

DIET AND DENTITION IN THE GREATER ANTILLEAN PRIMATESS.B. Cooke*The Graduate Center, City University of New York, NYCEP, United States**Presenter's Email: scooke@gc.cuny.edu*

This study investigates the diet and dentition of the Greater Antillean monkeys including a yet undescribed Hispaniolan species, *Antillothrix bernensis*, also from Hispaniola, the Cuban forms *Paralouatta varonai* and *P. marianae*, and the enigmatic Jamaican primate, *Xenothrix mcgregori*. These poorly understood island species likely entered and became isolated in the Caribbean sometime during the Miocene and subsequently adapted to their unique island habitats. Although significant advances have been made toward understanding the phylogenetic relationships and biogeography of this group, little is known of their paleobiology and ecological adaptations. This paper redressed that gap in our knowledge. The dentition of a large sample of eight living platyrrhine genera (240 individuals), the four Caribbean platyrrhines for which there is dental evidence, and nine mainland South American extinct species were laser scanned in order to create virtual three-dimensional models of dentition from which metric data could be collected. A series of functional measures were employed including true three-dimensional surface area and measures of cusp and crest "sharpness". Indices, including Boyer's (2008) Relief Index were calculated for all species and were found to successfully discriminate folivorous, frugivorous, and insectivorous diets in living primates allowing for comparison between the extant primates of known dietary profile and the extinct forms. *X. mcgregori* was likely a frugivorous primate, while the other forms may have had more mixed diet of fruits and leaves. This ecological information sheds light for the first time on the adaptations of this unique island fauna.

Keywords: platyrrhine, island fauna, Caribbean, functional morphology