Cranial morphological variation of Dromiciops gliroides (Microbiotheria) along its geographical distribution in south-central Chile: A three-dimensional analysis

Valladares-Gómez, Alejandro

Celis-Diez, Juan L.

Palma, R. Eduardo

Manríquez, Germán S.

© 2017 Deutsche Gesellschaft für Säugetierkunde We analyzed the variation in cranial morphology of the marsupial Dromiciops gliroides along its distribution in south-central Chile. We evaluated whether the cranial morphological variation is congruent with the phylogeographic structure previously observed in this species. We built three-dimensional models of 69 crania on which we digitized 30 landmarks. We used standard geometric morphometric methods to extract and analyze the shape and size components of the crania. Our data showed a subtle but consistent cranial size and shape variation along the studied distributional range, suggesting a geographic variation pattern rather than a phylogeographic structuring. Indeed, our multivariate analyses recovered a subtle morphological differentiation between island and mainland populations, contrary to what is suggested by a former phylogeographic study. We detected that either the cranial size variation, as well as the insularity and the latit