

Sean Prall

ASSISTANT PROFESSOR

DEPARTMENT OF ANTHROPOLOGY, UNIVERSITY OF MISSOURI

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Positions

University of Missouri

- Assistant Professor, Department of Anthropology 2019-

University of California, Los Angeles

- Postdoctoral Scholar, Center for Behavior, Evolution, and Culture 2016-2019

University of Washington

- Research Scientist, Department of Biomedical Informatics & Medical Education 2015-2016

New Mexico State University

- Visiting Assistant Professor, Department of Anthropology 2015

Education

Indiana University, Ph.D. Anthropology 2014

Boise State University, B.A. Anthropology 2008

Grants

- 2023. National Science Foundation (BCS #2317312) & the Social Science Research Council Mercury Project. *NSF-SSCR: Sociodemographic Influences on Vaccine Decision-Making*. Role: PI. Co-PIs: Brooke Scelza & Helen Davis. \$442,478.
- 2012. Indiana Academy of Science Senior Research Grant. The role of dehydroepiandrosterone in immuno-competence and immunoredistribution in humans. \$2966.

Publications

JOURNAL ARTICLES

- **Prall SP**, Scelza BA. 2023. The causes and consequences of women's status in Himba pastoralists. *Evolution & Human Behavior*, <https://doi.org/10.1016/j.evolhumbehav.2023.10.002>.
- **Prall SP**, Scelza BA, Trumble B. 2023. Stress and androgens in Himba women. *Adaptive Human Behavior & Physiology*.
- Swinford NA, **Prall SP**, Gopalan S, Williams CM, Sheehama J, Scelza BA, Henn BM. 2023. Increased homozygosity due to endogamy results in fitness consequences in a human population. *Proceedings of the National Academy of Sciences* 120(43) e2309552120.
- Walker RS, Flinn MV, **Prall SP**, Hamilton HJ. 2023 (preprint). Remote sensing evidence for population growth of isolated indigenous societies in Amazonia. <https://doi.org/10.21203/rs.3.rs-3018537/v1>
- Scelza BA, **Prall SP**. 2023. Only death will separate us: the role of extramarital partnerships among Himba pastoralists. *Archives of Sexual Behavior* 52, 1355-1363.
- Swinford NA, Gallagher B, Sheehama J, Lin M, **Prall SP**, Scelza BA, Henn BM. 2023. Examination of runs of homozygosity in relation to height in an endogamous Namibian Population. *American Journal of Biological Anthropology* 180(1): 207-215.
- **Prall SP**, Scelza BA. 2023. The dietary impacts of drought in a traditional pastoralist economy. *American Journal of Human Biology* 35(1), e23803. (selected as *Editors Choice*)

- Swinford NA, **Pralle SP**, Williams CM, Sheehama J, Scelza BA, Henn BM. 2022 (preprint). Increased homozygosity due to endogamy results in fitness consequences in a human population. *bioRxiv* 2022.07.25.501261.
- **Pralle SP**, Scelza BA. 2022. The effect of mating market dynamics on partner preference and relationship quality among Himba pastoralists. *Science Advances* 8(18):eabm5629.
- Starkweather KE, Keith MH, **Pralle SP**, Alam N, tuz Zohora F, Thompson ME. 2021. Are fathers a good substitute for mothers? Paternal care and growth rates in Shodagor children. *Developmental Psychobiology* 63(6):e22148.
- Scelza BA, **Pralle SP**, Starkweather KE. 2021. The role of spousal separation on norms related to gender and sexuality among Himba pastoralists. *Social Sciences* 10(5):174.
- **Pralle SP**, Scelza BA. 2020. Resource demands reduce partner discrimination in Himba women. *Evolutionary Human Sciences* 2:E45 1-29.
- Broesch T, Crittenden AN, Beheim BA, Blackwell AD, Bunce JA, Colleran H, Hagel K, Kline M, McElreath R, Nelson RG, Pisor AC, **Pralle SP**, Pretelli I, Purzycki B, Quinn EA, Ross C, Scelza B, Starkweather K, Stieglitz J, Borgerhoff-Mulder M. 2020. Navigating cross-cultural research: methodological and ethical considerations. *Proceedings of the Royal Society B* 287(1935): 20201245.
- Scelza BA, Atkinson E, **Pralle SP**, McElreath R, Sheehama J, Henn BM. 2020. The ethics and logistics of field-based paternity studies. *Evolutionary Human Sciences* 2:E22 1-19.
- **Pralle SP**, Scelza BA. 2020. Why men invest in non-biological offspring: paternal care and paternity confidence among Himba pastoralists. *Proceedings of the Royal Society B* 287(1922): 20192890.
- Scelza BA, **Pralle SP**, Swinford N, Gopalan S, Atkinson E, McElreath R, Sheehama J, Henn BM. 2020. High rate of extra-pair paternity in a human population demonstrates diversity in human reproductive strategies. *Science Advances* 6(8):eaay6195.
- Scelza BA, **Pralle SP**, Starkweather K. 2020. Paternity and social obligations explain men's allocations to romantic partners in an experimental giving game. *Evolution and Human Behavior* 41:96-103.
- Scelza BA, **Pralle SP**, Blumenfeld T, Crittenden AN, Gurven M, Kline M, Koster J, Kuschnik G, Mattison SM, Pillsworth E, Shenk MK, Starkweather K, Stieglitz J, Sum CY, Yamaguchi K, McElreath R. 2020. Patterns of paternal investment predict cross-cultural variation in jealous response. *Nature Human Behaviour* 4:20-26.
- Scelza BA, **Pralle SP**, Levine N. 2019. The disequilibrium of double descent: changing inheritance norms among Himba pastoralists. *Philosophical Transactions of the Royal Society B* 374:20180072.
- **Pralle SP**, Yetish G, Scelza BA, Siegel JM. 2018. The influence of age and sex specific labor demands on sleep in Namibian agro-pastoralists. *Sleep Health* 4(6):500-508
- Scelza BA, **Pralle SP**. 2018. Partner preferences in the context of concurrency: what Himba want in formal and informal partners. *Evolution and Human Behavior* 39:212-219.
- Longman D, **Pralle SP**, Shattuck EC, Stephen ID, Stock JT, Wells JCK, Muehlenbein MP. 2018. Short-term resource allocation during extensive athletic competition. *American Journal of Human Biology* 30: e23052.
- Tieder JS, **Pralle SP**, Beck J, Alberda E, Jensen D, Nair D, Carline JD. 2017. A survey of perceived effectiveness of Part 4 Maintenance of Certification. *Hospital Pediatrics*, 7(11):642-648.
- **Pralle SP**, Scelza BA. 2017. Child fosterage and sex-biased nutritional outcomes among Namibian Pastoralists. *American Journal of Human Biology* 29(6): e23058.
- Hodges-Simeon CR, **Pralle SP**, Blackwell A, Gurven M, Gaulin SJC. 2017. Adrenal maturation, nutritional status and mucosal immunity in Bolivian youth. *American Journal of Human Biology* 29(5): e23025.
- **Pralle SP**, Larson EE, Muehlenbein MP. 2017. The role of dehydroepiandrosterone on functional innate immune responses to acute stress. *Stress and Health* 33:656-664.
- **Pralle SP**, Muehlenbein MP. 2015. Dehydroepiandrosterone and multiple measures of functional immunity in young adults. *American Journal of Human Biology* 27(6):877-880.

- Georgiev AV, Muehlenbein M, **Prrall SP**, Emery-Thompson M, Maestripieri D. 2015. Male quality, dominance rank and mating success in free-ranging rhesus macaques. *Behavioral Ecology* 26(3):763-772.
- **Prrall SP**, Ambu L, Nathan S, Alsisto S, Ramirez D, Muehlenbein MP. 2015. Androgens and innate immunity in rehabilitated semi-captive Orangutans (*Pongo pygmaeus morio*). *American Journal of Primatology* 77(6):642-650.
- Muehlenbein MP, Pacheco MA, Taylor JE, **Prrall SP**, Ambu L, Nathan S, Alsisto S, Ramirez D, Escalante AA. 2015. Accelerated diversification of non-human primate malarias in Southeast Asia: adaptive radiation or geographic speciation? *Molecular Biology and Evolution* 32(2):422-439.
- **Prrall SP**, Muehlenbein MP. 2014. Testosterone and immune function in primates: A brief summary with methodological considerations. *International Journal of Primatology* 35(3-4): 805-824.
- Muehlenbein MP, Ancrenaz M, Sakong R, Ambu L, **Prrall SP**, Fuller G, Raghanti MA. 2012. Ape conservation physiology: Fecal glucocorticoid responses in wild *Pongo pygmaeus morio* following human visitation. *PLoS ONE* 7(3): e33357.
- Streeter M, **Prrall SP**, Hill C. 2008. Paleohistological Study of Pleistocene Mammoth (*Mammuthus*) Bone. *Current Research in the Pleistocene* 25:189-191.

BOOK CHAPTERS

- **Prrall SP**, Muehlenbein MP. 2018. DHEA modulates immune function: a review of the evidence. In: G Litwack (ed), *Dehydroepiandrosterone*. Elsevier Press, p. 125-144.
- **Prrall SP**, Muehlenbein MP. 2017. Hormonal correlates of dominance. In: A Fuentes (ed), *International Encyclopedia of Primatology*. Wiley-Blackwell.
- Muehlenbein MP, **Prrall SP**, Peck HN. 2017. Immunity, hormones and life history trade-offs. In: Jasienska G, Sherry DS, Holmes DJ (eds). *The Arc of Life: Evolution and health over the life course*. Springer Press, p. 99-120.

PAPERS IN REVIEW

- Walker RS, Flinn MV, **Prrall SP**, Hamilton HJ. in revision. Remote sensing evidence for population growth of isolated indigenous societies in Amazonia. *Scientific Reports*.
- **Prrall SP**, Scelza BA, Davis HE. in review. Medical mistrust, discrimination, and healthcare experiences in Namibian pastoralists. *BMC Public Health*.
- Page AE, Ringen EJ, Koster J, Borgerhoff Mulder M, Kramer K, Shenk M, Steiglitz J, Starkweather K, Ziker J, Boyette A, Colleran H, Moya C, Du J, Mattison S, Greaves R, Sum C, Lui R, Lew-Levy S, Kiabiya Ntamboudila F, **Prrall S**, Towner M, Blumfield T, Migliano AB, Major-Smith D, Dyble M, Salali GD, Chaudhary N, Derkx I, Ross C, Scelza B, Gurven M, Winterhalder B, Cortez C, Pacheco-Cobo L, Schacht R, Macfarlan SJ, Leonetti D, French JC, Alam N, tuz Zohora F, Sear R. in review. Subsistence strategy does not predict fertility at the group level, but women who farm have more children. *PNAS*.

Presentations

CONFERENCE PRESENTATIONS AND PUBLISHED ABSTRACTS

- **Prrall SP**, Scelza B, Davis H. submitted. Discrimination, medical mistrust, and vaccination decisions in Namibian pastoralists. *Society for Applied Anthropology*. Santa Fe, NM.
- **Prrall SP**, Walker RS. submitted. Bayesian networks approach to dyadic trait data from Namibian pastoralists. *Human Biology Association Annual Meeting*. Los Angeles, CA.
- **Prrall SP**, Scelza B, Davis H. 2023. Medical mistrust, social learning, and vaccination decisions in Namibian pastoralists. *International Society for Evolution, Medicine, & Public Health Annual Conference*. Irvine, CA.
- **Prrall SP**, Scelza B. 2023. Predictors and fitness-relevant outcomes of women's status in Himba pastoralists. *European Human Behavior and Evolution Association Conference*. London, UK.
- **Prrall SP**, Scelza B, Davis H. 2023. Medical mistrust, discrimination, and vaccination decisions in Namibian pastoralists. *Society for Cross-Cultural Research Annual Meeting*. San Juan, Puerto Rico.

- **Pralle SP**, Scelza B. 2022. Mating market dynamics on partner preference and relationship quality among Namibian agro-pastoralists. *European Human Behavior and Evolution Association Conference*. Online.
- **Pralle SP**, Scelza B. 2022. The causes and consequences of women's status in Himba pastoralists. *American Journal of Biological Anthropology* 177(S73):147.
- Scelza B, **Pralle SP**. 2022. Hidden Kin: the role of extramarital partners in the lives of Himba women. *American Journal of Biological Anthropology* 177(S73):161.
- Swinford N, **Pralle SP**, Scelza B, Henn B. 2022. Increased homozygosity due to endogamy results in fitness consequences in a human population. *American Journal of Biological Anthropology* 177(S73):177.
- **Pralle SP**, Scelza B. 2021. Effects of paternity and concurrency on the length of interbirth intervals in Himba women. *American Anthropological Association Annual Meeting*. Baltimore, MD.
- Starkweather K, Keith M, **Pralle SP**, Alam N, Thompson ME. 2021. Paternal care and growth rates in Shodagor children. *American Journal of Human Biology* 33(S1):42.
- **Pralle SP**, Scelza B, Trumble B. 2020. Androgen dynamics and reproductive socioecology in Himba Pastoralists. *American Journal of Human Biology* 32(S1):45.
- Scelza B, **Pralle SP**. 2020. The value of concurrency: the multimodal effects of romantic partnerships on women's health and well-being. *American Journal of Human Biology* 32(S1):51.
- **Pralle SP**, Scelza B. 2019. The reputational benefits of social fatherhood. *American Anthropological Association Annual Meeting*. Vancouver, BC.
- **Pralle SP**, Yetish G, Scelza B, Siegel J. 2019. Activity, labor demands, and sex shape sleep patterns among Himba pastoralists. *American Journal of Physical Anthropology* 168(S68):194.
- Scelza B, **Pralle SP**, Swinford N, Gopalan S, Atkinson A, McElreath R, Sheehama J, Henn B. 2019. Husband, lover, pater, genitor: concurrency and paternity in Himba pastoralists. *American Journal of Physical Anthropology* 168(S68):218.
- **Pralle SP**, Scelza B. 2018. Bad for boys, worse for girls: the sex-biased effects of fosterage on nutritional status in Himba children. *American Journal of Human Biology* 30: e23111.
- **Pralle SP**, Scelza B. 2018. Effects of resource scarcity and food insecurity on partner preference. *American Anthropological Association Annual Meeting*. San Jose, CA. **(Winner of the EAS New Investigator Award)**
- **Pralle SP**, Scelza B. 2017. Fosterage on adult strength and body fat in Himba women. *American Journal of Physical Anthropology* 162(S64):320.
- Muehlenbein MP, **Pralle SP**, Shattuck EC, Sparks CS, Baker KC. 2017. Is primate sexual coloration an accurate indicator of immune functions? *American Journal of Physical Anthropology* 162(S64):294.
- **Pralle SP**, Scelza B. 2017. Characterizing perceptions of food insecurity in Himba women. *American Anthropological Association Annual Meeting*. Washington DC.
- **Pralle SP**, Scelza B. 2017. Cross-cultural perceptions of jealousy. *Human Behavior and Evolution Society Annual Meeting*. Boise, ID.
- **Pralle SP**, Scelza B. 2017. Fosterage and paternity uncertainty on childhood health and growth in Himba pastoralists. *California Workshop on Evolutionary Social Science*. San Luis Obispo, CA.
- **Pralle SP**, Muehlenbein MP. 2016. Adrenal development and androgen-immune interactions in orangutans (*Pongo pygmaeus morio*). *American Journal of Physical Anthropology* 156(S60):257.
- **Pralle SP**, Scelza B. 2016. Effects of paternity confidence on child health. *American Anthropological Association Annual Meeting*. Minneapolis, MN.
- Georgiev AV, Muehlenbein MP, **Pralle SP**, Emery Thompson M, Maestripietri D. 2015. Innate immune function and oxidative stress as measures of male quality in Cayo Santiago rhesus macaques. *American Journal of Physical Anthropology* 156(S60):143.
- **Pralle SP**, Muehlenbein MP. 2014. The roles of dehydroepiandrosterone and testosterone in innate immunity in college-aged adults. *American Journal of Human Biology* 26(2):277-8.

- **Pralle SP**. 2014. The role of dehydroepiandrosterone in human immune function. *Anthropology Graduate Student Association Symposium*, Indiana University Bloomington.
- **Pralle SP**, Muehlenbein MP. 2013. Androgens and immune function in human and nonhuman primates. *American Journal of Physical Anthropology* 150(S56):224.
- Becker LL, **Pralle SP**, Shattuck EC, Muehlenbein MP. 2013. The impact of testosterone fluctuations on competition in women. *American Journal of Physical Anthropology* 150(S56):77.
- Muehlenbein MP, Ancrenaz M, Sakong R, Ambu L, **Pralle SP**, Fuller G, Raghanti MA. 2012. Fecal glucocorticoid responses in wild orangutans following human visitation. *American Journal of Physical Anthropology* 147(S54):219.
- **Pralle SP**, Muehlenbein M. 2011. The ratio of salivary testosterone to dehydroepiandrosterone changes throughout recovery from respiratory tract infections in men: implications for understanding hormone-mediated immunity. *American Journal of Human Biology* 23:273.
- **Pralle SP**, Blanchard S, Hurst D, Ireland E, Lewis C, Martinez L, Rich A, Singh E, Taboas C, Muehlenbein M. 2011. Salivary measures of testosterone and functional innate immunity are directly associated in a sample of healthy young adults. *American Journal of Physical Anthropology* S52:243.
- Muehlenbein M, **Pralle SP**, and Chester E. 2011. Development of a noninvasive salivary measure of functional immunity in humans. *American Journal of Human Biology* 23:267.

INVITED PRESENTATIONS

- 2023. BEC Speaker Series, University of California, Los Angeles.
- 2023. Darwin Week, College of Charleston, Charleston SC.
- 2022. University of Namibia, Oshakati, Namibia.
- 2022. Department of Anthropology, University of California, Santa Barbara.
- 2022. Evolutionary Anthropology Spring Colloquium Series, University of California, Davis.
- 2022. Anthropology Department Colloquium Series, University of Missouri.
- 2020. Focus on Africa Series, MU African Interdisciplinary Studies Hub, University of Missouri.
- 2019. Spring Speaker Series, Department of Anthropology, University of Nevada, Las Vegas.
- 2019. Department of Anthropology, New Mexico State University.
- 2019. Department of Anthropology, University of Missouri.
- 2016. BEC Speaker Series, University of California, Los Angeles.
- 2016. BASS Seminar Series, Department of Anthropology, University of Washington.
- 2015. Anthropology Undergraduate Organization, New Mexico State University.
- 2014. Animal Behavior Brownbag Seminar Series, Institute for Mind and Biology, University of Chicago.

Experience and Training

FIELD EXPERIENCE

2016-current - Kunene Rural Health and Demography Project, Kunene Region, Namibia

Four seasons of fieldwork with Himba pastoralists. Collection of demographic, anthropometric, behavioral, reproductive, and social network data. Collection of salivary samples, DNA samples, and actigraphic data. Project Co-director.

2015 - Primate Ecotourism Survey, Kurland Township, South Africa

One season as associate instructor in an undergraduate field school focused on primate ecotourism. Student management and oversight, and collection of survey data.

2009 & 2011 - Sabah Ecohealth Project, Sandakan, Malaysia

Two seasons of data collection focused on ecotourism and the human-primate interface. Collection and processing

of biological samples for virus extraction and identification from humans. Collection and processing of biological samples from orangutans and macaques.

2005 - Belize Valley Archaeological Reconnaissance Project, Cayo District, Belize

One season of bio-archaeology field school at Cave's Branch Rockshelter.

WORKSHOPS

- Energetics in Anthropology Workshop, Duke University. May 2022.
- Professional Grant Development Workshop. Grant Training Center. April 2021.
- Economic Network Dynamics of Wealth and Inequality. Santa Fe Institute. February 2020.
- Field-site Management. Max Planck Institute for Evolutionary Anthropology, Department of Human Behavior, Ecology and Culture. Leipzig, Germany. June 2018.

SKILLS

- Phlebotomy training from the Indiana University School of Medicine
- Anthropometric assessment of body composition
- Immunological Assays: hemolytic complement assay, serum and salivary bacteria killing assay, lymphocyte proliferation assay, dexamethasone suppression test, flow cytometry, EIA
- Enzyme immunoassay for assessment of hormone concentrations
- Blood borne Pathogen, Chemical, and Bio safety Level II Training
- R statistical software, Bayesian statistics, Filemaker database software
- Intermediate Spanish, basic Otjiherero

Teaching Experience

University of Missouri

- Introduction to Anthropology
- Outbreaks and the Anthropology of Emerging Disease
- Evolution of Human Sexuality
- Evolutionary Medicine
- Comparative Social Organization

New Mexico State University

- Human's Place in Nature
- Human Osteology
- Reproductive Ecology

Indiana University, Bloomington

- Introduction to Bioanthropology
- Human Anatomy Lab
- Human Physiology Lab
- Biology Laboratory

Honors

- Paper selected as *Editors Choice* for the January 2023 issue of AJHB.
- New Investigator Award, Evolutionary Anthropology Society, 2018.
- Departmental Nominee for the Wells Graduate Fellowship Award, IU, 2012.
- Liljeblad Cultural Anthropology Book Award, BSU, 2007.
- Eagle Scout Award, Boy Scouts of America, 2003.

Awards

- Writing Fellowship, College of Arts & Sciences, MU. 2023-2024.
- Faculty International Travel Award, College of Arts & Sciences, MU. 2022.
- Early Career Fellowship. Energetics in Anthropology Workshop, Duke University. 2022.
- William S. Pollitzer Student Travel Award, AAPA 2012, 2013, & 2014.
- David C. Skomp Award, Department of Anthropology, Indiana University, Bloomington. 2013.

- David C. Skomp Award, Department of Anthropology, Indiana University, Bloomington. 2011.

Professional Affiliations

- American Anthropological Association - Evolutionary Anthropology Society
 - American Association for the Advancement of Science*
 - American Association of Biological Anthropologists
 - Cultural Evolution Society
 - Human Behavior and Evolution Society
 - Human Biology Association*
 - European Human Behaviour and Evolution Association*
 - Society for Cross-Cultural Research*
- *current membership

Service

EXTRAMURAL SERVICE

- Panelist, Early Career Event, EHBEA 2023.
- Session Chair, "Inequality," EHBEA 2023.
- Panelist, Cultural Anthropology. National Science Foundation, 2023.
- Session Chair, "Healthcare, health crises, and the intersection of social and gender identity," SCCR 2023.
- Panelist, Cultural Anthropology. National Science Foundation, 2022.
- AAPA Program Committee, 2018, 2019, 2020, 2022, 2023
- HBA Student Awards Committee, 2018

INTRAMURAL SERVICE

- Anthropology Graduate Student Association Faculty Liason. 2023 - current
- Chair of the Department of Anthropology Committee for Lectures & Communication. 2023 - current
- Anthropology Undergraduate Association Faculty Liaison. 2020-2023
- Committee Member for Cole Tobin (MA, in progress), Emma Tinker-Fortel (MA, in progress), & Kyle Clark (PhD 2021).

AD-HOC REFEREEING

Adaptive Human Behavior and Physiology, American Journal of Human Biology, Annals of Human Biology, Biological Reviews, Evolutionary Anthropology, Evolutionary Human Sciences, Evolution and Human Behavior, Hormones and Behavior, Human Nature, Impact in Agricultural and Life Sciences, International Journal of Primatology, Nature Human Behaviour, Oxford University Press, Psychoneuroendocrinology, Routledge Anthropology, Scientific Reports, Social Sciences, Social Science & Medicine

Selected Media Coverage

- 2023 - *EurekAlert/AAAS & ScienceDaily* - Study suggests that having common ancestors can jeopardize fertility for generations
- 2023 - *Sausage of Science Podcast* - Sean Prall on the Himba, dyadic peer ratings, and the giants of R
- 2023 - *Kansas City Magazine* - MU Anthropologist Says Relationships Are Better Between People With Similar Levels Of Desirability
- 2022 - *Men's Health Australia* - Science says you shouldn't punch above your weight in a relationship
- 2022 - *EurekAlert/AAAS & ScienceDaily* - Relationships are best between people of similar desirability, study finds
- 2022 - *EurekAlert/AAAS* - Ethical challenges in cross-cultural research
- 2020 - *The Conversation* - The deep evolutionary links between monogamy and fatherhood are more complicated than we thought, by Rob Brooks
- 2020 - *EurekAlert/AAAS* - Study of African society inspires broad thinking about human paternity, fidelity
- 2012 - *Conservation Magazine* - Stressful Vacation