Write-Up

Initial Notes and discussion with Sarah

Questions: - recent IPMs that have used N-mix models within them? - recent uses of M-R models (CJS, JS, etc) for nests?

Novel approach… Generally for nest survival studies, we can look at the nest and know its fate, which can then be scaled up for population-level inference.

However, under certain (data-poor) situations, don’t always know nest fate. So, we are modeling nest detection to estimate nest fate. [Need to get this down a little better].

Big categories and ideas:

Multi-state versus multi-event

General nest survival: definitions, sources of bias

Expanding computing power has led to model extension through relaxation of model assumptions and applications to newly specific ecological questions and situations, where different life histories (cryptic species, skip breeders, long juvenile absences, disease states, age groups, sex), sampling techniques, data availabilities, and/or study designs require specific treatments and methods.

GOF

open versus closed population; CJS versus JS

Temporary emigration as an unobservable state

Difference between unobservable state and uncertain state/observation (missing disease versus misidentifying?)

Environmental data - how it is included in modeling, whether in nest survival versus other vital rates (adult/juv survival, provisioning rates, seasonal nest schedule, weaning/fledging timing/condition) - Large scale versus local