



Animal Migration Syndromes: Their ecology and evolutionary consequences

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ABSTRACT

There are two aspects to animal migrations: 1) a collection of behavioral and morphological traits that define them (syndromes) and 2) a set of ecological outcomes (pathways and settlement patterns) that provide feedback from natural selection on the defining traits. I shall examine migration briefly in some typical and atypical bird patterns and then analyze some complex migration/life history syndromes in three insect species (two true bugs and a butterfly) using an experimental approach to examine the behavior, ecology, genetics, and evolution of these syndromes. The studies demonstrate that migration syndromes include several traits involving ecology and life histories, e.g. trophic apparatus and reproductive outputs, beyond those simply contributing to movement and that selection on these traits can profoundly influence the evolution of migration. Finally, analyses of museum specimens and of field records show that complex migration syndromes evolve extensively even over contemporary time.

Monday, October 2, 3:30 – 4:30 Location: WSC240