RECENT ADVANCES IN THE ANALYSIS OF OCCUPANCY AND ABUNDANCE DATA IN RESPONSE TO MANAGEMENT ACTIVITIES

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Recent advances in the analysis of occupancy data collected from repeated visits to sampling stations will be presented along with an example analysis of avian community responses to prescribed fire. The occupancy analysis is a Bayesian hierarchical model, allows fixed and random effects, and is a composite analysis that allows researchers to estimate management effects for rare species as well as community level indices such as species richness. Additional examples of applied research projects that have used Bayesian hierarchical models will be briefly discussed to demonstrate the flexibility of the method and

introduce the audience to techniques they may not be familiar with. Additionally, an example using variable circular plot, i.e., distance data, will be presented demonstrating an analysis of red squirrel (*Tamiasciurus hudsonicus*) densities in response to prescribed fire. These methods are appropriate for studies designed to investigate the impact of management practices on wildlife species and represent improvements over previous techniques.