Title: Survival Analysis for Avian Ecologists: Moving beyond Mayfield

Workshop description (500 words max):

Proper estimation of survival rates is critical for understanding many topics that are the focus of avian ecologists, yet the methods for obtaining such estimates are varied and can be challenging to learn. Moreover, survival analyses require different assumptions and considerations relative to other types of modeling approaches that are commonplace in avian ecology. In this workshop, we will focus on training participants in modern statistical approaches for quantifying survival during two important periods of the annual cycle of birds: the nest cycle, and the post-fledgling period.

Workshop participants will receive hands-on instruction regarding two distinct modeling approaches important to avian ecologists. In the first half of the course, modern approaches to developing and testing nest survival models will be taught using Program MARK and RMark, in addition to logistic exposure models in R. In the second half, survival analyses with Cox Proportional Hazards models will be taught, including instruction on the use fixed and time-varying covariates and approaches for dealing with censoring, again using R. Within each component, discussion of common study design considerations (e.g., sample sizes, sampling frequency) will be included, and participants will have time to work through their own datasets.

Workshop participants are expected to have working knowledge of R and a general background in statistical modeling. Attendees are expected to bring their own laptop loaded with relevant open source software and their own dataset(s) for use in the course, and all participants will receive a set of course notes and annotated programs for worked examples.

Preferred timeslot: before the main conference

Preferred duration: 8 hours (0800-1200, 1300-1700)

Space and/or resource requirements:

Tables and chairs for up to 50 participants

Projector and screen

Power outlets, extension cords, and/or power strips for up to 50 participants

wi-fi for installation of statistical packages for conducting exercises

Max number of participants: 50

Anticipated cost to deliver workshop: $1500

Proposed cost to participants: $30 for students/postdocs, $60 for professionals

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Additional comments: