 60s. ([IMG Source](http://www.chemistryviews.org/details/ezine/4214091/A_Chemical_Examination_of_the_Isenheim_Altar_Role_Played_in_History_by_Horned_Ry.html))

**17-Science is a tool** for asking and answering questions. With corn smut, for example, we can ask how to get rid of it, or how to propagate it. With fairy rings, we can ask how to keep it out of golf courses, or we can ask if golf courses are sustainable. With rye ergot, we can ask how to eradicate it, or how to use it to bring forth a plethora of medicines. Science as a tool can help us answer all these questions, but the questions that we ask are ultimately up to us. ([IMG Source](https://veganethos.wordpress.com/2014/12/28/sentience/))