Metacommunity analysis of Mexican bats: environmentally mediated structure in an area of high geographic and environmental complexity

Celia López-González1*, Steven J. Presley2, Abraham Lozano1, Richard D. Stevens3 and Christopher L. Higgins4

¹CIIDIR Unidad Durango, Instituto
Polite´cnico Nacional, Sigma 119,
Fraccionamiento 20 de Noviembre II,
Durango, Durango 34220, Me´xico, ²Center for
Environmental Sciences and Engineering and
Department of Ecology and Evolutionary
Biology, University of Connecticut, Storrs, CT
06269-4210, USA, ³Department of Biological
Sciences, Louisiana State University, Baton
Rouge, LA 70803, USA, ⁴Department of
Biological Sciences, Tarleton State University,
Stephenville, TX 76402, USA

ABSTRACT

Aim We tested the hypothesis that distributions of Mexican bats are defined by shared responses to environmental gradients for the entire Mexican bat metacommunity and for each of four metaensembles (frugivores, nectarivores, gleaning insectivores, and aerial insectivores). Further, we identified the main environmental factors to which bats respond for multiple spatial extents.