

FEATURE ARTICLES

MACROGEOGRAPHIC VOCAL VARIATION IN SUBSPECIES OF SWAMP SPARROW

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Abstract. Variation in song can play a central role in species and subspecies recognition among birds. The ability of individuals to distinguish between songs of their own versus songs of a different subspecies potentially strengthens local adaptation of subspecific populations. We investigated the degree of vocal divergence and discrimination between two subspecies of Swamp Sparrow (*Melospiza georgiana*) to examine how variation in song could influence behavioral response. We recorded songs of Southern (*M. g. georgiana*) and Coastal Plain (*M. g. nigrescens*) Swamp Sparrow males in Maryland and Delaware, respectively, and analyzed variation in syllable composition, repertoire size, trill rate, and frequency bandwidth. In addition to describing differences in song characteristics, we performed an estimate of local song type diversity that predicted larger population repertoires in *M. g. nigrescens*. We then broadcast recordings to evaluate male territorial responses to song and found that males reacted more strongly to songs of their own subspecies than to songs of the other subspecies. The extent of song variation and discrimination suggests the possibility of continued divergence. Further tests may determine whether such results can be generalized beyond the populations studied to the subspecies level, and whether females as well as males differentiate between songs from separate subspecies.

Key words: geographic variation, *Melospiza georgiana*, song playbacks, subspecies divergence, Swamp Sparrow, vocalizations.