GEORGE MASON UNIVERSITY
COLLEGE OF SCIENCE
BIOLOGY DEPARTMENT SEMINAR
Spring 2015

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Gantz Family Collections Center, Science & Education
The Field Museum

"New approaches to estimate and catalog the diversity of fungi on Earth"

Fungi are estimated to contain more that a million species, but only 100,000 species are currently known. Novel statistical approaches allow to more accurately predict fungal diversity and hence focus on targeted inventories, as shown based on examples from the large lichenized families Graphidaceae (Ascomycota) and Hygrophoraceae (Basidiomycota). The example of the recently discovered fungal class Archaeorhizomycetes shows how next-generation sequencing technology offers the possibility of cataloguing a large number of undescribed fungal species based on molecular data. With a large number of occurrence data now available through public repositories such as GBIF, predictive niche mapping based on confirmed species occurrences can be used as a tool to remotely assess the accuracy of taxonomic identifications, as exemplified by the lichen fungus Usnea longissima (Ascomycota: Parmeliaceae). Together, these tools provide exciting opportunities to make a global inventory of fungi a task possibly to be completed within the next five decades.

TUESDAY April 14, 2015

3:00-4:15 PM

Johnson Center Meeting Room F