## Microhabitat use, daily activity pattern and diet of *Liolaemus* etheridgei Laurent, 1998 (Reptilia: Liolaemidae) in the Andean *Polylepis* forests of Arequipa, Peru

Irbin Llanqui<sup>1</sup>, Bryn Edwards<sup>2</sup>, and Evaristo Lopez<sup>3</sup>

<sup>1</sup>Universidad Nacional Mayor de San Marcos <sup>2</sup>Lancaster University <sup>3</sup>Universidad Nacional de San Agustín de Arequipa

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## Abstract

This study compared the microhabitat use, daily activity pattern and diet of Liolaemus etheridgei Laurent 1998 in two Polylepis woodlands: El Simbral (fragmented) and Tuctumpaya (unfragmented), in Arequipa, Southern Peru. In both populations, we did not detect positive selection for any microhabitat; however, the population at El Simbral showed a negative selection for Polylepys trees while the Tuctumpaya population showed negative selection for Polylepis trees and non-thorny bushes. In El Simbral, active individuals were detected between 9:00 and 15:59h, whereas in Tuctumpaya, we detected active individuals from 8:00 to 17:59h. In both populations, observations of active individuals dropped between 11:00 and 11:59h. We recorded 17 and 23 prey categories in the El Simbral and Tuctumpaya populations respectively. The most important animal prey category in each population was found to be Lygaeidae: Hemiptera, and was the only animal prey category that was selected for in El Simbral and Tuctumpaya. In addition, due to the proportions of plant material found, the El Simbral was found to be omnivorous, whereas the Tuctumpaya population was herbivorous. Trophic niche breadth was broader in Tuctumpaya (B\_a= 0.202) than the El Simbral (B<sub>-</sub>a= 0.147) population, despite there being no significant differences in diet (Permanova: F = 1.036, P = 0.409, permutations = 9999), which is coherent with the high value of trophic niche overlap (O<sub>-</sub>(j,k) = 0.963). Our compiled data reveal that L. etheridgei shows no selection for any of the resources we define in Polylepis woodlands, on the contrary, it selects negatively against *Polylepis* trees and non-thorny bushes. The daily activity patterns indicate a bimodal pattern with peaks at 9:00-10:59 and 13:00-13:59 h. The diet of L. etheridgei consists mainly of plants (%W: 66.373), and the most important animal prev category is Lygaeidae: Hemiptera (%IRI = 55.3), which is selected positively.

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