



**Friday, August 10, 2007: 8:00 AM-11:30 AM**

## **A2&7 (San Jose McEnergy Convention Center)**

### **Biodiversity and Ecosystem Restoration in a Changing World**

Human population growth and increased land-use change and natural resource consumption have led to ecosystem degradation as well as loss of species and fragmentation. Humans are significantly changing our world often with negative repercussions such as species extinctions. As biodiversity declines, most conservationists and scientists have wanted to determine what happens to ecosystem function as species are lost. Ecosystem restoration projects offer an exciting opportunity for exploring the alternative, innovative question: what happens to ecosystem function as additional species are added to a newly restored system? This symposium will address key questions about biodiversity and ecosystem restoration and investigate how to incorporate our understanding of the role of biodiversity in ecosystems to improve restoration efforts. We have chosen two key questions of interest to ecologists and restoration practitioners: How does increasing species diversity affect the provisioning and stability of ecosystem functions? Can ecosystem restoration be an effective tool to protect and preserve biodiversity? In this symposium biodiversity will be broadly defined to include species and functional diversity. We will examine the role of biodiversity in a broad spectrum of restored ecosystems including wetlands, prairies, cloud forests, temperate forests, and the Arctic. Given the focus on diversity of this symposium, it is fitting that this symposium will also feature a diversity of speakers including international scientists. The speakers represent both established ecologists as well as members of the next generation of scientists facing the challenges of ecology in a changing world. Speakers will talk about topics of general interest supported by examples from their work. This symposium is meant to integrate biodiversity and ecosystem function (BEF) with restoration ecology and understand how each field can benefit from or contribute to the other, and how both fields can help direct human activities toward a more sustainable future. This symposium will involve exchanges that will clarify the role of biodiversity in restorations and enlighten future restoration efforts as well as biodiversity conservation efforts. The conclusion of the symposium will be a brief discussion synthesizing the main highlights of the symposium followed by a general discussion with the audience.

Organizer: Ariana Sutton-Grier, Duke University

Co-organizers: Justin Wright, Duke University  
Roberto Lindig-Cisneros, Universidad Nacional Autonoma de Mexico

Moderator: Justin Wright, Duke University

- 8:00 AM Introduction: Can 15 years of biodiversity-ecosystem functioning research contribute anything useful to restoration ecology?  
**Justin Wright, Duke University**
- 8:20 AM Using climate change to restore biodiversity  
**Terry Chapin, University of Alaska**
- 8:40 AM A world preoccupied with ecosystem structure: moving toward a more dynamic approach to restore biodiversity  
**Margaret Palmer, University of Maryland**
- 9:00 AM The effects on understory vegetation of alternative restoration treatments in temperate forests of western Mexico  
**Roberto Lindig-Cisneros, National University (Mexico) or Universidad Nacional Autonoma de Mexico, Arnulfo Blanco-García, National University (Mexico) or Universidad Nacional Autonoma de Mexico**
- 9:20 AM Lichens and Biological Soil Crusts in Ecological Restorations: Where, When, and Why?  
**Susan Will-Wolf, University of Wisconsin Madison, Matthew A. Bowker, Northern Arizona University**
- 9:40 AM Break
- 9:50 AM Restoring biodiversity and ecosystem functioning in prairies: do the two necessarily go together?  
**Amy Symstad, USGS Black Hills Field Station**
- 10:10 AM Restoring biodiversity and ecosystem function in rapidly-changing salt marshes  
**Joy Zedler, University of Wisconsin Madison, Gary Sullivan, The Wetlands Initiative, Inc., John C. Callaway, University of San Francisco**
- 10:30 AM Plant functional diversity and the restoration of riparian wetland ecosystem function  
**Ariana Sutton-Grier, Duke University, Justin Wright, Duke University, Song Qian, Duke University, Curtis Richardson, Duke University**
- 10:50 AM Ecological functional assessment and biodiversity as indices of restoration in the Mesopotamian marshes of southern Iraq  
**Curtis Richardson, Duke University, Najah A. Hussain, University of Basrah**
- 11:10 AM Conclusion and Synthesis  
**Justin Wright, Duke University, Amy Symstad, USGS Black Hills Field Station, Louise Jackson, University of California Davis, James M. Bullock, Centre for Ecology and Hydrology, Katia Engelhardt, University of Maryland Center for Environmental Science, Ariana Sutton-Grier, Duke University, Emily Bernhardt, Duke University**