

Pattern of genetic differentiation of an incipient speciation process: The case of the high Andean killifish *Orestias*

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© 2017 Guerrero-Jiménez et al. This is an open access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited. During the Pleistocene and Holocene, the southwest Andean Altiplano (17°-22°S) was affected by repeated fluctuations in water levels, high volcanic activity and major tectonic movements. In the early Holocene the humid Tauca phase shifted to the arid conditions that have lasted until the present, producing endorheic rivers, lakes, lagoons and wetlands. The endemic fish *Orestias* (Cyprinodontidae) represents a good model to observe the genetic differentiation that characterizes an incipient speciation process in allopatry since the morphospecies described inhabit a restricted geographic area, with present habitat fragmentation. The genetic diversity and population structure of four endemic morphospecies of *Orestias* (Cyprinodon