

## Sam K. Patterson

Department of Anthropology  
University of Notre Dame  
spatter5@nd.edu  
Pronouns: they, them, theirs

### Summary

---

I study developmental plasticity, aging health, and social determinants of health and fitness in our living primate relatives. I use demographic and ecological data, behavioral data, biological samples, and Bayesian statistical approaches. I incorporate field and laboratory methodologies in my research program.

### Education

---

- |      |                                                                                                                        |
|------|------------------------------------------------------------------------------------------------------------------------|
| 2021 | Ph.D., Arizona State University, Anthropology                                                                          |
| 2016 | M.A., Arizona State University, Anthropology                                                                           |
| 2013 | B.S., University of Michigan, Ann Arbor, Evolutionary Anthropology<br>Honors with Distinction, James B. Angell Scholar |

### Academic Positions

---

- |         |                                                                                                                                                                |
|---------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2025-pr | Assistant Professor<br>Department of Anthropology<br>University of Notre Dame                                                                                  |
| 2023-25 | Visiting Assistant Professor<br>Department of Anthropology<br>New York University                                                                              |
| 2021-23 | Postdoctoral Fellow (NSF SBE)<br>Department of Anthropology, New York University<br>Mentors: Dr. James Higham, Dr. Noah Snyder-Mackler, Dr. Lauren Brent       |
| 2021    | Research Specialist<br>School of Human Evolution and Social Change, Arizona State University<br>Mentor: Dr. Benjamin Trumble                                   |
| 2017-21 | Teaching & Research Associate<br>Institute of Human Origins, Arizona State University<br>School of Human Evolution and Social Change, Arizona State University |

2014-19      National Science Foundation Graduate Research Fellow  
School of Human Evolution and Social Change, Arizona State University

## **Teaching**

---

### **Instructor of record**

Human Evolution, New York University  
Primate Behavioral Ecology, New York University  
Evolution and Sex, New York University  
Primate Societies, New York University  
Social Behavior Across the Life Course, New York University

### **Teaching Assistant**

Great Adaptations, Arizona State University  
Human Origins, Arizona State University  
Food and Culture, Arizona State University

## **Fellowships, Awards, and Grants**

---

### **External**

2021-2023      National Science Foundation Postdoctoral Research Fellowship (SBE)  
(\$143,000)  
2022-2023      National Science Foundation and European Research Council  
Collaboration, Supplemental Joint Funding Initiative (\$6,100)  
2014-19      National Science Foundation Graduate Research Fellowship (\$102,000)  
2017      National Science Foundation Dissertation Research Improvement Grant  
(\$24,181)  
2017      Leakey Foundation Research Grant (\$15,000)  
2012      National Science Foundation IRES (\$2,500)

### **Internal**

2022      New York University, Global Research Initiatives (\$22,500)  
2020      SHESC Summer Writing Fellowship (\$8,500)  
2019      Donald H. Morris Award for Outstanding Doctoral Student in Evolutionary  
Anthropology  
2016      SHESC Graduate Research Grant, Arizona State University  
2015      SHESC Student Research Grant, Arizona State University  
2015      CLAS Graduate Excellence Award, Arizona State University  
2013      Undergraduate Service Award, Department of Anthropology, University of  
Michigan  
2013      John Patrick Kennedy Award, LSA Honors Program, University of  
Michigan  
2013      Derrow/Goodman Fund, Department of Anthropology Fellowships  
Committee, University of Michigan

## Travel Grants

---

- 2015-19      Pollitzer Student Travel Award, American Association of Physical Anthropologists (x2)
- 2016-20      GPSA Travel Grant, Arizona State University (x5)

## Publications

---

- 2024      **Patterson, S.K.**, Andonov, E.\*, Arre, A.M., Martinez, M.I., Negron-Del Valle, J.E., Petersen, R.M, Phillips, D., Rahman, A.\*, Ruiz-Lambides, A., Villanueva, I.\*, Lea, A.J., Snyder-Mackler, N., Brent, L.J., Higham, J.P. Early life adversity has sex-dependent effects on survival across the lifespan in rhesus macaques. (*In press*) *Philosophical Transactions of the Royal Society B*. DOI 10.1098/rstb.2022.0456  
\*high school students
- 2024      Watowich, M., Costa, C., Chiou, K., Goldman, E., Petersen, R., **Patterson, S.**, Martinez, M., Sterner, K., Horvath, J., Montague, M., Platt, M., Brent, L., Higham, J., Lea, A., Snyder-Mackler, N. Immune gene regulation is associated with age and environmental adversity in a nonhuman primate. (2024) *Molecular Ecology*.
- 2023      **Patterson, S.K.**, Petersen, R.M., Brent, L.J.N., Snyder-Mackler, N., Lea, A.J., Higham, J.P. Natural populations of non-human animals as model systems for understanding early life adversity effects on aging. (2023) *Integrative and Comparative Biology*, icad058
- 2023      Hawley, C., **Patterson, S.K.**, Silk, J. Tradeoffs between mating effort and parenting effort in a polygynadrous mammal. (2023) *iScience*
- 2022      **Patterson, S.K.**, Strum, S.C., & Silk, J.B. Early life adversity affects sociality and interaction style in wild female olive baboons. (2022) *Proceedings of the Royal Society B*, 289.1969: 20212244.
- 2021      **Patterson, S.K.**, Hinde, K., Bond, A.B., Trumble, B.C., Strum, S.C., & Silk, J.B. Effects of early life adversity on maternal effort and glucocorticoids in wild olive baboons. (2021) *Behavioral Ecology and Sociobiology*, 75:114.
- 2021      **Patterson, S.K.**, Strum, S.C., & Silk, J.B. Resource competition shapes female-female aggression in olive baboons. (2021) *Animal Behaviour*, 176: 23-41.
- 2017      Silk, J.B., Roberts, E.R, Barrett, B.J., **Patterson, S.K.**, & Strum, S.C. Female-male relationships influence the form of female-female

relationships in olive baboons, *Papio anubis*. (2017) *Animal Behaviour*, 131: 89-98.

- 2016 Sandel, A.A., Miller, J.A., Mitani, J.C., Nunn, C.L., **Patterson, S.K.**, & Garamszegi, L.Z. Assessing sources of error in comparative analyses of primate behavior: intraspecific variation in group size and the social brain hypothesis. (2016) *Journal of Human Evolution*, 94: 126-133.
- 2014 **Patterson, S. K.**, Sandel, A. A., Miller, J. A., & Mitani, J. C. Data quality and the comparative method: The case of primate group size. (2014) *International Journal of Primatology*: 1-14.

### **Invited Talks, Symposiums, and Workshops**

---

- 2023 Yale University, Biological Anthropology Colloquium, October 2023  
*Invited speaker*
- 2023 Boston Pepper Center symposium, Harvard Medical School, May 2023  
Invited speaker on Adverse early experiences (trauma, stigma, SDoH) leading to accelerated aging phenotypes
- 2023 New York Academy of Science, Anthropology Division, April 2023.  
Series: "Past upheavals, current conjectures, and the future forward."  
Invited Discussant with Dr. Jenny Tung
- 2023 'Biology at Birth' symposium at the annual Society for Integrative and Comparative Biology (SICB) meeting, January 2023  
Invited speaker; Author on special issue manuscript
- 2022 Evolution of Developmental Plasticity Workshop, NYU Berlin, Germany, December 2022  
Co-organizer with James Higham, Amanda Lea, and Jenny Tung  
*Acquired funding* from NYU Global Research Initiatives, the Max Planck Institute for Evolutionary Anthropology, and The Vanderbilt Evolutionary Studies Initiative
- 2022 The New York Consortium in Evolutionary Primatology seminar series, May 2022  
Invited speaker, "Consequences of adverse early life experiences in primates"
- 2022 The Royal Society's scientific meeting, "Collective animal behavior through time"  
Attendee

- 2021 Early biopsychosocial development and life-course health and wellbeing: exploring cross-species research (joint seminar series among Newcastle University, Lancaster University, and Zoological Society of London); perspectives from human child development fields and animal studies, October 2021  
Invited speaker, "Consequences of early life adversity"
- 2016 Towards a better understanding of social convergence between cetaceans and primates symposium at the joint meeting of the International Primatological Society and the American Society of Primatologists, August 2016  
Invited speaker, "Ties that bind: social bonds among female baboons reflect tension between maternal kinship and ties to different males"
- 2016 Culture Change Workshop, Arizona State University, March 2016  
*Co-organizer*, Departmental workshop on harassment/misconduct  
Workshop materials available on request

### **Conference Presentations**

---

- 2025 **Patterson, S.K.**, Negron-Del Valle, J.E., Phillips, D., Ruiz-Lambides, A., Snyder-Mackler, N., Brent, L.J.N., Higham, J.P. Early life adversity shapes adult behavioral phenotypes in male and female rhesus macaques. American Society of Primatologists.
- 2024 Nonnamaker, L., Cruz, K., Dasari, M., **Patterson, S.K.** Old solutions for colonial problems: queering biological anthropology. American Association of Biological Anthropologists.
- 2023 **Patterson, S.K.**, Andonov, Arre, Martínez, Negron-Del Valle, Petersen, Phillips, Rahman, Ruiz-Lambides, Villanueva, Lea, Snyder-Mackler, Brent, Higham. Early life adversity increases mortality risk across the lifespan in free-ranging rhesus macaques (2023) International Primatological Society – Malaysian Primatological Society Joint Meeting.  
*Session Chair*
- 2023 **Patterson, S.K.**, Andonov, E., Rahman, A., Villanueva, I., Petersen, R.M, Martínez, M.I., Lea, A.J., Snyder-Mackler, N., Brent, L.J.N., Higham, J.P. Early life adversity increases mortality risk across the lifespan in free-ranging rhesus macaques (2023) Society for Integrative and Comparative Biology (SICB) meeting.
- 2022 **Patterson, S.K.**, Strum, S.C., & Silk, J.B. Infant baboons reduce costly social behaviors but grunt more during challenging times. (2022). American Association of Biological Anthropologists.

- 2021 **Patterson, S.K.**, Strum, S.C., & Silk, J.B. Early life adversity affects sociality and interaction style in wild female olive baboons. (2021). Meeting of the Northeastern Evolutionary Primatologists.
- 2021 **Patterson, S.K.**, Strum, S.C., & Silk, J.B. Early life adversity affects sociality and interaction style in wild female olive baboons. (2021). Animal Behavior Society Virtual Meeting.
- 2021 **Patterson, S.K.**, Hinde, K., Bond, A.B., Trumble, B.C., Lu, A., Strum, S.C., & Silk, J.B. Maternal behavior and glucocorticoid levels shape infant development in wild olive baboons. (2021). American Association of Physical Anthropologists.
- 2020 **Patterson, S.K.**, Strum, S.C., & Silk, J.B. Effects of early life adversity on maternal behavior and physiology in wild olive baboons. (2020). Early Life Adversity Meeting for early career researchers, Virtual Conference.
- 2020 **Patterson, S.K.**, Strum, S.C., & Silk, J.B. Early life adversity exerts lasting effects on maternal behavior and physiology. (2020). Animal Behavior Society Virtual Meeting.
- 2020 **Patterson, S.K.**, Strum, S.C., & Silk, J.B. Effects of early life adversity and novel foraging circumstances on maternal behavior. (2020). American Association of Physical Anthropologists.
- 2019 **Patterson, S.K.**, Strum, S.C., & Silk, J.B. Effects of early life adversity and novel foraging circumstances on maternal behavior. (2019). Southwestern Association of Biological Anthropologists Meeting.
- 2016 **Patterson, S.K.**, Roberts, E.K., Strum, S.C., & Silk, J.B. Ties that bind: social bonds among female baboons reflect tension between maternal kinship and ties to different males. (2016) Joint meeting of the International Primatological Society and the American Society of Primatologists. Invited oral presentation for symposium: Towards a better understanding of social convergence between cetaceans and primates. (Oral Presentation)
- 2015 **Patterson, S. K.**, Roberts, E. K., Strum, S. C., & Silk, J. B. The structure of social networks in olive baboons (*Papio anubis*). (2015) Southwestern Association of Biological Anthropologists Meeting. (Poster presentation)
- 2015 **Patterson, S. K.**, Bergman, T. J., Cheney, D. L., R. Seyfarth, R. M., & Beehner, J. C. Rises in testosterone predict rises in dominance rank for male chacma baboons. (2015) American Association of Physical Anthropologists. (Oral presentation)

- 2013 Sandel A. A., Miller, J. A., and **Patterson, S. K.** Revisiting the social brain hypothesis: Incorporating within-species group size variation into a comparative analysis. (2013) American Association of Physical Anthropologists (Poster presentation)
- 2013 **Patterson, S. K.** The comparative method in evolutionary biology: the effects of intraspecific variation and data quality. (2013) University of Michigan Anthropology Honors Symposium. Ann Arbor, Michigan. (Poster presentation)
- 2011 Barrett, L., Mule, V., and **Patterson, S. K.** Ranging behavior and activity budgets of the endangered Central American squirrel monkey (*Saimiri oerstedii*). (2011) Midwest Primate Interest Group (MPIG) Conference. Kent, Ohio. (Poster presentation)
- 2011 **Patterson, S. K.** Development of Locomotion in Wild Chimpanzees. (2011) University of Michigan Undergraduate Research Opportunities Program (UROP) Symposium. Ann Arbor, Michigan. (Poster presentation)

### **Mentoring and Professional Service**

---

- 2025 Masters Thesis Reader for Stacy-Anne Parke, New York University
- 2024 Queer Field Safety Workshop, American Association of Biological Anthropologists  
Panelist
- 2024 Masters Thesis Reader for Kandra Cruz, New York University
- 2023-25 Animal Subjects Liaison, Anthropology Faculty Committee  
New York University
- 2023 Diverse Career Pathways, Arizona State University  
Panelist
- 2023 Trans in Field Work panel, Texas Ecology, Evolution, and Behavior Club, UT Austin, March  
Panelist
- 2022 Masters Thesis Reader for JJ Gunson, New York University
- 2022 Lead Mentor for Applied Research Innovations in Science and Engineering (ARISE) program, New York University  
Mentor NYC high school students in a five-week research program

|         |                                                                                                                                                                 |
|---------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2021-pr | Liaison, International Society for Nonbinary Scientists                                                                                                         |
| 2019-24 | Team member and Reviewer, <a href="#">Anthro Illustrated</a>                                                                                                    |
| 2014-pr | LGBTQQIAA diversity group of the American Association of Biological Anthropologists                                                                             |
| 2020-21 | Lesson plan creator for the Origin Stories podcast, The Leakey Foundation                                                                                       |
| 2015-21 | Research Grant Reviewer, Graduate and Professional Student Association, Arizona State University                                                                |
| 2014-20 | Undergraduate Apprenticeship Program, Arizona State University<br>Mentor undergraduate students in research projects                                            |
| 2019    | Guest lecture, On being a primatologist at Mesa Community College                                                                                               |
| 2018-19 | Gateway Early College High School Professional Networking Breakfast<br>Met with 12 <sup>th</sup> grade students who aim to be First Generation College students |
| 2016    | Culture Change Workshop, Arizona State University<br>Co-organizer, Culture change workshop on harassment/misconduct                                             |
| 2014-16 | DANTA Website<br>A contributing author to the DANTA Association for Conservation of the Tropics outreach blog                                                   |
| 2013    | Academic Tutor, University of Michigan Athletics<br>Course: Primatology                                                                                         |

## **Research Experience**

---

|         |                                                                                                                                                                                                 |
|---------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2021-23 | Lab training at the SMACK lab, Center for Evolution and Medicine, Arizona State University<br>Postdoc training in molecular genetic techniques under the supervision of Dr. Noah Snyder-Mackler |
| 2021-23 | Analytical training at the University of Exeter, UK<br>Postdoc training in Bayesian social network analysis and animal models under the supervision of Dr. Lauren Brent                         |
| 2022-23 | Survey Research: "How do scholars think about the evolution of                                                                                                                                  |

developmental plasticity?” Survey study to learn more about how scholars understand and think about the evolution of developmental plasticity and its adaptive value.

Conceptualized the study, designed the questions and survey, completed necessary human research subjects training, and acquired IRB approval  
In collab with James Higham and Amanda Lea

- |         |                                                                                                                                                                                                                                                                                             |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2021-23 | Field work at Cayo Santiago, Caribbean Primate Research Center, Puerto Rico                                                                                                                                                                                                                 |
| 2017-21 | Lab work at the Evolutionary Biodemography and Comparative Lactation Lab, Center for Evolution and Medicine, Arizona State University<br>Ph.D. dissertation: Enzyme immunoassays to assess glucocorticoids in olive baboon feces<br>Postdoc: Alzheimer’s dementia and CVD among the Tsimane |
| 2014-17 | Fieldwork at Uaso Ngiro, Laikipia, Kenya<br>Ph.D. dissertation: 15 months of behavioral, hormonal, and photographic data collection on olive baboons<br>Ph.D. dissertation pilot study on olive baboons<br>Research assistant for PIs: Dr. Joan Silk, Dr. Shirley Strum, Dr. Eila Roberts   |
| 2013    | Fieldwork at Filoha, Awash National Park, Ethiopia<br>Research assistant, hamadryas baboons<br>PIs: Dr. Joan Silk, Dr. Larissa Swedell, Dr. Eila Roberts                                                                                                                                    |
| 2013    | Research Assistant, University of Michigan<br>Examined the challenge hypothesis in chacma baboons<br>PI: Dr. Jacinta Beehner                                                                                                                                                                |
| 2012-13 | Honors Thesis, University of Michigan<br>The comparative method in evolutionary biology: the effects of intraspecific variation and data quality<br>PI: Dr. John Mitani                                                                                                                     |
| 2012    | National Science Foundation: International Research Experiences for Students, Masai Mara, Kenya<br>Research assistant, spotted hyenas<br>PI: Dr. Kay Holekamp                                                                                                                               |
| 2011    | Fieldwork at Osa Conservation’s Piro Research Station, Costa Rica<br>Field school; pilot study on squirrel monkeys                                                                                                                                                                          |
| 2010-11 | Undergraduate Research Opportunities Program, University of Michigan<br>Research assistant, videography of Ngogo chimpanzees                                                                                                                                                                |

PIs: Dr. John Mitani and Dr. Lauren Sarringhaus

### **Professional Membership**

---

|       |                                                    |
|-------|----------------------------------------------------|
| 2014- | American Association of Biological Anthropologists |
| 2015- | International Primatological Society               |
| 2020- | Animal Behavior Society                            |
| 2021- | International Society of Nonbinary Scientists      |
| 2025- | American Society of Primatologists                 |