

PROPOSAL FOR NATL \$500 MINI-GRANT

Title: FUNGAL DIVERSITY IN THE NATL

Summary: Collect and identify macrofungi in the NATL, and record fungal diversity and fruiting times.

Starting date: April 24, 2013

Completion date: Oct. 23, 2013

Project description:

We are four students who took the graduate Mycology class with Dr. Matthew Smith in Fall 2012. We propose to collect and inventory fungi with macroscopic fruiting bodies in the Natural Area Teaching Laboratory. The objective is to record the diversity and fruiting times of macrofungi. This survey will serve as a baseline to compare against future fungal collections to determine if the fungal community at NATL changes over time due to changes in temperature or rainfall. The knowledge and photographs generated through this work will be useful for the NATL website, NATL public outreach activities, and for citizens and scientists studying insect and plant diversity at NATL.

From April 24 to October 23, 2013, at least one of us will scout for mushrooms once per week in each of the NATL ecosystems, but collecting frequency will depend on fruiting. We will meet once a month to identify our mushrooms to species in the Mycology Lab. Our collections will build on the specimens and database that we assembled during Fall 2012 as part of the Mycology course in the Department of Plant Pathology. Dr. Smith will provide microscopes and mycological resources to aid identifications. He will also make equipment available in the event we wish to perform DNA extractions, PCR, and electrophoresis to confirm identifications.

Fungal collecting is unobtrusive and we expect no potential negative impacts on NATL. Mushrooms are the ephemeral reproductive structures of fungi, so harvesting them should not harm the bulk of the organism (the mycelium) that is present in the wood, leaf litter, and soil. All specimens will be photographed in the field and dried in the mycology lab. Representative specimens will be deposited in the UF Mycological Herbarium (FLAS), where they will be permanently preserved and available to future researchers. We will deliver the inventory of fungi to the NAAC by Oct. 31, 2013.

Designated leader of the group/classification:

Sonja Mullerin (smullerin@ufl.edu), M.S. student, Forest Pathology, SFRC
P.O. Box 358378, Gainesville, FL 32635, tel.: (352) 505-3982

Other members: **Kshitij Khatri**, M.S. student, Dept. of Plant Pathology, kkhatri@ufl.edu

Naweena Thapa (naweena.thapa@ufl.edu), M.S. student, Dept. of Plant Pathology, 2811 SW Archer Rd., #D-29, tel: (352) 514-9892

Nina Zagvasdina (ninaz89@ufl.edu), M.S. student, Entomology and student in Doctor of Plant Medicine program, Dept. of Plant Pathology

Project adviser: **Dr. Matthew Smith**, Assistant Professor, Department of Plant Pathology, 2517 Fifield Hall, (352) 273-2837. Email: trufflesmith@ufl.edu

Budget: The \$500 from the grant will be used for the following supplies and services:

- Microscope supplies (slides, coverslips, stains, dropper bottles) \$ 50.
 - Collection supplies (plastic bags, wax paper, wax paper bags, etc.) 100.
 - DNA sequencing, which presently costs \$6 per sample.
DNA sequencing will be done when necessary to identify a sample to species 350.
- Total: 500.00

Provision for periodic communication with NAAC administration:

The group will submit progress reports to NAAC administration monthly or as appropriate. We will take pictures throughout the project.

Team leader: _____ Date: _____

Sponsor: _____ Date: _____