**A study of landscape-level habitat relationships between birds and vegetation on the Modoc Plateau  
  
Presenter's Name:** Jaime Ratchford  
**Presenter's Company/Employer:** California Department of Fish and Wildlife  
**Presenter's Title:** Environmental Scientist  
**Topic:** Technology in natural areas conservation   
**Proposal Type:** Individual Presentation  
 **Abstract:**Occupancy models often provide easy to interpret variables but are difficult to translate into spatially explicit information at a landscape-level. The California Department of Fish and Wildlife Vegetation Classification and Mapping Program is examining the relationship between wildlife communities and how these relationships can be extrapolated across a large geographic area using fine-scale vegetation mapping in the Modoc Plateau. The Modoc Plateau is an area of California with a low human population, yet strongly affected by human-caused disturbances and rapid changes in vegetation patterns. Vegetation classification and mapping of 1.2 million acres of this region began in 2016, providing quantitative spatially explicit vegetation information to be co-analyzed with high-density bird survey data collected in the 2018 and 2019 field seasons. Field crews collected bird occupancy data using digital recorders at 308 sites during the breeding season in 2018 and 2019. Sites were selected according to a stratified sample allocation covering 15 of the most common terrestrial and wetland vegetation types in the ecoregion. These data are being used to build and test a series of occupancy models for birds of the area, including the declining greater sage-grouse, in order to clarify landscape-level habitat relationships between bird species and regionally important vegetation types. This study is expected to have a significant impact on statewide wildlife habitat assessment and will revise and refine current habitat modeling practices and assumptions state-wide.