

Title: Prehensile-tail use and positional behavior in wild mantled howler monkeys (*Alouatta palliata*) and white-faced capuchins (*Cebus capucinus*)

Presenter: Margaux Hingey, MiraCosta College

Mentor: Lynne Miller

Among primates, the prehensile tail is an adaptation unique to only five genera of New World monkeys. It acts as a fifth limb capable of grasping and thus facilitates movement in arboreal environments. In this study, differences in prehensile-tail use were explored between wild mantled howler monkeys (*Alouatta palliata*) and white-faced capuchins (*Cebus capucinus*). Inter-species differences in tail anatomy, body size, diet, and activity levels informed the first prediction: Capuchins would use tail prehension more during locomotor modes (e.g., traveling and foraging), while howlers would use it more during postural modes (e.g., resting and feeding). Significant levels of sexual dimorphism in each species informed the second prediction: Males would use tail prehension more than females. Fourteen hours of observational data were collected at La Suerte Biological Field Station in Costa Rica over eight days in July 2019. Using point sampling, the frequency and behavioral context of tail prehension were recorded in adult subjects. The results supported neither prediction. Howlers were found to use tail prehension more than capuchins during both postural (79.0% vs. 43.4%) and locomotor (56.3% vs. 31.7%) modes. Females of both species exhibited more tail prehension than males across all activities, except for traveling in howlers (42.4% vs. 52.2%). Distinct locomotor modes between both species and sex differences in activity budgets may account for these results. Ultimately, this study corroborates previous findings regarding the role of tail prehension in weight-bearing and locomotion, but suggests that the prehensile tail may play a different functional role for each species.

References

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