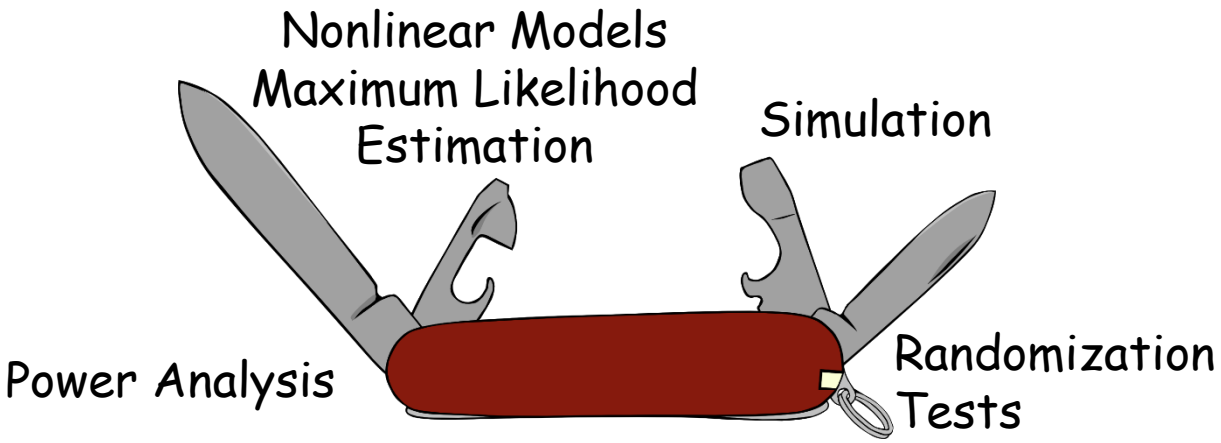
ZOO 955: A quantitative ecology "Swiss Army Knife"

Introduction to simulation, randomization and likelihood-based methods

Fall 2022 – Tuesday afternoons (time TBD) – Hasler Lab Conference Room

COURSE DESCRIPTION: Many of the quantitative methods used in ecology fall outside of the core sequence of biostatistics courses. This class will emphasize a problem-solving approach to addressing quantitative challenges faced by many graduate students in ecology. Simulation, data randomization, and likelihood-based methods will be introduced as tools to answer questions like: How much data (and which types) do I need to collect? Which of my alternative models is best? Are my model parameters confounded?



Instructor: Olaf Jensen (he/him) ojensen@wisc.edu

Readings: selections from the Ecological Detective (Hilborn and Mangel 1997), Ecological Models and Data in R (Bolker 2008), Model Selection and Multimodel Inference (Burnham and Anderson 2002) and others.

Pre-requisites: This course is geared primarily for first or second-year grad students and presumes some familiarity with basic statistics, probability distributions, and R.