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Dear *Ecology Letters* editorial team,

Please find the enclosed manuscript "Species are not most abundant in the center of their geographic range or climatic niche", which we submit for consideration as a *Letter*.

Novelty Statement: In our manuscript, we provide a thorough test of the *abundant-center* hypothesis, which posits that species should be most abundant in the center of either their geographic range or their climatic niche. While intuitive, there is mixed evidence on the generality of this pattern, and only recently have investigators quantified distance in terms of environmental distance from species niche center. Our examination of over 1600 bird, mammal, fish, and tree species found little support for this hypothesis. Further, we found no ecological trait or phylogenetic basis for relationship between distance and species abundance. Together, this manuscript provides a comphrehensive test of *distance-abundance* relationships with respect to geographic and climatic tolerances, providng the first test relating the slope of the *distance-abundance* relationship to species traits or phylogenetic relatedness. Our findings suggest that *distance-abundance* relationships may be rare, difficult to detect, or are a gross oversimplification of the complex biogeographical forces that determine species spatial abundance patterns.

We believe this article will be of interest to a broad range of ecologists, as the relationship between distance and abundance is central to many existing hypotheses in biogeography and macroecology. In advance, we appreciate your consideration and assistance. Please don't hesitate to contact us with any questions.

Sincerely,

Tad Dallas