WE ARE PLEASED TO ANNOUNCE A SEMINAR PRESENTED BY

Andrew N. Miller, Ph.D.
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“Fungal diversity in Illinois caves and environmental factors that influence the growth of the bat-killing fungus, *Pseudogymnoascus destructans*”

Thursday, June 16, 2016 at 9:00 AM
Astellas Conference Room, SLSRC 3410/3430
Refreshments will be served at 8:45 AM

*Pseudogymnoascus destructans* continues to devastate North American bat species since its introduction to New York in 2006. Our research focused on determining the fungal diversity in caves and mines throughout Illinois with the goal of detecting the first occurrence of *P. destructans* in the state. We also investigated the effect of biotic and abiotic factors on *P. destructans* and the potential of trans, trans farnesol (a *Candida* quorum sensing compound) as an effective bio-control agent for *P. destructans*. Over 250 species of fungi, including *P. destructans*, were identified from 2,849 cultures isolated from ten areas during this three-year study from 2012-2014. *Pseudogymnoascus destructans* is a persistent invasive that can utilize the majority of nitrogen sources and complex carbon containing substrates found in caves, tolerate elevated levels of inhibitory sulfur compounds and calcium, grow and sporulate over a wide pH range, and express a yeast phenotype when grown within a reduced environment. It also demonstrates greater sensitivity to trans, trans farnesol than its closely related species warranting further study as a bio-control agent.

**Bio:** Dr. Andrew Miller is a Research Professor at the Illinois Natural History Survey at the University of Illinois Urbana-Champaign. His primary research interests focus on the systematics and biodiversity of a broad range of fungi, but he is particularly interested in the evolution of wood-inhabiting ascomycetes. Currently, he is involved in research projects on the systematics of several groups in the Sordariomycetes, the biodiversity of soil fungi, and a large-scale inventory of Great Lakes fungi. His research employs traditional taxonomic techniques such as field collecting, microscopy and culture in artificial media, while incorporating the latest technology in digital imaging, georeferencing and high-throughput DNA sequencing. Dr. Miller also serves as the Director of the Fungarium/Herbarium and Curator of Fungi for the Illinois Natural History Survey and the University of Illinois collections.