

Eli D. Strauss

School of Biological Sciences
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Research Interests

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

Education

2012 – 2019 **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 Alexander von Humboldt Postdoctoral Research Fellowship
2019 University of Nebraska Lincoln School of Biological Sciences Population Biology Postdoc of Excellence
2019 Competitive award from NSF-funded BEACON Center for the Study of Evolution in Action. “Evolutionary perspectives on social inequality” (\$88,609)
2019 MSU EEBB Distinguished Student Speaker (\$500)
2017 Best Graduate Student Talk at *Göttinger Freilandtage*, 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

Strauss ED, Shizuka D, Holekamp KE. (in review) Juvenile rank acquisition influences fitness independent of adult rank. *Proceedings of the Royal Society, B*.
Green DS, Farr M, Holekamp KE, **Strauss ED**, Zipkin E. (2019) 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

2019. Michigan State University.
2019. **Invited member** of Reorganizing Social Organization Workshop at Max Planck Institute of Evolutionary Anthropology, Leipzig, Germany.
2019. **Invited talk** Warder Clyde Allee Competition, Animal Behavior Society, Chicago IL.
2017. University of Nebraska, Lincoln.

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*, Gottingen, 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 EEBB Travel Fellowship (\$600)
- 2016 IBIO Shaver Award (\$1,125)
- 2016 EEBB Summer Fellowship (\$1,800)
- 2014 EEBB Summer Fellowship (\$1,800)
- 2013 EEBB 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 UC Berkeley (Dr. Stephen Palmer)

Mentoring

- 2015 – 2019 Mentored seven 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 EEBB Recruitment Liaison
- 2017 – 2018 MSU Science Festival volunteer
- 2016 – 2019 Biology on Tap founder & organizer (public outreach event for adults)
- 2016 – 2018 EEBB 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