

# HABITAT FOR THE FUTURE

## SPEAKER



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#### Integrating Sensory Ecology and Conservation Science: Implications for Southwestern T&E Riparian Species

Sensory ecologists investigate how organisms perceive, process, and respond to their environment and understanding how threatened and endangered animals respond to changing ecosystems is an important goal in conservation. Visual and acoustic signals mediate key animal behaviors and studying communication modalities can offer insight into how threatened and endangered species operate in their environment. In birds, song is a complex acoustic signal that is typically used to attract mates and repel competitors. Plumage coloration is also hypothesized to attract mates, but may aid in thermoregulation and avoid predation through crypsis. Assessing behavioral and morphological variation is important for the conservation of the endangered Southwestern Willow Flycatcher (SWFL, *Empidonax traillii extimus*), a subspecies of the Willow Flycatcher (*E. traillii*) because recently the subspecific status of SWFLs was challenged and argued that it be removed from the endangered species list. I will present results on geographic variation of plumage and song structure, and behavioral experiments assessing subspecies song discrimination that suggest reproductive isolation among Willow Flycatcher subspecies. I will then present results identifying the conservation status of flycatchers in eastern Utah based on song, because the Southwestern Willow Flycatcher song is stereotyped. Finally, I will present results indicating flycatcher song is an honest indicator of fitness, suggesting mating decisions are based on song. Using this information, managers can prioritize site revegetation efforts and/or biological control mitigation.