

Macrofungi Collection Consortium – Progress in Digitization Efforts

- 1.15 million Macrofungi specimens assembled in MycoPortal (ca. 733,000 specimens newly digitized, about 133,000 more than proposed)
- More than 75,000 ancillary data items digitized including photographs, notecards, spore prints, drawings, and paintings
- 132 undergraduates trained, plus many graduate students and recently graduated employees
- Goal to complete digitization by June 2017
- Georeferencing and data improvement are ongoing

Cortinarius Athinsonianus Sn. 15340
Spore 11-15 x 7-8.5 μ, broadly inequilateral, sides sinuate, ovate in face view and apically approximating broad base, coarsely roughened, dark brown to fuscous brown (in KOH); basidia 36-47 x 10-13 μ, hyaline in KOH (none with colored granules seen), spores with hyaline highly refringent granules, pleuro- and cheilocystidia none seen; gill trama subparallel, hyaline in KOH; petiole trama pyramidal, homogeneous beneath a gelatinous cuticle coating the proplectid in KOH; clamp connections present, cuticular hyphae very narrow (2-4 μ)



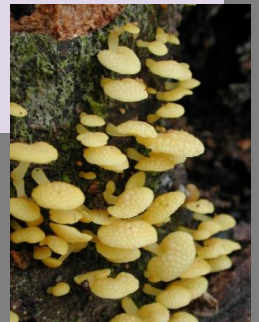
Research Uses of Data

- Mycota of North America project involving collaboration between professional mycologists and citizen scientist mycology groups
- aDIV Project: Analyzing the rates of diversification of Agaricales
- Field Guide to Northeastern North American Fungi
- Biogeographical/phylogenetic study of the genus *Amanita* in Australia and Southern South America
- Study of potential temporal shifts in basidiome production times across North America in the genus *Gyroporus*
- MycoPortal has been cited in at least six articles describing new species or revising existing ones
- Researchers are finding our specimens through the portal and contacting us for loans targeting specimens that previously had no database record



Management and Oversight

- Comprehensive project manual
- Small group training offered to all participants
- Staged record creation
- Record completion strategy
 - Centralized record completion staff
 - Crowdsourcing and on-site volunteers
 - Fieldbook usage
 - Semi-automated Workflow for Record Creation (SWORC)
- New features in Symbiota to enhance SWORC
 - Record sorting by user-defined criteria
 - Incorporation of SALIX technology



Sustainability Plan

- Integrate with other big data repositories and initiatives
- Involve mycological organizations in long-term oversight
- Keep the MycoPortal central to the Mycota of North America Project
- Build a world-wide mycological data portal through discussions with international organizations
- Encourage periodic supplements from NSF for adding additional collections and also for technology upgrades



Lessons Learned

- In-person training is important to build a sense of community in the project – this was one of the best things we did!
- Decentralize the digitization work -- each institution should do all of the various tasks for their own specimens
- Insist on the submission of regular reports from participating institutions
- Give institutions more flexibility in assembling their labor force for the project – dependence on undergraduates is not always feasible.

