

# Sean Prall

ASSISTANT PROFESSOR

DEPARTMENT OF ANTHROPOLOGY, UNIVERSITY OF MISSOURI

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## Positions

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*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

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*Indiana University*, Ph.D. Anthropology 2014

*Boise State University*, B.A. Anthropology 2008

## Publications

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### JOURNAL ARTICLES

- Scelza BA, **Prall SP**. 2023. Only death will separate us: the role of extramarital partnerships among Himba pastoralists. *Archives of Sexual Behavior*, doi.org/10.1007/s10508-023-02553-2.
- 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, **Prall 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.
- **Prall 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, **Prall 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, **Prall SP**, Starkweather KE. 2021. The role of spousal separation on norms related to gender and sexuality among Himba pastoralists. *Social Sciences* 10(5):174.
- **Prall 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, Collieran H, Hagel K, Kline M, McElreath R, Nelson RG, Pisor AC, **Prall 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, **Prall SP**, McElreath R, Sheehama J, Henn BM. 2020. The ethics and logistics of field-based paternity studies. *Evolutionary Human Sciences* 2:E22 1-19.

- **Prrall 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, **Prrall 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, **Prrall 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, **Prrall 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, **Prrall SP**, Levine N. 2019. The disequilibrium of double descent: changing inheritance norms among Himba pastoralists. *Philosophical Transactions of the Royal Society B* 374:20180072.
- **Prrall 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, **Prrall 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, **Prrall 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, **Prrall 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.
- **Prrall 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, **Prrall 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.
- **Prrall SP**, Larson EE, Muehlenbein MP. 2017. The role of dehydroepiandrosterone on functional innate immune responses to acute stress. *Stress and Health* 33:656-664.
- **Prrall 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.

- **Pralle SP**, Muehlenbein MP. 2017. Hormonal correlates of dominance. In: A Fuentes (ed), *International Encyclopedia of Primatology*. Wiley-Blackwell.
- Muehlenbein MP, **Pralle 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

- **Pralle SP**, Scelza BA. submitted. The causes and consequences of women's status in Himba pastoralists. *Evolution & Human Behavior*.
- Swinford NA, **Pralle SP**, Williams CM, Sheehama J, Scelza BA, Henn BM. in revision. Increased homozygosity due to endogamy results in fitness consequences in a human population. *PNAS*.
- 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, **Pralle 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 revision. Subsistence strategy does not predict fertility at the group level, but women who farm have more children. *Science*.

## Presentations

### CONFERENCE PRESENTATIONS AND PUBLISHED ABSTRACTS

- (forthcoming Spring '23) **Pralle SP**, Scelza B. Predictors and fitness-relevant outcomes of women's status in Himba pastoralists. *European Human Behavior and Evolution Association Conference*. London, UK.
- **Pralle 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, Maestriperi 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 recover 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. 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

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### FIELD EXPERIENCE

*2016-current - Kunene Rural Health and Demography Project, Kuenene 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

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### *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

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- 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

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- 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.

## Grants and funding

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- (submitted 1/2023) *Medical mistrust, social learning, and vaccination decisions in Kunene pastoralists of Namibia*. National Science Foundation. Cultural Anthropology Senior Research Grant. (PI S Prall, Co-PI B Scelza, Co-PI H Davis).
- 2012. The role of dehydroepiandrosterone in immunocompetence and immunoredistribution in humans. Indiana Academy of Science Senior Research Grant.

## Professional Affiliations

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- 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

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### EXTRAMURAL SERVICE

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

### INTRAMURAL SERVICE



- Member of the Department of Anthropology Committee for Undergraduate Studies, Curriculum, Development, Communications, and Space. 2019 - current
- Anthropology Undergraduate Association Faculty Liaison. 2020-current
- 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

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- 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