

## Eli D. Strauss

Department of Integrative Biology  
288 Farm Lane, Room 203  
Michigan State University  
East Lansing, MI 48824-1115  
straus46@msu.edu  
<http://straussed.github.io>

### Research Interests

---

Social evolution, social inequality, dominance hierarchies, comparative sociobiology, behavioral ecology, quantitative methods in evolution and ecology, social network analysis

### Education

---

- 2012 – 2019 **Candidate for dual PhD** at Michigan State University  
Integrative Biology (IBIO) and Ecology, Evolutionary Biology & Behavior (EEBB)  
Advisor: Dr. Kay E. Holekamp
- 2007 – 2011 **B.A. cum laude** at University of California, Berkeley

### Awards and Honors

---

- 2019 MSU EEBB Distinguished Student Speaker (\$500) (scheduled for April)
- 2017 Best Student Talk at *Göttinger Freiländertage*, Germany (\$180)
- 2012 NSF Graduate Research Fellowship (\$138,000)
- 2012 Graduate School University Distinguished Fellowship (\$80,000)
- 2011 Undergraduate Thesis in Cognitive Science with Highest Honors

### Publications

---

#### Peer-Reviewed

- Green DS, Farr M, Holekamp KE, **Strauss ED**, Zipkin E. (in revision) Can hyena behavior predict abundances of sympatric carnivores? *Philosophical Transactions of the Royal Society, B*.
- Strauss ED**, Holekamp KE. (2019) Social alliances improve rank and fitness in convention-based societies. *Proceedings of the National Academy of Sciences*.
- Strauss ED**, Holekamp KE. (2019) Inferring longitudinal hierarchies: Framework and methods for studying the dynamics of dominance. *Journal of Animal Ecology*.
- Smith JE, Lehmann KDS, Montgomery TM, **Strauss ED**, Holekamp KE. (2017) Insights from long-term field studies of mammalian carnivores. *Journal of Mammalogy*, 98:631-641. doi:10.1093/jmammal/gyw194.
- Holekamp KE, **Strauss ED**. (2016) Aggression and dominance: An interdisciplinary overview. *Current Opinion in Behavioral Sciences*, 12:44-51.
- Jones SC, **Strauss ED**, Holekamp KE. (2015) Ecology of African Carrion. Pp. 459-489 in *Carrion Ecology, Evolution, and Their Applications*. Benbow ME, Tomberlin JK, Tarone AM (Eds). CRC Press. Boca Raton, FL.
- Johnson AE, **Strauss ED**, Pickett R, Adami C, Dworkin I, Goldsby HJ. (2014) More bang for your buck: Quorum-sensing capabilities improve the efficacy of suicidal altruism. *ALIFE 14: Proceedings of the Fourteenth International Conference on the Synthesis and Simulation of Living Systems*, New York, NY.
- Strauss ED**, Schloss KB, Palmer SE. (2013) Color preferences change after experience with liked/disliked colored objects. *Psychonomic Bulletin & Review*, 20:935-943.

Schloss KB, **Strauss ED**, Palmer SE. (2013) Object color preferences. *Color Research & Application*, 38:393-411.

## Software

---

2019. **Strauss ED**. DynaRankR: Inferring Longitudinal Dominance Hierarchies. R package version 1.0.0. <https://CRAN.R-project.org/package=DynaRankR>

## Invited Seminars and Workshops

---

2017. **Strauss ED**, Holekamp KE. The dynamics of social status in a long-term study of nepotistic spotted hyenas. Talk presented at University of Nebraska, Lincoln.
2019. **Invited member** of Reorganizing Social Organization Workshop at Max Planck Institute of Evolutionary Anthropology, Leipzig, Germany.

## Conference Posters and Presentations

---

2018. **Strauss ED**, Shizuka D, Holekamp KE. Early life dominance interactions predict longevity in spotted hyenas. Talk presented at *BEACON Center for Evolution in Action*, Lansing, MI.
2018. **Strauss ED**, Shizuka D, Holekamp KE. Early life dominance interactions predict longevity in spotted hyenas. Talk presented at the *International Society for Behavioral Ecology Conference*, Minneapolis, MN.
2017. **Strauss ED**, Holekamp KE. Social bonds predict dynamics of dominance status in societies of spotted hyenas. Talk presented at *Göttinger Freilandtage*, Göttingen, Germany.
2017. **Strauss ED**, Holekamp KE. Social rank reversals in a long-term study of spotted hyenas. Talk presented at the *Animal Behavior Society Conference*, Toronto, ON.
2017. **Strauss ED**, Holekamp KE. The structure of nepotistic dominance hierarchies: The role of kinship and dominance. Talk presented at *BEACON Center for Evolution in Action*, Lansing, MI.
2016. **Strauss ED**, Holekamp KE. Social rank reversals in a long-term study of spotted hyenas. Talk presented at *MSU's Annual EEBB Research Symposium*, Lansing, MI.
2014. **Strauss ED**, Holekamp KE. Intraspecific variation in the society of a social carnivore. Poster presented at the *Animal Behavior Society Conference*, Princeton, NJ.
2014. Mirmomeni M, Hintze A, **Strauss ED**, Adami C. The collective hunting game: A new game to model social behavior in animals. Talk presented at the *Society for the Study of Evolution Conference*, Raleigh, NC.
2011. **Strauss ED**, Schloss KB, Palmer SE. The effects of imagined experiences of objects on preferences for colors. Talk presented at the *Vision Science Society Conference*, Naples, FL.
2010. **Strauss ED**, Schloss KB, Palmer SE. The good, the bad, and the ugly: Effects of object exposure on color preferences. Poster presented at the *Vision Science Society Conference*, Naples, FL.
2010. Schloss KB, Fortenbaugh FC, **Strauss ED**, Palmer SE. CSI Berkeley Episode II: Perceptual organization and selective attention. Talk presented at the *Vision Science Society Conference*, Naples, FL.
2009. Schloss KB, Fortenbaugh FC, **Strauss ED**, Palmer SE. CSI Berkeley Episode II: Perceptual organization and selective attention. Talk presented at the *Configural Processing Consortium*, Boston, MA.

## Research Grants and Fellowships

---

2019 Dissertation Completion Fellowship (\$7,500)  
2018 Dissertation Continuation Fellowship (\$7,500)  
2017 BEACON Travel Fellowship (\$1,000)  
2017 EEBC Travel Fellowship (\$600)  
2016 IBIO Shaver Award (\$1,125)  
2016 EEBC Summer Fellowship (\$1,800)  
2014 EEBC Summer Fellowship (\$1,800)  
2013 EEBC Travel Fellowship (\$400)  
2012 BEACON Top-up Fellowship (\$3,000)  
2010 UC Berkeley Undergraduate Research Apprenticeship Summer Award  
2009 UC Berkeley Undergraduate Research Apprenticeship Summer Award

---

### **Past Research Experience**

2011 – 2012 Research Assistant at Mara Hyena Research Project, Kenya (Dr. Kay Holekamp)  
2010 – 2011 Research Assistant in Animal Behavior Lab at UC Berkeley (Dr. Eileen Lacey)  
2008 – 2011 Research Assistant in Visual Aesthetics Lab at UC Berkeley (Dr. Stephen Palmer)

---

### **Mentoring**

2015 – 2018 Mentored six students conducting behavioral data extraction and analysis  
2014 – 2015 Mentored five students in field methods for behavior through NSF IRES program  
2013 – 2014 Mentored two students from underrepresented minorities through SROP program

---

### **Teaching**

2018 (fall) IBIO 830 Statistical Methods in Evolution and Ecology (teaching assistant for graduate-level course)  
2018 (sum) IBIO 341 Fundamentals of Genetics (teaching assistant)  
2016 (spring) IBIO 445 Evolution (discussion Instructor)  
2015 – 2017 IBIO 490 Behavioral Ecology of African Mammals (lead Instructor)

---

### **Service and Outreach**

2017 – 2018 Graduate student representative to IBIO faculty meeting  
2017 – 2018 MSU Hacky Hour founder & organizer (coding group for graduate students)  
2017 – 2018 EEBC Recruitment Liaison  
2017 – 2018 MSU Science Festival volunteer  
2016 – 2019 Biology on Tap founder & organizer (public outreach event for adults)  
2016 – 2018 EEBC Quantitative Methods Committee (revamping stats curriculum)  
2015 – 2016 IBIO Seminar Committee  
2014 – 2015 Weekly public presentations about spotted hyenas at Mara Serena Lodge, Kenya  
2014 – 2015 Mara Hyena Research Project field blog  
2013 – 2014 MSU Museum Darwin Day volunteer