



NIMBioS

National Institute for Mathematical
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NIMBioS Interdisciplinary Seminar

Dr. Rosemary Gillespie

Environmental Science

University of California, Berkeley

3:30 p.m.*, Thursday, February 9, 2012

NIMBioS, Blount Hall, 1534 White Ave, 4th floor

“Community assembly across an island chronology”

Recent years have seen a tremendous growth in both micro-evolutionary and ecological understanding of biodiversity, with the former allowing unprecedented insights into mechanisms of diversification, the latter yielding general predictions as to how communities are assembled. Linking processes that can be observed over recent timescales to those that are apparent over deeper time periods remains problematic. In this talk I will provide an ecological and micro-evolutionary perspective on patterns of biodiversity generated over evolutionary timescales. I use the model system of the chronology provided by the islands in the Hawaiian archipelago to examine snapshots of evolutionary history in micro-evolutionary and ecological contexts. I will use this system to examine: (1) the role of population structure and adaptive plasticity in shaping patterns of differentiation and speciation; and (2) patterns of species accumulation and decline over time, and how this can be influenced by the rate of diversification. Finally, I consider how change in the rate of species arrival due to human activity has affected the original dynamic of these island communities.

**Join us for refreshments in the NIMBioS Lobby on the 4th floor at 3 p.m.*

For more information about this and other NIMBioS Seminars, visit

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