

# Sofia C. Carrera

scarrera@umich.edu

University of Michigan  
Department of Psychology  
530 Church St., Ann Arbor, MI 48104

## Education

---

- 2016 - present    **PhD Candidate**, Biopsychology, University of Michigan  
Advisor: Jacinta Beehner  
Committee: Amy Lu, Ben Dantzer, Andrew Marshall, Eduardo Villamor  
Dissertation: “Early-life adversity: Maternal effects in a wild primate”
- 2018                **MS**, Psychology, University of Michigan
- 2015                **BS with distinction**, Ecology and Evolutionary Biology, Yale University  
Advisor: Richard Bribiescas  
Thesis: “Diurnal variation of testosterone in wild adult male owl monkeys of Formosa, Argentina”
- 2014                **Organization for Tropical Studies, Duke University**  
Study abroad program in South Africa – Field Biology

## Field Experience

---

- 2019 - present    **Simien Mountain Gelada Research Project, Ethiopia**  
PIs: Jacinta Beehner & Thore Bergman  
PhD dissertation fieldwork on geladas
- 2017 - 2019        **Simien Mountain Gelada Research Project, Ethiopia**  
PIs: Jacinta Beehner & Thore Bergman  
Pilot fieldwork on geladas (May - July 2017; November 2017 - March 2019)
- 2015 - 2016        **Owl Monkey Project**  
PI: Eduardo Fernandez-Duque  
Field research assistant for wild owl monkey behavioral endocrinology (Argentina: September 2015 - January 2016)  
Research assistant for captive owl monkey olfactory communication and pair-bonding behavior (Bastrop, TX: May 2015 - August 2015)
- 2014                **Organization for Tropical Studies, Kruger National Park, South Africa**  
NSF International Research Experience for Students (IRES) intern – Biodiversity analysis of small mammals in relation to elephant populations (June - July 2014)
- 2013                **Asociación Fauna Forever, Puerto Maldonado, Peru**  
PI: Chris Kirby  
Head research intern for behavioral observations of eight wild neotropical primate species (May - July 2013)

## **Laboratory Experience**

---

- 2016 - present    **Core Assay Facility, University of Michigan**  
PI: Jacinta Beehner  
Gelada female glucocorticoid analysis across pregnancy and lactation  
Validation of an EIA for glucocorticoid metabolites in gelada fecal samples (March 2018)  
Validation of an EIA for testosterone metabolites in gelada fecal samples (September 2018)
- 2018                **Endocrinology Laboratory, German Primate Center**  
PI: Michael Heistermann  
Measuring testosterone metabolites in gelada fecal samples (March 2018)
- 2013 - 2015       **Yale Reproductive Ecology Laboratory, Yale University**  
PIs: Richard Bribiescas & Claudia Valeggia  
BS thesis work analyzing wild owl monkey fecal testosterone samples
- 2014                **Veterinary Wildlife Services, Kruger National Park, South Africa**  
Research assistant validating a cortisol ELISA kit for African buffalo fecal samples (July - August 2014)
- 2013                **Hull Lab, Yale University**  
PI: Pincelli Hull  
Head student researcher identifying foraminifera species in deep ocean sediments (January - December 2013)

## **Fellowships**

---

- 2016 - 2021       **NSF Graduate Research Fellowship Program (GRFP)**
- 2014                **NSF International Research Experience for Students (IRES)**
- 2013                **Thomas C. Barry Travel Fellowship**
- 2013 - 2015       **Michele Dufault Endowment Fund for Yale Women in Science**

## **Grants and Awards**

---

- 2019                **Leakey Foundation, Research Grant (\$14,910)**
- 2019                **University of Michigan, Leonard Small Award (\$7,200)**
- 2019                **University of Michigan – Psychology, Pillsbury Graduate Research Award (\$1,000)**
- 2019                **Animal Behavior Society, Diversity Travel Award (\$145)**
- 2018                **University of Michigan, Rackham Professional Development Grant (\$400)**
- 2018                **University of Michigan – African Studies Center (\$2,000)**
- 2017                **University of Michigan, Rackham Graduate Student Research Grant (\$1,500)**

## Peer-Reviewed Publications

---

- In review     **Carrera SC**, Sen S, Heistermann M, Lu A, & Beehner, JC. Low rank and primiparity increase fecal glucocorticoid metabolites across gestation in wild geladas.
- 2019            Lu A, Petrullo L, **Carrera SC**, Feder J, Schneider-Crease I, & Snyder-Mackler N. Developmental responses to early life adversity: Evolutionary and mechanistic perspectives. *Evolutionary Anthropology*, 2019. <https://doi.org/10.1002/evan.21791>

## Published Abstracts

---

- 2019            **Carrera SC**, Lu A, & JC Beehner. In a non-seasonal primate, off-peak births require more time foraging during pregnancy. 56th Annual Conference of the Animal Behavior Society, Chicago, IL.
- 2018            **Carrera SC**, Lu A, & JC Beehner. Variation in time to weaning in wild geladas. 87th Annual Meeting of the American Association of Physical Anthropologists, Austin, TX.
- 2016            **Carrera SC**, Corley MK, Bribiescas RG, Vallengia C, & E Fernandez-Duque. Investigating how collection time affects fecal testosterone in a cathemeral species: *Aotus azarae*. Joint meeting of the International Primatological Society and the American Society of Primatologists, Symposium on Owl Monkeys, Chicago, IL.

## Science Communication

---

- 2019 - present     **Scientist Spotlights – Southeast Michigan**  
Teach children how to use an ethogram for animal behavior research
- 2017 - present     **Simien Lodge Annual Conservation Classes, Ethiopia**  
Help teach local children about conservation and geladas
- 2019                **Nerd Nite – Ann Arbor District Library**  
Presented my dissertation research at a local bar
- 2018                **Portal to the Public: University of Michigan Museum of Natural History Science Communication Fellowship**  
Participated in multiple workshops to design an activity for science communication
- 2018                **ComSciCon-MI**  
Participated in a 2-day workshop to improve oral and written science communication skills
- 2018                **Females Excelling More in Math, Research, and the Sciences, University of Michigan**  
Co-designed and co-led activities for young girls to learn about animal behavior
- 2016                **Huron Valley High School, Ann Arbor, MI**  
Presented a class on primate behavior and endocrinology research to high school students
- 2015                **Splash at Yale University, New Haven, CT**  
Developed and co-taught a class on animal behavior for high school students

## **Mentoring**

---

- 2017 - present     **Undergraduate Research Opportunity Program – University of Michigan**  
Research mentor for undergraduate students working in the Core Assay Facility (CAF)
- 2017 - present     **Association for Women in Science – University of Michigan**  
Group leader – in charge of leading discussions on various topics about being a woman in STEM

## **Teaching**

---

- Spring 2018     **Graduate Student Instructor (GSI): Introduction to Biopsychology – University of Michigan**  
Lead grader for the entire class; held discussion sections to introduce new material and led review sessions for exams
- Fall 2017     **GSI: Statistical Modeling and Data Visualization in R – University of Michigan**  
Designed and led lab sections to provide students with more information and practice using the R programming language; lead grader for all assignments; held problem-solving sessions

## **Service**

---

- 2019     **Conservation Physiology**  
Peer reviewer
- 2018     **Biopsychology area 10-year review**  
Student committee member

## **Additional Presentations**

---

- 2015     **Yale Ecology and Evolutionary Biology Symposium, Yale University**  
Diurnal variation of testosterone in wild adult male owl monkeys of Formosa, Argentina
- 2015     **Paskus-Mellon Forum, Jonathan Edwards College, Yale University**  
Diurnal variation of testosterone in wild adult male owl monkeys of Formosa, Argentina
- 2014     **NSF International Research Experience for Students (IRES) Symposium, South Africa**  
Drivers of small mammal communities in Kruger National Park, South Africa
- 2014     **Organization for Tropical Studies Symposium, South Africa**  
Understanding, preventing, and mitigating vervet - human conflict in Kruger National Park, South Africa