

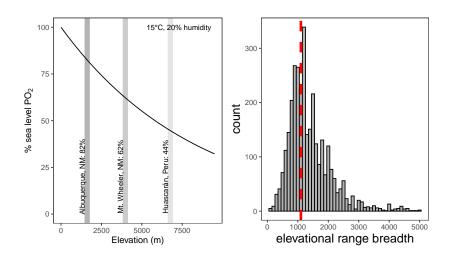
Respiratory plasticity and elevational range breadth in Andean birds

Ethan B. Linck, Jessie L. Williamson, Emil Bautista, Elizabeth J. Beckman, Phred M. Benham, Shane G. DuBay, L. Monica Flores, Chauncey R. Gadek, Andrew B. Johnson, Matthew R. Jones, Jano Núñez-Zapata, Alessandra Quiñonez, C. Jonathan Schmitt, Dora Susanibar, Jorge Tiravanti C., Karen Verde-Guerra, Natalie A. Wright, Thomas Valqui, Jay F. Storz, and Christopher C. Witt

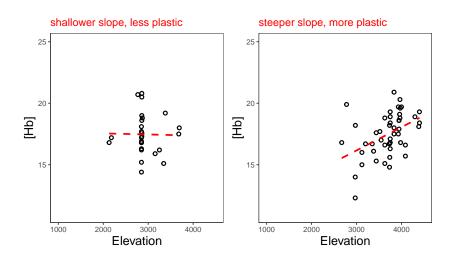
University of New Mexico
Department of Biology & Museum of Southwestern Biology



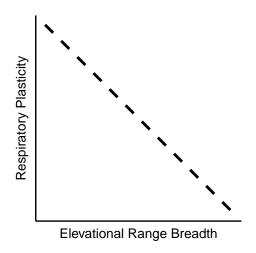
Blood O_2 -carrying capacity and elevational specialization



Respiratory plasticity

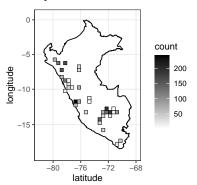


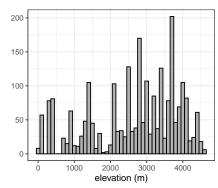
 H_1 : Respiratory plasticity constrains range breadth



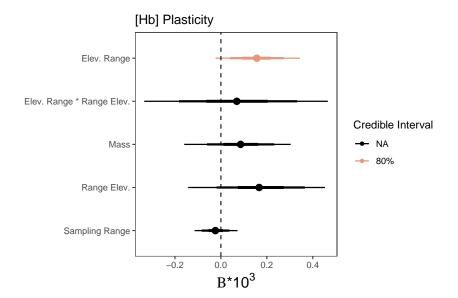
Methods

- ▶ [Hb] from 2367 individuals of 137 species
- ► Bayesian multivariate linear models





Elevational generalists have greater respiratory plasticity



We conclude: respiratory plasticity may facilitate elevational range expansion—even if broad elevational ranges aren't stable in the long term (Gadek et al. 2017)