

**NON-BREEDING COMPETITION BETWEEN MIGRANT AMERICAN
REDSTARTS (*SETOPHAGA RUTICILLA*) AND RESIDENT ADELAIDE'S
WARBLERS (*DENDROICA ADELAIDAE*) IN THE GUÁNICA
BIOSPHERE RESERVE, SOUTHWEST PUERTO RICO**

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ABSTRACT

I tested the hypothesis that migratory American Redstarts (Redstart; *Setophaga ruticilla*) and resident Adelaide's Warbler (Adelaide's; *Dendroica adelaidae*) compete for food in a dry forest of southwest Puerto Rico. Competition will not occur unless food is limiting and the foraging niche of the two species is similar. In dry years, total arthropod biomass declined and body condition of both species decreased. Moreover, these species had a very high degree of overlap in both foraging location and type of attack. Simulated territorial intrusions also indicated that these species are competing.

However, Adelaide's did not shift their foraging niche after Redstarts left and these species were not interspecifically territorial. Therefore, neither depletion nor interference competition is occurring. Instead, the evidence suggests that Redstarts listen to the frequent vocalizations of Adelaide's, and forage using temporary competition refuges.