

# Time Budget of *Alouatta palliata* and *Ateles geoffroyi* at La Selva Research Station: A Comparison



Hank Basta  
Mentor: Melissa S. Seaboch  
Department of Anthropology

## Introduction

### Activity Budgets

- Knowledge can help scientists understand population dispersion, this information can be used for conservation efforts<sup>1</sup>
- Differences attributed to food availability, which varies in time and space<sup>2</sup>

### Impact of Diet

- Fruit is more patchily distributed than leaves or herbs<sup>2</sup>
- Frugivores spend more time traveling<sup>2</sup> and folivores resting<sup>3</sup>

### Study Species

- Howler monkeys (*Alouatta palliata*) are primarily folivores<sup>3</sup>;
  - Recent studies show that *Al. palliata* spends
    - ~17% of their time foraging<sup>4</sup>
    - ~80% resting<sup>4</sup>
- Spider monkeys (*Ateles geoffroyi*) are primarily frugivores<sup>5</sup>;
  - Recent studies show that *At. geoffroyi* spends
    - 33.5% foraging<sup>6</sup>
    - 24.1% resting<sup>6</sup>
    - 32.6% travelling<sup>6</sup>

### Hypothesis

*Al. palliata* will have more resting and foraging periods, compared to *At. geoffroyi*.

## Methods

### Site description

- Data collection will take place in May 2022 at La Selva Research Station, Costa Rica

### Data collection methods

- 1-minute instantaneous focal sampling
- Data collected will include;
  - Feeding times
  - Aggressive behaviors
  - Vocal calling
  - Resting
  - Travel

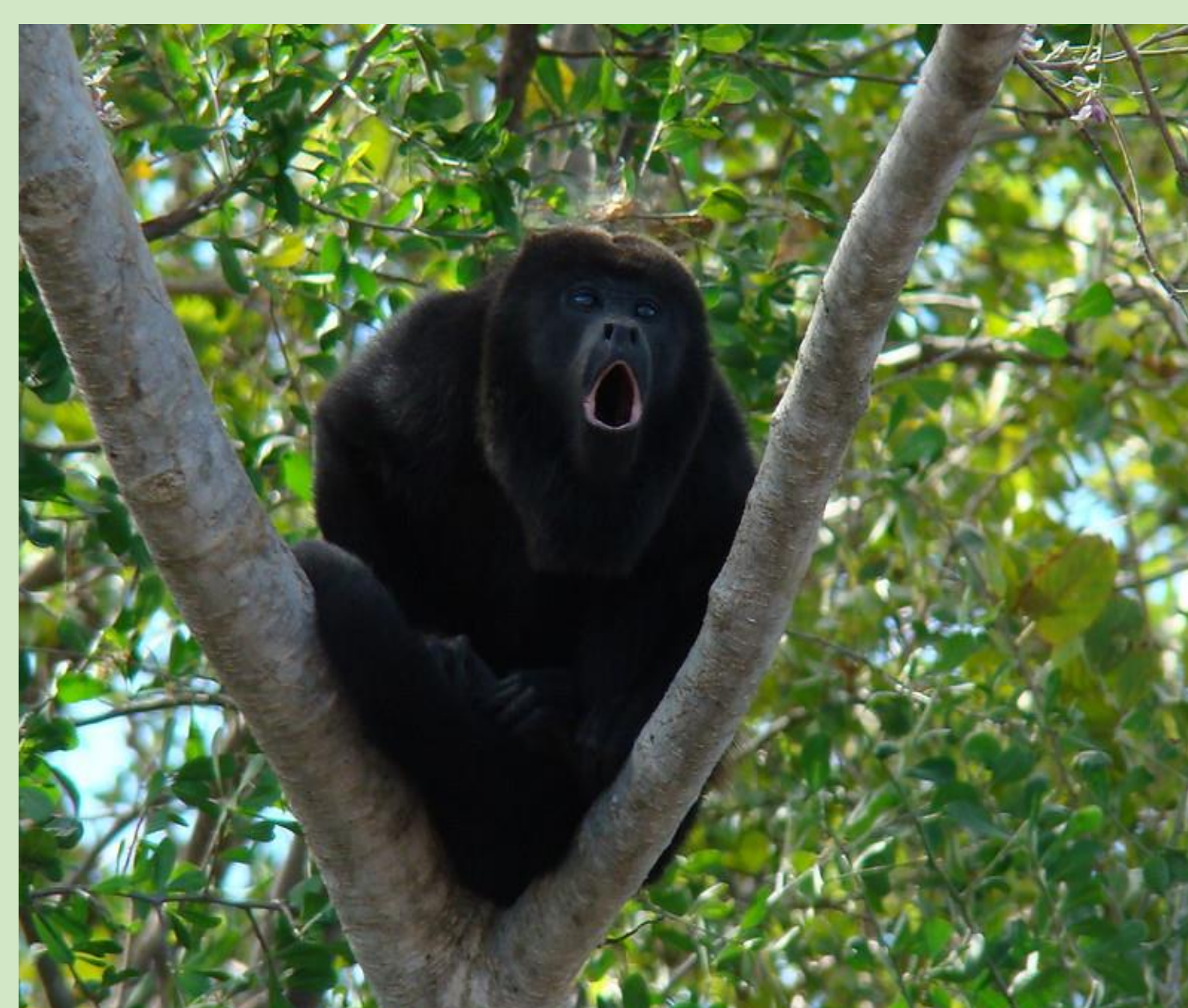


Image by: Anita Gould - <https://tinyurl.com/3z5kznhw>

Howler monkeys (*Al. palliata*) weigh 3.1 – 9 kg, depending on sex<sup>4</sup>. Fur is almost entirely black except for a fringe of long gold to buff hairs on their sides<sup>7</sup>

Spider monkeys (*At. geoffroyi*) weigh 6 – 9.4 kg depending on sex<sup>6</sup>. Fur ranges from silvery-gray, black, and yellowish to reddish brown<sup>8,9</sup>

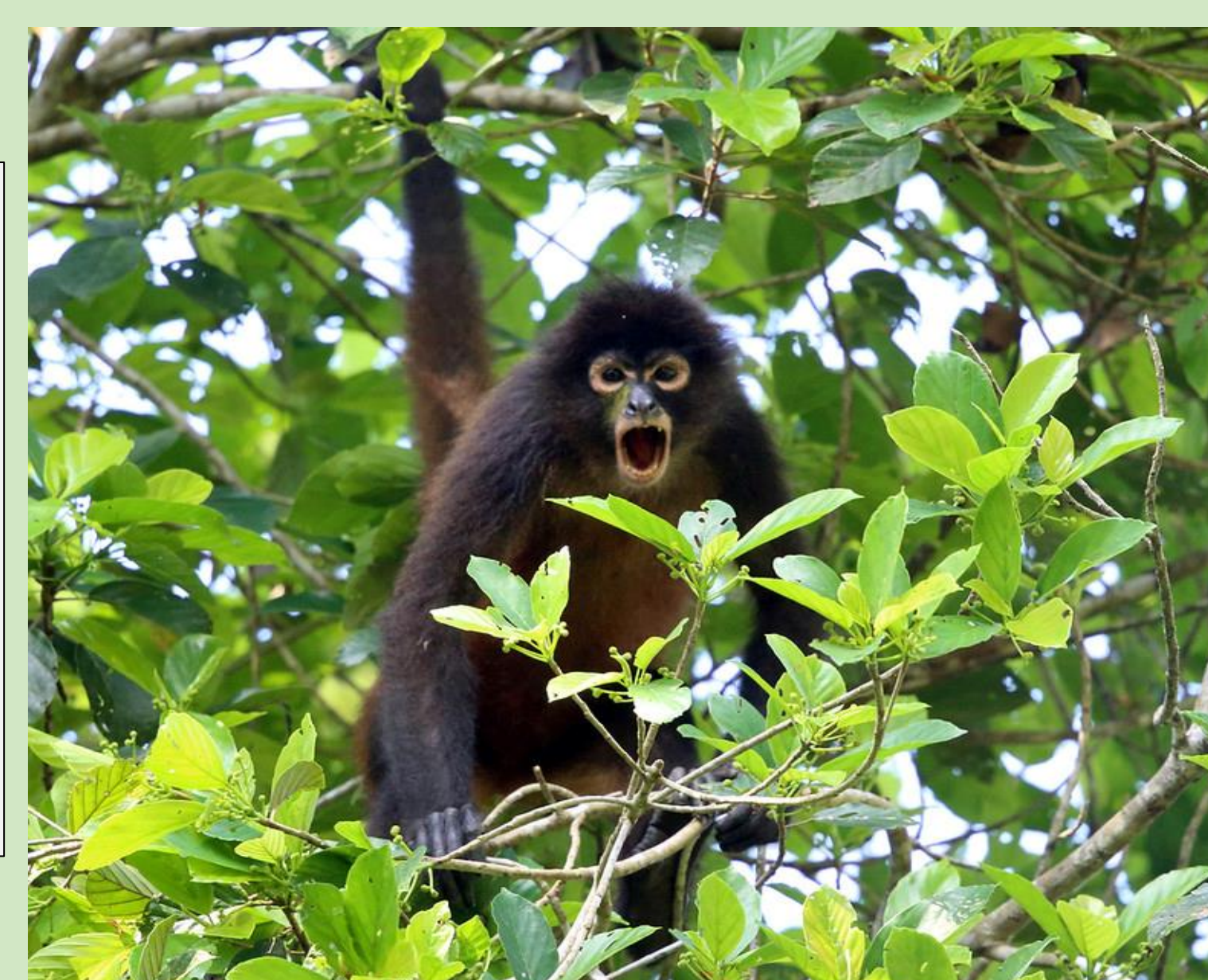
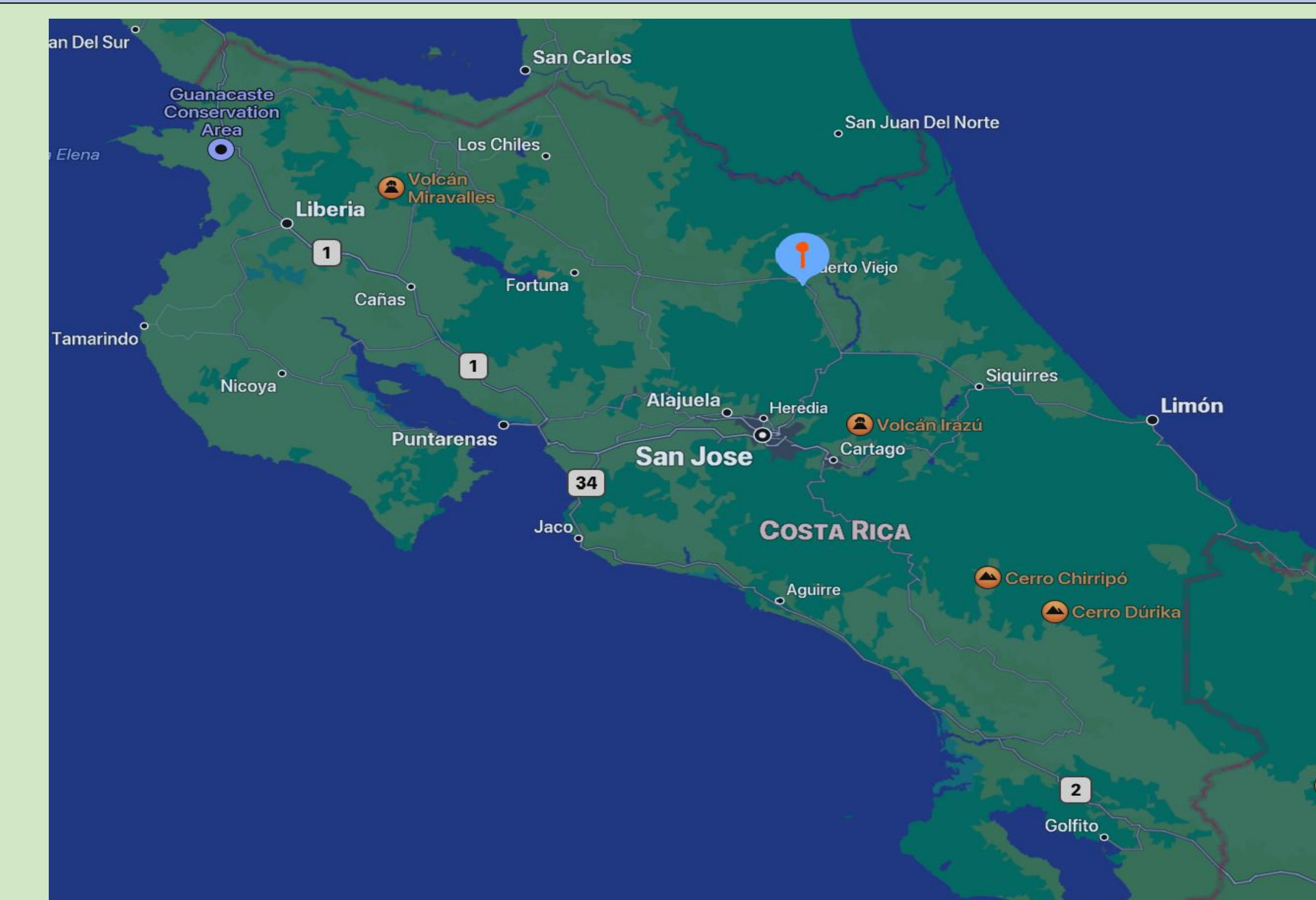
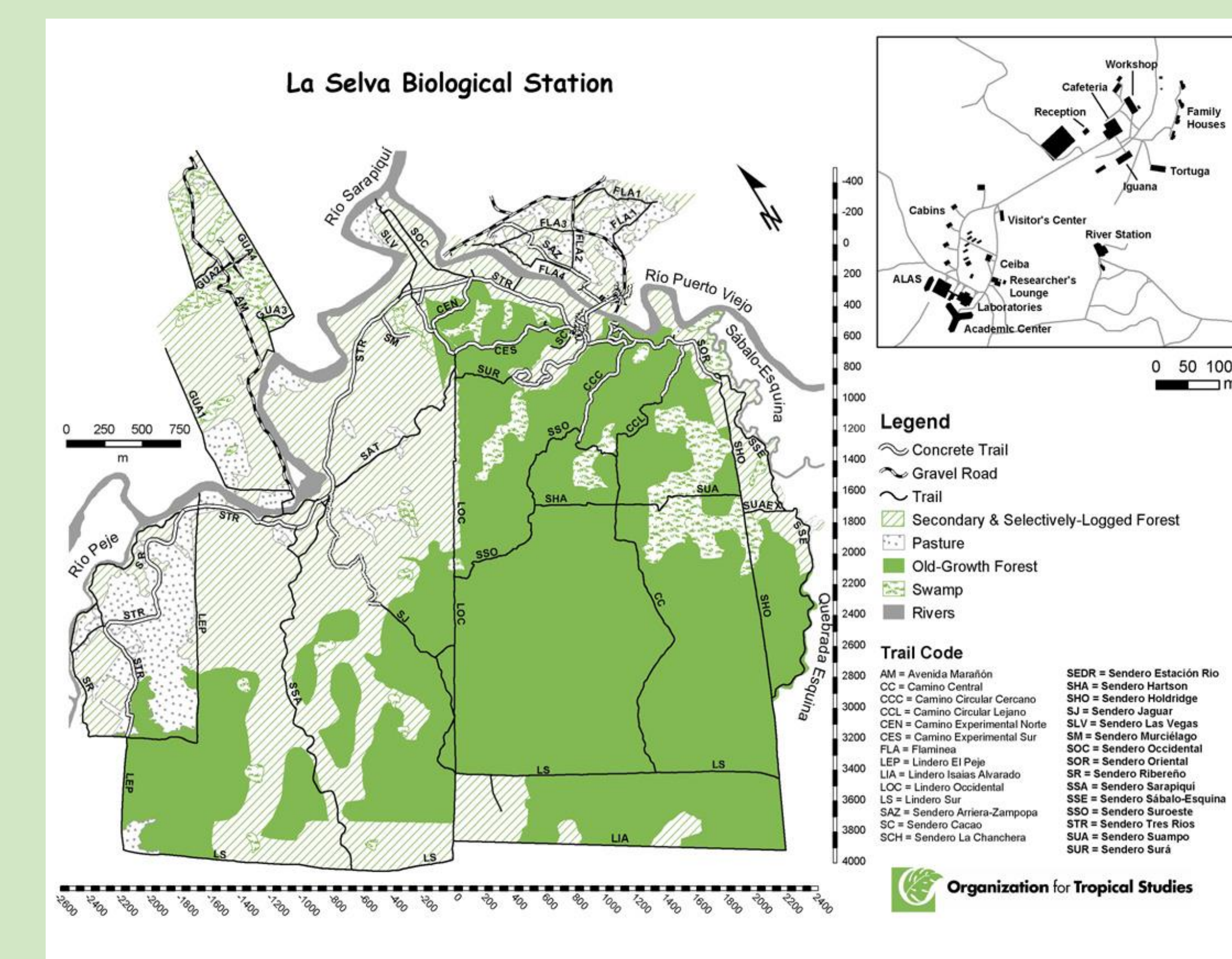


Image by: Tom Murray - <https://tinyurl.com/yw53b2w5>

## Site Description



La Selva Research Station



Forest distribution at La Selva Research Station

## References

<sup>1</sup> Gabriel, D.N., (2013) Habitat Use and Activity Patterns as an Indication of Fragment Quality in a Strepsirrhine Primate. *International Journal of Primatology* 388-406  
<sup>2</sup> Ostrofsky, K.R., Robbins, M.M., Fruit-feeding and activity patterns of mountain gorillas (*Gorilla beringei beringei*) in Bwindi Impenetrable National Park, Uganda. doi: 10.1002/ajpa.24056  
<sup>3</sup> Neville, M.K., Glander, K.E., Braza, F., Braza F., Rylands A.B., (1988), The howling monkeys, genus *Alouatta*. *Ecology and Behavior of Neotropical Primates* 349-453.  
<sup>4</sup> Estrada A., Garcia Y., Munoz D., Munoz D., Franco B., (2001) survey of the population of howler monkeys (*Alouatta palliata*) at Yumka Park in Tabasco, Mexico. *Neotropical Primates* 9 12-14.  
<sup>5</sup> Campbell, C.J., (2000), *The Reproductive Biology of Black-handed Spider Monkeys (Ateles geoffroyi): Integrating Behavior and Endocrinology*.  
<sup>6</sup> Di Fiore A., Campbell C.J. (2007) The atelines: variation in ecology, behavior, and social organization. *Primates in Perspective* 155-185  
<sup>7</sup> Emmons L.H., Feer F. (1990) Monkeys. *Neotropical Rainforest Mammals: A Field Guide*.  
<sup>8</sup> Hines J.H. (2005) Dissertation. *Ecology and Taxonomy of Ateles geoffroyi in Parque Nacional Pico Bonito, Atlantida, Honduras*.  
<sup>9</sup> Rylands A.B., Groves C.P., Mittermeier R.A., Cortes-Ortiz L., Hines J.H. (2006) Taxonomy and distributions of Mesoamerican primates. *New Perspectives in the Study of Mesoamerican Primates: Distribution, Ecology, Behavior and Conservation*.