A Study of Foraging Behavior and Diet of *Cebus capucinus* (white-faced capuchin monkey) in a Tropical Forest in Costa Rica

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Anthropology and Primates

- By studying primates, we're essentially studying ourselves
- Primate order includes humans and our closest living biological relatives
- Provides evolutionary insight

http://marketsinitiative.org/wordpress/wp-content/uploads/2008/12/orangutan-pictures.jpg

Tropical forests

- Vary by temperature, rainfall, and geographical characteristics
- Differ in successional stages
  - Human-related
  - Natural processes
- Altered taxonomic composition
  - Structural differences
  - Canopy and support use

Cebus capucinus – White faced capuchin monkey

- New World primate
- ~3kg
- Multimale/ multifemale groups
- Varying group sizes
- Large distribution

Diet and foraging behavior

- Mainly fruit
  - Animal prey
  - Insects
  - Other plants
- Flexible foraging techniques
- Tool use

Carara National Park

- Transitional Forest
- Primary and secondary forests
- 5,242 hectacres
- Large population of C. capucinus

http://www.costarica4u.com/jaco_herradura/images/mapclimate.gif

Primary Objective

- How do the foraging methods and diet composition of *C. capucinus* in a transitional forest at Carara National Park compare to the foraging methods of *C. capucinus* in both tropical wet and dry forests?

Methods- Data Collection

- July & August 2008
- Modified focal animal sampling
- Trails walked daily
- Data collected on foraging and feeding behavior, age, sex, group size, and canopy and support use

Methods

- **Foraging behavior** – the activity of looking for food
- **Feeding behavior** – the activity of eating a food item
- **Traveling** – the act of moving from one location to another
- **Resting** – the act of being dormant
- **Other** – any number of various behaviors not including those listed above (i.e. grooming)

Methods

- Canopy use
  - Ground
  - Lower
  - Middle
  - Upper
- Support use
  - Small
  - Medium
  - Large
  - Trunk

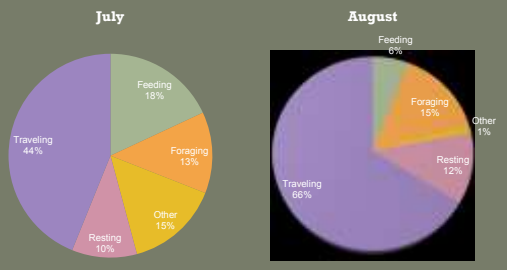
Methods- Data Analysis

- Data obtained compared to published data
  - Panger et al. 2002
  - Rose et al. 1990
- Standard descriptive statistics calculated to quantify :
  - Frequency with which specific foraging techniques were utilized
  - Proportion of food items consumed
  - Differences in foraging behavior and diet by sex/age classes and habitat type

Results and Discussion

- Minimum of two groups observed
  - Size and composition
  - Observed travel patterns
- Most time spent traveling, followed by foraging and feeding
  - Locality bias
  - Comparable travel and feeding expenditure

Overall Observed Behavior

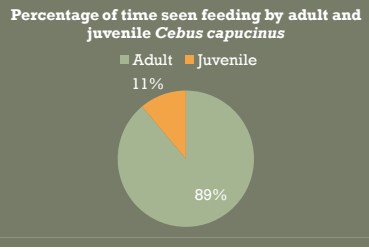


Results and Discussion

- Fruit consumed at a higher rate than insects in July and insects at a higher rate than fruit in August
- Foraging was observed in a higher percentage in August (16.8%) than in July (12.9%)

Results and Discussion

- Adults observed eating more often than juveniles



Results and Discussion

- Juveniles never entered the upper canopy
- Insect foraging differed between primary and secondary forests

Conclusion

- Overall, foraging behavior and diet observed were a combination of that seen within both tropical dry and wet forests

http://alchemistpoonam.files.wordpress.com/2008/06/613px-capuchin_costa_rica.jpg

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