

REVEALING THE DIVERSITY OF *LEBIASINA BIMACULATA*: A WIDELY DISTRIBUTED SPECIES IN THE TRANSANDINE BASINS OF PERU

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ABSTRACT

The evolutionary processes responsible for the biodiversity of fish fauna in the rivers of the Peruvian coast are still poorly understood. This region exhibits low fish diversity and has been the subject of few studies, despite its significant importance for the ecosystem services it provides. *Lebiasina bimaculata* is distributed in the rivers of the Pacific slope and in the Marañón River basin. The aim of the study was to determine the population variations of *L. bimaculata* from morphological, meristic, and morphometric perspectives. Collections were made in 25 coastal rivers of the Pacific slope and the eastern Marañón basin. Morphometric and meristic measurements were taken from 164 specimens, which were photographed for geometric morphometric analysis. The principal components analysis (PCA) of the linear morphometric measurements did not show significant differences among samples from different basins. However, canonical variate analysis (CVA) in geometric morphometry allowed for grouping specimens by department, revealing differences in their shape among the basins, particularly in the basins of the Tumbes, Piura, and Zaña rivers and the Lima department basins (Lurín, Chillón, Huaura, and Rímac rivers). Correlation analyses indicated that the rivers of Lima and Piura basins are significantly distinct from the others, as well as that specimens from the Nazca River basin (Ica) differ significantly from those in La Libertad (Chicama, Moche, and Virú rivers). Additionally, specimens from the Tumbes River showed notable differences compared to those from the Ancash department (Santa, Casma, and Fortaleza rivers) and La Libertad. These findings suggest variation in the morphology of populations throughout their distribution. This information will contribute to a better understanding of the diversity of these poorly studied ecosystems and will be fundamental for their conservation.

Keywords: freshwater fish, geometric morphometry, morphology

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