

POSTER 122

**POPULATION HISTORY AT THE MICROSCALE:
CRANIOMETRICS OF CAYO SANTIAGO MACAQUES**

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Being able to understand the effects of relatedness on adult cranial morphology has implications for inferring population histories, and for informing us about the influence of genetics on cranial form among human populations. Several methods have been developed to infer relatedness among human or other primate populations using metric data. R-matrix methods have typically been used to approach questions of population history on global or regional scales with a time depth of tens to thousands of generations.

This study uses detailed genealogical and demographic information for rhesus macaques born over four decades on Cayo Santiago along with individually matched cranial measurements. We evaluated the ability of craniometric data to recover two important patterns expected from the demographic records: individuals born in more distant time periods are less similar to each other; social groups that arose from the fissioning of a parent group will be more similar to each other than to other social groups.

Craniometric data are consistent with both expectations from the demographic data, and reflect discernable genetically based phenotypic variation in cranial form. Further research is needed to refine and test predictions about patterns in the craniometric data. Methods used in this study could be further developed to infer population history in disease modeling, and for explaining population variation in cranial phenotypes.

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