

**FOOD PROCESSING ACTIVITIES AND DIET OF SOOTY MANGABEYS (*CERCOCEBUS ATYS*).**

W.S. McGraw<sup>1</sup>, D.J. Daegling<sup>2</sup>, A.E. Vick<sup>2</sup>, A. Bitty<sup>3</sup>, R. Paacho<sup>4</sup>

<sup>1</sup>*Department of Anthropology, The Ohio State University, Columbus, Ohio,* <sup>2</sup>*Department of Anthropology, The University of Florida,* <sup>3</sup>*University of Cocody, Abidjan, Ivory Coast,* <sup>4</sup>*Tai Monkey Project.*

*Presenter's Email: mcgraw.43@osu.edu*

The diphyletic origin of mangabeys is now widely accepted and most authorities agree that *Cercocebus* is the sister taxon of *Mandrillus* while *Lophocebus* forms an unresolved trichotomy with *Papio* and *Theropithecus*. Members of the *Cercocebus-Mandrillus* clade share skeleto-dental features believed to be related to a feeding strategy that involves aggressive manual foraging and the processing of hard foods recovered from the forest floor (Fleagle and McGraw 1999, 2001). Evidence for a shared morphological complex is substantial, yet details concerning how members of the *Cercocebus-Mandrillus* clade actually employ these features under natural conditions are more limited. Such information is critical for testing the general hypothesis that expanded premolars are associated with a strong reliance on a durophagous diet involving elevated levels of powerful post-canine crushing as an ingestive strategy. Here, we report results from a 12 month study of sooty mangabeys *Cercocebus atys* in the Ivory Coast's Tai forest. We used focal sampling methods to collect information on diet, ingestive behavior and oral processing activities for different age and sex classes. Hardness of preferred foods was evaluated using commercially available handheld durometers. The great majority of the sooty mangabey diet is obtained from the ground. The most preferred foods, *Sacoglottis gabonensis* seeds, comprise 52% of the annual diet followed by invertebrates (13%). *Sacoglottis* seeds are the hardest dietary item and their processing involves post-canine crushing that is largely unobserved for other foods. These data confirm that premolar expansion is associated with specific ingestive behaviors involving hard objects in the diet.

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