

Betsy Arnold PhD; Professor, University of Arizona CALS, School of Plant Sciences

Fungi, on average, have a bad reputation: they invade your toenails, your wounds, your pet's lungs, your plants. And, as the saying goes 'they will kill'. 'They do include the bad and the ugly,' our speaker Betsy Arnold PhD might protest, 'but they include the good as well!'. There are a gazillion fungi species which are benevolent and even critical for the plant life on which human sustainability depends, and some of them are even edible. Well, perhaps not gazillion but an estimated 5.1 million species of fungi are projected to exist, and chances are many more will be discovered with time and molecular techniques. So, inasmuch as there are so many kinds of fungi, many people are needed to study them. Betsy Arnold, based at the University of Arizona, is not only one of these people...but she leads a small army of fungiologists (or is it mycologists? Ask Prof. Pryor) to discover fungal biodiversity. In trying to understand who Betsy Arnold is, one needs to look online* to discover that she is a multi-faceted humanist, scientist, hiker, animal lover, and above all a people person (just look at the rich and varied array of pictures* filled with her team). From high school students, to Native American students at Dine' College, to world-wide collaborators, to her lab team members at the UofA, Dr. Arnold balances the social and the scientific with a laser-focus on her research objectives: *"to study ecological and evolutionary aspects of plant-fungal symbioses"*, using *"classic microbiological methods, ecological sampling techniques, molecular tools, and the robust framework of phylogenetic biology"*. To carry out this wide-ranging spectrum of research, the Arnold team conducts lab work and extensive field research in areas *"ranging from Arctic tundra to lowland rainforests"* and focuses on topics that range from bacterial symbionts of fungi to the effects of soil-borne molds on tropical forest dynamics.

In today's seminar, Betsy will share with us her latest discoveries and her recent sojourns in exotic places, and in so doing will engulf us with her enthusiasm and passion using interdisciplinary approaches to answering challenging biological questions.

*<https://www.ncbi.nlm.nih.gov/pubmed/21613136>

<https://cals.arizona.edu/mycoherb/arnoldlab/funstuff.html> *<http://www.arnoldlab.net/>

***<http://science.sciencemag.org/content/338/6106/485.full?rss=1> <https://twitter.com/betsyarizona?lang=en>

