Herbarium Volunteer Luncheon Lectures
Wednesdays at noon, Fall 2009

The Herbarium Luncheon-Lecture Series is held in the Herbarium Conference Room from 12:00 noon until 1:00 p.m. Please bring a lunch—hot beverages and snacks will be provided. All volunteers and staff are welcome.

Sept 30: "Serpentine soils and the ecology and evolution of oak ecosystem mycorrhizal symbioses" — Sara Branco, Ph.D. Candidate, University of Chicago. Serpentine soils are extreme environments, rich in toxic heavy metals and poor in nutrients. Serpentine soils exert strong selective pressure on plants, and serpentine floras often exhibit low diversity, but strong endemism (restricted ecological or geographic range) and ecological variation within species. Although the majority of serpentine plants are associated with mycorrhizal fungi, very little is known about serpentine fungi. Serpentine adaptation in fungi has been suggested and linked to plant tolerance to serpentine environments. However, evidence is still scant and it is not clear if and how fungi evolve in response to serpentine environments, nor if they play a particular role in allowing plants to colonize serpentine soils. In this seminar, Sara will present her research, which utilizes field, greenhouse and molecular approaches to understand ecological and evolutionary patterns of ectomycorrhizal (ECM) fungi and their host, *Quercus ilex* subsp. *ballota,* from serpentine forests in Portugal. Exploring adaptation in both partners of this mycorrhizal relationship is ideal to fully understand tolerance to serpentine soils.

Oct 28: "Hybridization among black oaks of the Chicago region" — Andrew Hipp, Arboretum Plant Systematist and Herbarium Curator. Understanding the taxonomy of black oak relatives in the upper Great Lakes region is key to understanding our wooded ecosystems. Previous work at the Arboretum has shown that the Eastern North American scarlet oak (*Quercus coccinea*) is genetically distinct from both Hill's oak (*Q. ellipsoidalis*) of the North American Great Lakes region and the more widespread black oak (*Q. velutina*) and suggests that there has been hybridization between Hill's oak and black oak. In this seminar, Andrew will present ongoing molecular genetic work into the evolutionary relationships among New World oaks and hybridization among black oak relatives of the Western Great Lakes region. The seminar will include new findings on the evolution of ecologically important leaf traits and taxonomy of Chicago region oaks.

Dec 2: T.B.A. – A great lecture planned for this day has been rescheduled to Spring, 2010. The December lecture will be announced soon!