

## Conservation and landscape genetics of the Black-throated Finch (*Peophila cincta*)

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Landscape genetics investigates relationships between population processes and landscape structure. I use this approach to understand the role of specific landscape features and environmental conditions in affecting population connectivity, gene flow and movements of a threatened species. the Black-throated Finch, both northern (*Peophila cincta atropygialis*) and southern subspecies (*P. c. cincta*), has subjected to many threatening processes over the last decade, especially the southern form. The decline of *P. c. cincta* is believed to be primarily due to overgrazing of riparian grassland, clearing and habitat fragmentation. The genetic consequence of the decline is unknown. I use molecular data to identify population structure; to quantify gene flow between remnant populations; and to understand how these dynamics are related to landscape features. With the analysis of landscape genetics, I can understand the extent of genetic impacts from environmental disturbance, the way in which birds use landscapes, and how viable and differentiate the existing populations are.