

Within-species digestive tract flexibility in rufous-collared sparrows and the climatic variability hypothesis

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The climatic variability hypothesis (CVH) states that species are geographically more widespread at higher latitudes because individuals have a broader range of physiological tolerance or phenotypic flexibility as latitude and climatic variability increase. However, it remains unclear to what extent climatic variability or latitude, acting on the phenotype, account for any observed geographical gradient in mean range size. In this study, we analyzed the physiological flexibility within the CVH framework by using an intraspecific population experimental approach. We tested for a positive relationship between digestive-tract flexibility (i.e., morphology and enzyme activities) and latitude and climatic and natural diet variability in populations of rufous-collared sparrows (*Zonotrichia capensis*) captured in desert (27°S), Mediterranean (33°S), and coldtemperate (41°S) sites in Chile. In accordance with the CVH, we observed a positive relationship between the magnitude of digestive-tract