

India A. Schneider-Crease

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Arizona State University

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CURRENT POSITION

2022-present Assistant Professor in Global Health, School of Human Evolution and Social Change, Center for Evolution and Medicine, Arizona State University

2022-present Co-Director, Simien Mountains Gelada Research Project (Simien Mountains National Park, Ethiopia)

2019-present Co-Director, Kasanka Baboon Project (Kasanka National Park, Zambia)

EDUCATION

Ph.D., Department of Evolutionary Anthropology, Duke University (2017).

B.A., Philosophy, French Language and Literature, Stony Brook University, *summa cum laude* (2009).

RESEARCH SUPPORT

2022 PI; The Leakey Foundation, Research Field Site Grant (\$25,000)

2021 PI; The Carter Center Guinea Worm Eradication Program pilot funding (\$18,000)

2021 PI; The Leakey Foundation, Research Field Site Grant (\$25,000)

2020 PI; Arizona State University, Center for Evolution and Medicine Postdoctoral Research Fellowship (\$140,000, 2.5 years)

2017 PI; National Science Foundation, Directorate for Social, Behavioral, and Economic Sciences Postdoctoral Research Fellowship (\$130,000, 2 years)

2018 PI; University of Washington Postdoctoral Awards (\$1200)

2018 PI; The Leakey Foundation Research Grant (\$25,000)

2016 PI; Primate Conservation, Inc. (\$2,900)

2012 PI; National Science Foundation, Graduate Research Fellowship (\$130,000, 3 years).

2015 PI; Duke Department of Evolutionary Anthropology Graduate Mentorship Award (\$1000)

2014 PI; Nacey Maggioncalda Foundation (\$3000)

2014 PI; Margot Marsh Biodiversity Foundation (\$10,000)

2013 PI; Primate Action Fund, Conservation, Inc. (\$3,000)

2013 PI; Duke Department of Evolutionary Anthropology Internal Graduate Award (\$700)

2012 PI; Duke Department of Evolutionary Anthropology Graduate Mentorship Award (\$2,000)

OTHER SUPPORT

2023 PI; Rapid Response Facility (partnership between the UNESCO World Heritage Centre and Fauna & Flora International) grant for conservation emergencies in UNESCO natural World Heritage Sites (\$40,000)

2021 PI; Beagle Charitable Foundation, annual grant for conservation activities in the Simien Mountains National Park, Ethiopia (\$15,000 annual)

2019 PI; Natural Habitat Adventures- World Wildlife Federation Partnership grant for conservation projects in Ethiopia (\$5,500)

PUBLICATIONS

*denotes undergraduate/graduate student mentee

Watowich, M., Chiou, K.L., Graves, B., Montague, M., Brent, L., Higham, J., Horvath, J., Lu, A., Martinez, M., Platt, M., **Schneider-Crease, I.A.**, Lea, A.J., Snyder-Mackler, N. Best practices for genotype imputation from low-coverage sequencing data in natural populations. *In review, Molecular Ecology Resources*.

Delacey, P.M, Sen, S.*, **Schneider-Crease, I.A**, Chiou, K.L., Lemma, A., Ayele, F., Haile, A.A., Lu, A., Bergman, T.J., Snyder-Mackler, N. Vascularization underlies differences in sexually selected skin coloration in a wild primate. *In review, Molecular Ecology*.

Schneider-Crease, I.A., Feder, J.A., Baniel, A., McCann, C., Azanaw, A.H., Abebe, B., Fitzgerald, F.*, Gomery, M.A.*, Simberloff, R.A., Petrie, Z.L., Gabriel, S., Dorny, P., Fashing, P.J., Nguyen, N., Bergman, T.J., Beehner, J.C., Snyder-Mackler, N., Lu, A. (2022). Urinary neopterin reflects lifetime variation in innate immunity, helminth-induced immunomodulation, and microbiome diversity in a wild primate. *Scientific Reports*, 12(1): 21307. <https://doi.org/10.1038/s41598-022-25298-9>

Schneider-Crease, I.A., Chiou, K.L., Moya, I.L.*, Lemma, A., Ayele, F., Azanaw, A.H., Kebede, F., Abebe, B., Bergman, T.J., Beehner, J.C., Lu, A., Lund, M.C., Custer, J.M., Kraberger, S., Snyder-Mackler, N., Varsani, A. (2022). Novel statovirus identified in fecal samples from wild geladas in the Ethiopian highlands, *Archives of Virology*. <https://doi.org/10.1007/s00705-022-05588-3>

Schneider-Crease, I. A., Weyher, A. H., Mubemba, B., Kamilar, J. M., Petersdorf, M., & Chiou, K. L. (2022). Stronger maternal social bonds and higher rank are associated with accelerated infant maturation in Kinda baboons. *Animal Behaviour*, 189, 47-57.

Chiou, K. L., Janiak, M. C., **Schneider-Crease, I. A.**, Sen, S., Ayele, F., Chuma, I. S., ... & Snyder-Mackler, N. (2022). Genomic signatures of high-altitude adaptation and chromosomal polymorphism in geladas. *Nature Ecology & Evolution*, 1-14.

Delacey, P.M., Perlman, R.F., Sen, S.*, **Schneider-Crease, I.A**, Chiou, K.L., Lemma, A., Ayele, F., Higham, J.P., Lu, A., Snyder-Mackler, N., Beehner, J.C., Bergman, T.J. (2022) Assessing male gelada chest patches: color measurement and physiological mechanisms. *Mammalian Biology*, 1-13

Schneider-Crease, I.A., Blackwell, A.D., Kraft, T.S., Emery Thompson, M., Maldonado Suarez, I., Cummings, D.K., Stieglitz, J., Kaplan, H., Snyder-Mackler, N., Gurven, M., Trumble, B.C. (2021). Helminth Parasitism Inhibits Cytokine Responses to Viral and Bacterial Stimulations in a Subsistence Population in Bolivia. *Evolution, Medicine, and Public Health*. 9(1); <https://doi.org/10.1093/emph/eoab035>.

Schneider-Crease, I. (2020). Larval Tapeworm Infections in Primates: Coenurosis, Cysticercosis, and Echinococcosis. In: *Neglected Diseases of Monkeys: From the Monkey-Human interface to One Health*, Eds: S. Knauf & L. Jones-Engel. (pp. 323-342). Springer.

Schneider-Crease, I., Beehner, J.C., Bergman, T.J., Gomery, M.A.*, Koklic, L.*, Lu, A., Snyder-Mackler, N. (2020). Ecology eclipses phylogeny as a major driver of nematode parasite community structure in a graminivorous primate. *Functional Ecology*. doi:10.1111/1365-2435.13603

- Trumble, B.C., **Schneider-Crease, I.** (2020). Chronic Diseases of Aging in an Evolutionary Context. *Evolution, Medicine, and Public Health*. eoa013, <https://doi.org/10.1093/emph/eoa013>.
- Schneider-Crease, I.**, Chiou, K.L., Snyder-Mackler, N., Beehner, J.C., Bergman, T.J., Lu, A. (2020). Beyond infant death: the hidden costs of infanticide in geladas (*Theropithecus gelada*). *Animal Behaviour*, 59: 89-95.
- Lu, A., Petrullo, L. Carrera, S., Feder, J., **Schneider-Crease, I.**, Snyder-Mackler, N. (2019). Developmental Responses to Early Life Adversity: Evolutionary and Mechanistic Perspectives. *Evolutionary Anthropology*, doi.org/10.1002/evan.21791.
- Miller, I.F., **Schneider-Crease, I.**, Nunn, C.L., Muehlenbein, M.P. (2018). Estimating infection prevalence: best practices and their theoretical underpinnings. *Ecology & Evolution*, 8, 6738-6747.
- Schneider-Crease, I.**, Griffin, R.H., Gomery, M.A.* , Dorny, P., Noh, J.C., Handali, S., Chastain, H., Wilkins, P.P., Nunn, C.L., Beehner, J.C., Bergman, T.J. (2017). Identifying wildlife reservoirs of neglected taeniid tapeworms: Non-invasive diagnosis of endemic *Taenia serialis* infection in a wild primate population. *PLoS Neglected Tropical Diseases*, 11(7), e0005709.
- Schneider-Crease, I.**, Griffin, R.H., Gomery, M.A.* , Bergman, T.J., Beehner, J.C. (2017). High mortality associated with tapeworm parasitism in geladas (*Theropithecus gelada*) in the Simien Mountains National Park, Ethiopia. *American Journal of Primatology*, 79(9), e22684.
- Schneider-Crease, I.**, Snyder-Mackler, N., Jarvey, J.C.* , Bergman, T.J. (2013). Molecular identification of *Taenia serialis* coenurosis in a wild Ethiopian gelada (*Theropithecus gelada*). *Veterinary Parasitology*, 198, 240-243.

OTHER ACTIVITIES

- 2021-present Leader of international collaboration between Engineers Without Borders-Arizona State University Chapter, the Addis Ababa Institute of Technology, Debarq University, the Ethiopian Wildlife Conservation Authority, the Duke University Nicholas Institute of the Environment, Gizish Industries, and the School of Sustainability at Arizona State University. Projects include design and implementation of waste management infrastructure in the Simien Mountains National Park, the development of small-scale recycling/upcycling workshops in Ethiopia, and capacity-building in engineering, ecotourism, and conservation sectors.
- 2015-present Board member, *Save the Simiens* (501(c)(3); lapsed). Coordinator for a non-profit conservation organization in the Simien Mountains National Park (SMNP), Ethiopia. Activities include international and local fundraising, on-site organization, training, and education.

INVITED TALKS

- 2023 *upcoming*. “Ecological dimensions of zoonotic emergence in natural systems” Integrative Biology Seminar Series, Michigan State University, East Lansing, MI. *Virtual*.
- 2023 *upcoming*. “Mechanisms of novel pathogen transmission in natural infectious disease networks: the impact of animal migrations on local microbial, viral, and parasitological communities.” Club EvMed, TriCEM, Durham, NC. *Virtual*.
- 2022 “One Health Approaches to Zoonoses: tapeworms, viruses, and Guinea worm in primates.” North Carolina State University College of Veterinary Medicine, Raleigh, North Carolina.

- 2022 “Zoonoses through an ecological lens: primates and their pathogens.” Department of Evolutionary Anthropology, Duke University.
- 2022 “Disease ecology from multiple dimensions: leveraging natural systems to understand broad patterns of infectious disease” Department of Wildlife and Fisheries, Penn State University.
- 2022 “Multidimensional approaches to understanding drivers of novel disease emergence in natural systems.” Center for Tropical and Emerging Infectious Diseases, Department of Infectious Diseases, College of Veterinary Medicine, University of Georgia.
- 2021 “From ecological networks to individuals: drivers of novel disease emergence in natural systems.” Department of Ecology and Evolution, University of Tennessee Knoxville.
- 2021 “From the global to the personal: ecological interactions as drivers of health and disease in humans and nonhuman primates.” Host-Parasite Interactions Group, University of Calgary, Alberta, Canada. *Virtual*.
- 2021 “Drivers of heterogeneity in patterns of infectious disease in primates”. Guinea Worm Eradication Program, The Carter Center, Atlanta, GA. *Virtual*.
- 2020 “Parasitism, life history, and immunity in a globalized world”. Center for Evolution and Medicine Seminar Series. Arizona State University, Tempe, AZ. *Virtual*.
- 2017 “Integrating conservation, public health, and primate behavior in the Simien Mountains National Park, Ethiopia.” Ministry of Science and Technology, Addis Ababa, Ethiopia.
- 2016 “A parasitic driver of natural selection in primates: effects of age, sex, and anthropogenic habitat change.” Sociality and Health in Primates (SoHaPi) workshop. Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany.
- 2012 “To each their own (parasite): Gastrointestinal parasites in a population of captive lemurs”, le Centre Québécois sur la santé des Animaux Sauvages, Faculté de médecine vétérinaire, Université de Montréal, Sainte-Hyacinthe, QC.

PRESENTATIONS

- 2023 **Schneider-Crease I.**, Weyher, A.H., Petersdorf, M., Kamilar, J., Chiou, K.L. Maternal friendships speed up infant development in Kinda baboons. American Association of Biological Anthropologists (AABA). Reno, Nevada.
- 2022 **Schneider-Crease, I.**, Blackwell, A.D., Kraft, T.S., Emery Thompson, M., Maldonado Suarez, I., Cummings, D.K., Stieglitz, J., Kaplan, H., Snyder-Mackler, N., Gurven, M., Trumble, B.C. “Helminth infection is associated with dampened cytokine responses to viral and bacterial stimulations in Tsimane hunter-horticulturalists”. 6th Annual Meeting, International Society for Evolutionary Medicine and Public Health (ISEMPH). Lisbon, Portugal.
- 2021 **Schneider-Crease, I.**, Beehner, J.C., Lu, A., Bergman, T.J., Snyder-Mackler, N. “Ecology eclipses phylogeny as a driver of parasite community structure in a gramivorous primate” International Primatological Society. Quito, Ecuador. *Virtual*.
- 2021 **Schneider-Crease, I.**, Blackwell, A.D., Kraft, T.S., Emery Thompson, M., Maldonado Suarez, I., Cummings, D.K., Stieglitz, J., Kaplan, H., Snyder-Mackler, N., Gurven, M., Trumble, B.C. “Helminth Parasitism Inhibits Cytokine Responses to Viral and Bacterial Stimulations in a Subsistence Population in Bolivia”. American Association of Physical Anthropologists (AAPA), *Virtual*.
- 2021 Kamilar, J.M., Weyher, A.H., Petersdorf, M., Chiou, K.L., **Schneider-Crease I.** “Maternal rank and infant development of Kinda baboons at Kasanka National Park, Zambia”. American Association of Physical Anthropologists (AAPA), *Virtual*.

- 2019 **Schneider-Crease, I**, Griffin, R.H., Gomery, M.A., Bergman, T.J., Beehner, J.C. “Zoonotic taeniid infections: Fitness costs in a primate model system”. 5th Annual Meeting, International Society for Evolutionary Medicine and Public Health (ISEMPH). Zurich, Switzerland.
- 2016 **Schneider-Crease, I**, Noh, J.C., Bergman, T.J., Beehner, J.C. “Diagnosing *Taenia serialis* in wild geladas: Novel use of adapted urine Ag-ELISA for assessing wildlife health.” 2nd Annual Meeting, International Society for Evolutionary Medicine and Public Health (ISEMPH), Durham, NC.
- 2016 **Schneider-Crease, I**, Griffin, R.H., Jarvey, J.C., Bergman, T.J., Beehner, J.C. “Cease and De Cyst: Females more likely than males to fight off tapeworm cysts.” 85th Annual Meeting, American Association of Physical Anthropologists (AAPA), Atlanta, GA.
- 2015 **Schneider-Crease, I**. “Primate Conservation and Disease.” Duke Talent Identification Program, Duke University, Durham, NC.
- 2013 **Schneider-Crease, I**, Schopler, R., Digby, L. "Cross-species parasite prevalence: pinworms in captive lemurs." 82nd Annual Meeting, American Association for Physical Anthropologists (AAPA), Knoxville, TN.
- 2012 **Schneider-Crease, I**, Schopler, R., Digby, L. "Cross-species parasite patterns: pinworm prevalence in captive lemurs." Women in Science and Engineering Symposium 2012, Duke University, Durham, NC.

TEACHING AND MENTORING

Faculty advisor: Engineers Without Borders-ASU Chapter (2020-present). 29 students, weekly meetings.

Certifications: Association of College and University Educators (ACUE) Microcredential: Creating an Inclusive and Supportive Learning Environment (March 2023)

Instructor: Advanced Evolutionary Medicine (ASU; Spring 2023); One Health in Australia (ASU Study Abroad May 2023), Advanced Primate Conservation (Duke; Summer 2017).

Teaching Assistant (Duke University): Human Anatomy, Primate Sexuality, Sociobiology, Human Osteology, Introduction to Biological Anthropology.

PhD committee member: Catherine Kitrinos, Department of Anthropology, University of Massachusetts Amherst.

Undergraduate supervisor: Aliya Kammerer (current; Arizona State University), Isabella Moya (current; Arizona State University), Lia Koklic (completed; University of Washington).

OUTREACH

2022 Interview, ASU News. *Baby Kinda baboons become independent faster if moms are social, dominant*. <https://news.asu.edu/20220811-new-research-baby-kinda-baboons-become-independent-faster-if-moms-are-social-and-dominant>

2019 Mentor, *Girls Embracing Math and Science*. Mentor for girls in science, Seattle, WA.

2015-2016 Popular media interviews and coverage, research and conservation, *Amhara Mass Media Agency (AMMA)*, *Ethiopian Television (ETV)*, *ShayBuna*, *Ethiopian News Agency*.

2014-2015 Mentor, *BOOST Science Program (NIH)*. Mentored students from historically marginalized backgrounds in science and technology. Durham, NC.

SERVICE

Reviewer for *Science Advances*, *Emerging Infectious Diseases*, *Philosophical Transactions B*, *PLOS ONE*, *American Journal of Primatology*, *National Geographic*, *Parasitology International*, *International Journal*

for Parasitology, International Journal for Parasitology: Parasites and Wildlife, Primates, Ecology and Evolution, Global Ecology and Conservation

MISCELLANEOUS

Certificate in wildlife handling and chemical immobilization from Global Wildlife Resources.

Certificate in wilderness first aid from Survival Med.