DEPARTMENT OF ECOLOGY & EVOLUTIONARY BIOLOGY

Dr. Eben Broadbent – University of Alabama
Ecology and conservation across spatial and temporal scales

We live in an era of unprecedented environmental change, now referred to as the Anthropocene. Dr. Eben Broadbent, director of The Spatial Ecology & Conservation (SPEC) Lab at the University of Alabama, will be presenting on his research to better understand the implications of these environmental changes, using geospatial analysis and remote sensing methods that span spatial scales from individual leaves to ecosystems to continental scales. His presentation will highlight his research: (a) using fusion of airborne hyperspectral - LiDAR data to model leaf ecophysiology in a Hawaiian rainforest, (b) using Landsat satellite imagery to map selective logging across the Brazilian Amazon, and (c) understanding how edaphic and climatic factors determine secondary forest regeneration rates, scaling from individual stems to Neotropical scale modeling and remote sensing studies. He will conclude with discussing the transformative aspects of new technological advancements, including unmanned aerial vehicles with multi-spectral and LiDAR capabilities, as well as 3D soundscape recorders and camera traps, and how these can be used to better understand human-environmental interactions and ecosystem degradation in tropical biodiversity hotspots.

RESEARCH TALK – Monday Feb 22; Room 27, Alumni Memorial Bldg; 4:30 – 5:30 PM.