Stable isotopes document mainland-island divergence in resource use without concomitant physiological changes in the lizard Liolaemus pictus

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Shifts in feeding ecology are believed to promote island-mainland divergence. The lizard Liolaemus pictus has several different subspecies on Chilean islands and mainland. These subspecies inhabit contrastingly different habitats both in different islands and mainland, which suggests the potential for habitat related dietary variation. We investigated the dietary habits of L. pictus by both stomach content analyses and by nitrogen stable isotope analyses (?15N), which we used as a proxy variable for trophic level. We also compared the morphology of the digestive tract and the activity of intestinal digestive enzymes of mainland and island lizards. We hypothesized differences in diet and trophic level among populations and that these differences would predict the expression of the morphological and biochemical features of the digestive tract. More specifically, we predicted shorter intestines and higher levels of peptidases in more insectivorous than in more frugivorous/herbivorous liza