Background:
- Fungi are filamentous, or sometimes unicellular, heterotrophic organisms with absorptive nutrition, and many fungal species (e.g., mycorrhizal forms) are essential symbiotic partners of vascular plants, providing them with nutrients such as phosphorus, while others are key decayers of organic matter that benefit the biosphere by cycling carbon.
- A wide range of natural communities exist in Indiana, and some areas in the state support high levels of plant diversity. For example, over 1,100 plant species have been documented within Indiana Dunes National Lakeshore. Considering the tight linkages between vascular plants and their fungal counterparts, a high level of fungal diversity might also be expected across the state.
- We examined numerous digitized records of fungal specimens available online in a public database. To supplement these data, we carried out online searches of records of fungi from the state in the scientific literature, including a wealth of digitized publications from the Proceedings of the Indiana Academy of Science spanning from 1894 to 1982.

Methods:
- Fungal specimens housed in universities, fungaria, and natural history museums across the United States were searched for specimens from Indiana on the Mycoportal Collections data portal (http://mycoportal.org), a Symbiota software database that currently contains over 2.3 million records.
- Records of Indiana fungi from MyCoPortal were supplemented with those from the scientific literature, and a number of historical mycological publications containing records of Indiana fungi were accessed online from the digital archive of the Proceedings of the Indiana Academy of Science (https://journals.iupui.edu/index.php/ias/index).
- A list of scientific names were then compiled from all the records of Indiana fungi recovered, and the current taxonomic status and synonymy for each species were verified using the online fungal nomenclature database MycoBank (http://www.mycobank.org), and the system of classification followed that outlined in MycoBank.

Results:
- The species included on the Indiana checklist represent three major phyla (Ascomycota, Basidiomycota, Chytridomycota, Zygomycota) in the Eumycota (the true fungi) and one major phylum (Oomycota) in Chromista (organisms with fungus-like life cycles outside of the Eumycota, many of these being plant pathogens).
- The Indiana checklist contains a number of species that have importance to humans, such as important pathogens of agricultural crops (e.g., Magnaporthe oryzae), deadly poisonous mushrooms (e.g., Amanita bisporigera), and choice edibles (e.g., Morchella angusticeps).
- Thus far, over 3000 records of fungi occurring in Indiana have been recovered from MyCoPortal and the scientific literature, and we have begun to compile a list of over the 2000 fungal species represented in these records that will be presented in publication submitted to the Proceedings of the Indiana Academy of Science.

Citations: