



*WildEcol Seminar Series presents*

# Aerial insectivorous bird declines: When? Where? Why?

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Many species of aerial insectivorous birds are experiencing dramatic population declines worldwide. Yet both the spatiotemporal patterns in population dynamics and the drivers of population declines remain unclear. While previous analyses have described universal declines of all species across northeastern North America initiating before or during the 1980s, we present analyses revealing highly complex spatiotemporal patterns among five species during 1966-2011: Chimney Swifts, Purple Martins, Barn Swallows, Tree Swallows, and Northern Rough-winged Swallows. Large-scale climate cycles (e.g., El Niño, NAO) and migratory conditions (winds and storms during spring and fall migration) explained up to 62% of the interannual variation in population trends, and one little-studied climatic cycle alone – the Atlantic Multidecadal Oscillation – explained up to 48%. I will also present preliminary results of new analyses documenting relative effects of land use, pesticides, and climate on aerial insectivores breeding in the Canadian Prairie Pothole region. These findings highlight the need to improve our understanding of aerial insectivore life history, demographics, and migratory connectivity in order to develop appropriate species-specific management actions designed to conserve this ecologically-important guild.

**Wednesday, October 22<sup>nd</sup>, 2014, 3:30 pm**

**PNWRC Conference Room**

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