

UNUSUAL FOSSIL RODENT FAUNAS FROM SOUTH CENTRAL CHILE

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Laguna del Laja, Chile (LdL) is one of few places that preserves stratigraphically superposed fossil mammal faunas in South America; taxa that occur elsewhere in at least four South American Land Mammal Ages (SALMAs) are represented. The volcanogenic nature of the strata at LdL permits high-precision $^{40}\text{Ar}/^{39}\text{Ar}$ analysis; 17 dates (~20-9 Ma) are distributed throughout most of the ~1.8 km thick section, significantly improving age control particularly for the early to middle Miocene segment of the SALMA sequence.

All twenty rodent taxa from LdL (37.5°S 71.2°W) represent new species, but temporal ranges for relevant genera elsewhere span much of the early late Miocene. The lowest levels of the Cura-Mallín Fm. exposed at LdL produce taxa differing modestly from Patagonian contemporaries. ?*Neoreomys* n. sp. from LdL resembles the rare ?Colhuehuapian *Neoreomys* sp. from El Pajarito, Chubut, while Santacrucian *Protacaremys* n. sp. and *Acarechimys* n. sp. from LdL compare closely to but are distinct from Colhuehuapian-Colloncuran species from Patagonia and Neuquén. *Prostichomys* n. sp. and *Luantus* n. sp. from LdL, genera previously restricted to the ?Santacrucian Pinturas Fm. (and Colhuehuapian portion of the Sarmiento Fm. for the latter taxon), also show strong similarities to their high latitude relatives. Rodents from higher stratigraphic levels at LdL are strikingly distinct from their closest known relatives; at least 10 are new at the generic level. The Cura-Mallín Fm. in this region shows no evidence of syn-contractional deposition prior to ~14 Ma, arguing that the high degree of endemism does not reflect geographical isolation by local shortening. Some taxonomic novelty could be attributable to sampling between currently recognized SALMAs and within poorly-known SALMAs. Harder to reconcile is the absence of typically abundant age-diagnostic taxa (e.g., *Perimys*, *Neoreomys australis*, *Eocardia*, *Stichomys*), and the increase in post-early Santacrucian endemism between the LdL faunas and those reported from Argentina.