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Summary:

Songs serve various important functions in songbird species, ranging from communication to sexual selection. Extensive previous research has been conducted to elucidate the roles that songs play, and to understand how the astounding diversity of song structure (much like human language) arises among the multitude of songbird species. However, this research has focused mainly on songbird species in which the males are the dominant singers. In this research, we address this gap by investigating the songs of female house wrens, *Troglodytes aedon*, in two different populations - Pennsylvania and Michigan. Our aim was to examine similarities and differences in the songs that the two populations produce to evaluate the occurrence of geographical dialects. In other species, including house wrens, males show distinct vocal dialects between populations in different geographic regions. We hypothesize the female house wren's exhibit geographic variation in their songs. To examine this, we recorded, collected, and analyzed song data from house wren populations at the Luz Arbor Reserve of the Kellogg Biological Station in Barry County, Michigan and Lackawanna State Park in Lackawanna County, Pennsylvania. Our comparison was based on 12 different structural elements of song. Our analysis shows that, although both populations shared several song types, two song types were shared predominantly by birds from one geographic region. The song type unique to Pennsylvania was sung at a higher frequency. Our results suggest that female house wrens do exhibit geographical dialects. We discuss implications of these findings in the context of the fitness advantages that geographical variations in songs confer, and make an association regarding the higher frequency observed in songs to adaptations to urbanization, providing avenues for further research in the process.