

# Sean Prall

ASSISTANT PROFESSOR

DEPARTMENT OF ANTHROPOLOGY, UNIVERSITY OF MISSOURI

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## Positions

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*University of Missouri, Columbia*

- Assistant Professor, Department of Anthropology 2019-current

*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

- **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.
- **Prall 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, **Prall 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, **Prall 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, **Prall 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, **Prall SP**, Levine N. 2019. The disequilibrium of double descent: changing inheritance norms among Himba pastoralists. *Philosophical Transactions of the Royal Society B* 374:20180072.
- **Prall 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, **Prall 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, **Pral 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, **Pral 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.
- **Pral 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, **Pral 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.
- **Pral SP**, Larson EE, Muehlenbein MP. 2017. The role of dehydroepiandrosterone on functional innate immune responses to acute stress. *Stress and Health* 33:656-664.
- **Pral 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, **Pral 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.
- **Pral 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, **Pral 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.
- **Pral 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, **Pral 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, **Pral SP**, Hill C. 2008. Paleohistological Study of Pleistocene Mammoth (*Mammuthus*) Bone. *Current Research in the Pleistocene* 25:189-191.

## BOOK CHAPTERS

- **Pral SP**, Muehlenbein MP. 2018. DHEA modulates immune function: a review of the evidence. In: G Litwack (ed), *Dehydroepiandrosterone*. Elsevier Press, p. 125-144.
- **Pral SP**, Muehlenbein MP. 2017. Hormonal correlates of dominance. In: A Fuentes (ed), *International Encyclopedia of Primatology*. Wiley-Blackwell.
- Muehlenbein MP, **Pral 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.

## PUBLICATIONS IN PREP/REVIEW

- Starkweather KE, Keith MH, **Pral SP**, Alam N, Thompson ME. In revision. Paternal care and growth rates in Shodagor children. *Developmental Psychobiology*.

## Presentations

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### CONFERENCE PRESENTATIONS AND PUBLISHED ABSTRACTS

- **Pral S**, Scelza B, Trumble B. 2020. Androgen dynamics and reproductive socioecology in Himba Pastoralists. *American Journal of Human Biology* 32(S1):45.
- Scelza B, **Pral S**. 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.
- **Pral S**, Scelza B. 2019. The reputational benefits of social fatherhood. *American Anthropological Association Annual Meeting*. Vancouver, BC.

- **Prrall S**, 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, **Prrall S**, 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.
- **Prrall S**, 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.
- **Prrall S**, 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)**
- **Prrall S**, Scelza B. 2017. Fosterage on adult strength and body fat in Himba women. *American Journal of Physical Anthropology* 162(S64): 320.
- Muehlenbein MP, **Prrall 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.
- **Prrall S**, Scelza B. 2017. Characterizing perceptions of food insecurity in Himba women. *American Anthropological Association Annual Meeting*. Washington DC.
- **Prrall S**, Scelza B. 2017. Cross-cultural perceptions of jealousy. *Human Behavior and Evolution Society Annual Meeting*. Boise, ID.
- **Prrall S**, Scelza B. 2017. Fosterage and paternity uncertainty on childhood health and growth in Himba pastoralists. *California Workshop on Evolutionary Social Sciences*. San Luis Obispo, CA.
- **Prrall SP**, Muehlenbein MP. 2016. Adrenal development and androgen-immune interactions in orangutans (*Pongo pygmaeus morio*). *American Journal of Physical Anthropology* 156(S60):257.
- **Prrall S**, Scelza B. 2016. Effects of paternity confidence on child health. *American Anthropological Association Annual Meeting*. Minneapolis, MN.
- Georgiev AV, Muehlenbein MP, **Prrall SP**, Emery Thompson M, Maestripieri 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.
- **Prrall 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.
- **Prrall SP**. 2014. The role of dehydroepiandrosterone in human immune function. *Anthropology Graduate Student Association Symposium*, Indiana University Bloomington.
- **Prrall SP**, Muehlenbein MP. 2013. Androgens and immune function in human and nonhuman primates. *American Journal of Physical Anthropology* 150(S56):224.
- Becker LL, **Prrall 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, **Prrall S**, Fuller G, Raghanti MA. 2012. Fecal glucocorticoid responses in wild orangutans following human visitation. *American Journal of Physical Anthropology* 147(S54):219.
- **Prrall S**, 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.
- **Prrall S**, 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, **Prrall S**, and Chester E. 2011. Development of a noninvasive salivary measure of functional immunity in humans. *American Journal of Human Biology* 23:267.

## INVITED PRESENTATIONS

- 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.

## Grants and Fellowships

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- 2013. Testing the stress-linked immunocompetence handicap hypothesis in human males. David C. Skomp Award, Department of Anthropology, Indiana University, Bloomington.
- 2012. The role of dehydroepiandrosterone in immunocompetence and immunoredistribution in humans. Indiana Academy of Science Senior Research Grant.
- 2011. The role of dehydroepiandrosterone in immunoredistribution in humans. David C. Skomp Award, Department of Anthropology, Indiana University, Bloomington.

## Field Experience

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*2016-2018 - Kunene Rural Health and Demography Project, Kuenene Region, Namibia*

Three 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.

*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.

## Teaching Experience

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*University of Missouri*

- Comparative Social Organization
- Evolution of Human Sexuality
- Evolutionary Medicine
- Outbreaks and the anthropology of emerging disease

*New Mexico State University*

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

*Indiana University, Bloomington*

- Introduction to Bioanthropology - grader capacity, 2x
- Introduction to Bioanthropology - instructor of record, 1x
- Human Anatomy Lab - 3x
- Human Physiology Lab - 3x
- Biology Laboratory - 3x

## Skills

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- 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

## Awards

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- New Investigator Award, Evolutionary Anthropology Society, 2018
- William S. Pollitzer Student Travel Award, AAPA 2012, 2013, & 2014
- 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

## Workshops

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- 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.

## Professional Affiliations

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- American Anthropological Association - Evolutionary Anthropology Society\*
  - American Association of Physical Anthropologists
  - Cultural Evolution Society
  - Human Behavior and Evolution Society
  - Human Biology Association
  - European Human Behaviour and Evolution Association
- \*current membership

## Service

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### EXTRAMURAL SERVICE

- AAPA Program Committee, 2018, 2019, 2020
- 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
- PHD Committee Member for Cole Tobin & Kyle Clark.

### AD-HOC REFEREEING

Adaptive Human Behavior and Physiology, American Journal of Human Biology, Annals of Human Biology, Biological Reviews, Evolutionary Human Sciences, Evolution and Human Behavior, Hormones and Behavior, Human Nature, International Journal of Primatology, Nature Human Behaviour, Psychoneuroendocrinology, Scientific Reports