

**SEXUAL SELECTION AND CANINE DIMORPHISM IN THE TWO MEXICAN HOWLER MONKEYS
ALOUATTA PALLIATA AND *A. PIGRA***

M.A. Kelaita¹, P.A.D. Dias², L. Cortés-Ortiz¹

¹University of Michigan, Ann Arbor, MI, USA ²Universidad Veracruzana, Xalapa, Veracruz, Mexico

Presenter's Email: mkelaita@umich.edu

The goal of this study is to investigate at what extent intra-sexual selection is operating in the two species of howler monkeys that occur in Mexico, *Alouatta palliata* and *A. pigra*. *A. palliata* groups are larger and have a greater female to male ratio than those of *A. pigra*. Therefore we predict that *A. palliata* is undergoing greater sexual selection due to high levels of male-male competition. We measured dental casts obtained from live-caught individuals and used canine dimorphism as a proxy to determine whether there is a difference in intra-male competition between the two species. Maxillary canines are effective weapons and are expected to be larger in males when intra-male competition is high. Canine height and mesiodistal dimensions in these two species decrease with age due to wear; therefore we utilized the labiolingual dimension in males (*A. palliata* = 13, *A. pigra* = 14) and females (*A. palliata* = 15, *A. pigra* = 13) to calculate dimorphism. Using a resampling statistical approach, we tested for a difference in maxillary canine dimorphism between the two species and found no significant difference. These results coincide with our previous findings on body size dimorphism and suggest that either similar forces of sexual selection are operating in the two species or that other factors have an effect on canine dimorphism. Official permits to conduct this research were obtained from SEMARNAT (Mexico). This study was funded by NSF (DEB-0640519), Universidad Veracruzana, and the University of Michigan.

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