

CURRICULUM VITAE

JOHN A. BUNCE

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Max Planck Institute for Evolutionary Anthropology
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Starting 3/2024

Division of Anthropology
American Museum of Natural History
Central Park West at 79th Street
New York, NY 10024-5192 USA

EDUCATION

- 2009 **Ph.D.**, Anthropology, University of California, Davis, CA, USA
 Dissertation: Ecology and Genetics of Color Vision in *Callicebus brunneus*, a
 Neotropical Monkey (Advisor: Dr. Lynne Isbell)
- 2004 **M.A.**, Anthropology, University of California, Davis, CA, USA
- 2002 **B.S.**, Biology, Bates College, Lewiston, ME, USA

RESEARCH INTERESTS

Empirical and theoretical study of cultural diversity and dynamics at ethnic boundaries
Cultural change, nutrition, and health in Indigenous Amazonian populations
Behavior, ecology, and evolution of humans and non-human primates
Ecology, genetics, and evolution of color vision in primates and other mammals

ACADEMIC APPOINTMENTS

- From 3/2024 Assistant Curator of Anthropology, Division of Anthropology, American Museum
 of Natural History
- 2018-23 Senior Researcher and Group Leader: Culture, Environment, and Health Research
 Group, Dept. of Human Behavior, Ecology, and Culture, Max Planck Inst. for
 Evolutionary Anthropology
- 2016-18 Postdoctoral Fellow, Dept. of Human Behavior, Ecology, and Culture, Max Planck
 Inst. for Evolutionary Anthropology

- 2015-16 Visiting Assistant Professor, Dept. of Anthropology, Indiana University, Bloomington
 2012-15 Postdoctoral Scholar, Dept. of Anthropology, University of California, Davis
 (Advisor: Dr. Richard McElreath)
 2012-13 Investigador Afiliado, Pontificia Universidad Católica del Perú
 2012 Lecturer, Department of Anthropology, Vanderbilt University
 2010 Visiting Prof, Dept. of Folk Studies and Anthropology, Western Kentucky University
 2010-13 Research Associate, Dept. of Anthropology, Vanderbilt University
 2009-17 Research Associate, Dept. of Anthropology, UC Davis
 2008 Associate-In (Lecturer), Dept. of Anthropology, UC Davis

GRANTS AND AWARDS

- 2017-23 Max Planck Society: Continuing research funding for long-term fieldwork on environmental perceptions, cultural change, and health in a Peruvian Amazonian population. PIs John Bunce and Caissa Revilla Minaya (€198,683)
 2012-15 National Science Foundation: Ethnic Boundaries and Cultural Change in an Amazonian Population. BCS 1227152. PI John Bunce (\$143,448)
 2008-09 University of California Dissertation-Year Fellowship (\$31,400)
 2008 UC Davis Office of Graduate Studies Graduate Student Travel Award to XXII Congress of the International Primatological Society, Edinburgh, UK (\$1,000)
 2007 UC Davis Institute for Governmental Affairs Small Research Grant: Behavioral Genetics of Color Vision in a Wild Neotropical Monkey (\$250)
 2004-05 UC Davis Department of Anthropology Tuition Fellowship (\$6,296)
 2004 Leakey Foundation General Grant: Behavioral Genetics of Color Vision in a Wild Neotropical Monkey (\$8,000 + \$500 supplemental funding in 2007)
 2004 Wenner-Gren Foundation Individual Research Grant: Behavioral Genetics of Color Vision for a Neotropical Monkey in the Wild (\$25,000)
 2004 Sigma Xi Society Grant-in-Aid of Research: Ecological Consequences of Trichromatic Color Vision for *Callicebus brunneus*, a New World Monkey (\$2,000)
 2004 UC Davis Dept. of Anthropology Summer Research Fellowship: Ecological Consequences of Trichromatic Color Vision for *Callicebus brunneus*, a New World Monkey (\$3,000)
 2004 UC Davis UCD and Humanities Graduate Research Award (\$1,500)
 2004 University of California Marjorie and Charles Elliott Fellowship (\$6,766)
 2004 National Science Foundation Graduate Fellowship Honorable Mention
 2003 Organization for Tropical Studies Francis Bossuyt Memorial Fellowship: Genotypic frequencies of trichromatic color vision in a wild population of *Callicebus moloch* (\$1,500)
 2003 Sigma Xi Society Grant-in-Aid of Research: The frequency of trichromatic color vision in a wild population of *Callicebus moloch*, a New World monkey (\$2,212)
 2003 UC Davis Department of Anthropology Summer Research Award: The frequency of trichromatic color vision in a wild population of *Callicebus moloch*, a New World monkey (\$2,000)
 2002-03 UC Davis Department of Anthropology Nonresident Tuition Fellowship (\$11,132)

- 2001 Howard Hughes Student Travel Grant to the Society for Integrative and Comparative Biology (SICB) Annual Meeting, Anaheim, CA, USA, January 2002.
- 2001 Howard Hughes Independent Student Summer Research Grant: Locomotor and behavioral predictors of escape performance in prey fish
- 2000 Bates College Student Research Grant: The effects of soil type on litterfall quantity and composition for mid-elevation spruce-fir forests of the Northeastern United States
- 1999 Dana Scholar, Bates College, Lewiston, ME

RESEARCH EXPERIENCE

- 2009- **Research on Cultural Change among Amazonian Indigenous Peoples.** Long-term study of cultural change and health in a population of Mestizos and Indigenous Matsigenka people living in lowland forests of the Madre de Dios region of Peru. Conducted 35 months of fieldwork examining the effects of inter-ethnic interactions on distributions of cultural norms and beliefs about ethnic identity, as well as nutrition and growth in Matsigenka and Mestizo communities in 2010-2023. Developed mathematical models of cultural dynamics at minority-majority ethnic boundaries.
- 2011 **Research on Disease/Treatment Perceptions among Mexican Immigrants,** in collaboration with Dr. Norbert Ross (Vanderbilt University). Designed, conducted, and analyzed ethnographic interviews with immigrants from Mexico living in Nashville, TN, examining the effects of gender, parenthood, and residence time in the U.S. on perceptions of folk remedies and illness.
- 2007-08 **Ph.D. Dissertation Laboratory Research in Primate Genetics** in the Molecular Anthropology Laboratory of Dr. David Glenn Smith (UC Davis). Developed DNA extraction, amplification, and sequencing techniques for blood, saliva, and fecal samples collected from wild titi monkeys (*Callicebus brunneus*) in southeastern Peru. Produced first reported sequence characterization of *Callicebus* opsin alleles at the X-linked polymorphic gene locus contributing to variable trichromatic color vision in these monkeys. Developed a socio-ecologically-informed matrix population model of color vision gene evolution in primates.
- 2003-06 **Ph.D. Dissertation Field Research in Primate Ecology** entailing 23 months of fieldwork at the Estación Biológica de Cocha Cashu, Madre de Dios, Peru. Captured (via darting) and radio-collared wild titi monkeys (*Callicebus brunneus*) to facilitate an intensive nine-month behavioral study of the foraging ecology of five socially monogamous groups of these monkeys. Trained six Peruvian student co-workers and wrote a custom behavioral data collection program for hand-held computers in the field. Collected blood, saliva, and fecal samples for genetic analysis (above).

TEACHING EXPERIENCE

- 2019 **External Instructor:** II Curso Ciencias Sociales para la Conservación (Cocha Cashu Biological Station, San Diego Zoo Global - Perú, Pontificia Universidad Católica del Perú)
La Conservación, Optimización, y Gente Indígena (seminar on conservation from the perspective of optimal foraging theory applied to Indigenous Amazonian lifeways, for advanced undergraduate and Masters students in Peru)
- 2015-16 **Visiting Assistant Professor:** Department of Anthropology, Indiana University.
HUBI B400 Complex Problems of Humanity: Controversies in Human Adaptation (senior-year core course in IU Human Biology Program)
ANTH B200 Introduction to Bioanthropology (introductory-level undergraduate)
ANTH B260 Biocultural Medical Anthropology (mid-level undergraduate)
- 2012 **Lecturer:** Department of Anthropology, Vanderbilt University.
ANTH 103 Introduction to Biological Anthropology (introductory-level undergraduate, spring semester and summer session)
- 2010 **Visiting Professor:** Department of Folk Studies and Anthropology, Western Kentucky University.
ANTH 366 Primate Ecology and Behavior (advanced undergraduate)
- 2008 **Course Instructor:** Associate-In, Dept. of Anthropology, UC Davis.
ANT 1 Human Evolutionary Biology (introductory-level undergraduate)
- 2002-08 **Graduate Teaching Assistant:** Dept. of Anthropology, UC Davis. Undergraduate anthropology courses:
ANT 1 Human Evolutionary Biology (4 quarters)
ANT 15 Evolutionary Biology of the Human Life Cycle (1 quarter)
ANT 151 Primate Evolution (2 quarters)
ANT 152 Human Evolution (1 quarter)
ANT 158 Biological and Evolutionary Bases of Sex Differences (1 quarter)

PROFESSIONAL SERVICE

Cultural Evolution Society Executive Board member (elected 2023)

Manuscript Reviewer for *American Journal of Human Biology*, *American Journal of Primatology*, *American Naturalist*, *Behavioral Ecology and Sociobiology*, *Behaviour*, *Current Anthropology*, *Ecology and Evolution*, *Evolutionary Human Sciences*, *Folia Primatologica*, *Games*, *Human Ecology*, *Human Nature*, *International Journal of Primatology*, *Molecular Ecology Resources*, *Nature Sustainability*, *PLOS One*, *Primates*, *Proceedings of the National Academy of Sciences of the USA*, *Societies*, *Sustainability Science*

Grant Reviewer for U.S. National Science Foundation (Cultural Anthropology Program), Leakey Foundation, Pontificia Universidad Católica del Perú (Annual Research Project Competition), Cultural Evolution Society (ACE Awards)

RESEARCH PUBLICATIONS

Bunce, JA and C Revilla-Minaya (2023 preprint) Western educational environment drives Indigenous cultural dynamics in Amazonia. SocArXiv
<https://osf.io/preprints/socarxiv/g2xjy>

Bunce, JA and R McElreath (2023) Ethnicity and cultural dynamics. In: J. Tehrani, J. Kendal, and R. Kendal, eds., *The Oxford Handbook of Cultural Evolution*. Oxford University Press, pgs C58P1–C58P151.

Ross, CT, . . . **JA Bunce**, et al. (2023) Reproductive inequality in humans and other mammals. *Proceedings of the National Academy of Sciences of the USA* 120(22): e2220124120.

Bunce, JA, CI Fernández, and C Revilla-Minaya (2022 preprint) Causal models of human growth and their estimation using temporally sparse data. bioRxiv
<https://www.biorxiv.org/content/10.1101/2022.10.10.511559v2>

Revilla Minaya, C and **JA Bunce** (2022) Una experiencia contemporánea matsigenka de una epidemia local (A contemporary Matsigenka experience with a local epidemic). In: E. Fabiano and O. Espinosa, eds., *Las Enfermedades que Llegan de Lejos: Los Pueblos Amazónicos del Perú Frente las Epidemias de Ayer y la Pandemia de Hoy (Diseases That Come From Afar: Amazonian Peoples of Peru in the Face of Past Epidemics and the Current Pandemic)*, pgs 449-458. Lima: Fondo Editorial de la Pontificia Universidad Católica del Perú.

Bunce, JA (2021) Cultural diversity in unequal societies sustained through cross-cultural competence and identity valuation. *Humanities and Social Sciences Communications* 8: 238.

Broesch, T, . . . , **JA Bunce**, et al. (2020). Navigating cross-cultural research: Methodological and ethical considerations. *Proceedings of the Royal Society B*, 287: 20201245.

Bunce, JA (2020) Field evidence for two paths to cross-cultural competence: Implications for cultural dynamics. *Evolutionary Human Sciences* 2(e3):1-16.

Ross, CT, . . . , **JA Bunce**, et al. (2018) Greater wealth inequality, less polygyny: Rethinking the polygyny threshold model. *Journal of the Royal Society Interface* 15(144): 0180035.

Bunce, JA and R McElreath (2018) Sustainability of minority culture when inter-ethnic interaction is profitable. *Nature Human Behaviour* 2:205-212. (cover article)

Bunce, JA and R McElreath (2017) Inter-ethnic interaction, strategic bargaining power, and the dynamics of cultural norms: A field study in an Amazonian population. *Human Nature* 28(4):434–456.

Bunce, JA (2015) Incorporating ecology and social system into formal hypotheses to guide field studies of color vision in primates. *American Journal of Primatology* 77(5):516-526. (AJP Featured Article)

Bunce, JA, LA Isbell, MN Grote, and GH Jacobs (2011). Color vision variation and foraging behavior in wild Neotropical titi monkeys (*Callicebus brunneus*): Possible mediating roles for spatial memory and reproductive status. *International Journal of Primatology* 32:1058-1075.

Bunce, JA, LA Isbell, M Neitz, D Bonci, AK SurrIDGE, GH Jacobs, and DG Smith (2011) Characterization of opsin gene alleles affecting color vision in a wild population of titi monkeys (*Callicebus brunneus*). *American Journal of Primatology* 73:189–196. (AJP Featured Article)

O’Steen, S, SL Eby, and **JA Bunce** (2010) Dynamically honest displays: Courtship locomotor performance indicates survival in guppies. *Functional Ecology* 24:1045-1053.

MANUSCRIPT IN PREPARATION

CI Fernández, C Revilla-Minaya, and **JA Bunce** (in prep) Metabolism and allometry: A large-scale cross-cultural study of child growth.

NEWS ARTICLE

Bunce, JA (2014) Creating one’s own postdoc position: an NSF-funded investigation of cultural change in Amazonia. *Anthropology News* 55(7):e18-19.

PUBLISHED ABSTRACTS

Bunce, JA and LA Isbell (2008) Does colour vision explain variation in foraging behaviour for wild titi monkeys (*Callicebus brunneus*)? *Primate Eye* 96:55. XXII Congress of the International Primatological Society, Edinburgh, UK August 2008.

Bunce, J, S Eby, and S O’Steen (2001) Does c-start performance predict survival of prey encountering predators? *American Zoologist* 41(6):1401. Society for Integrative and Comparative Biology (SICB) Annual Meeting, Anaheim, CA, USA January 2002.

O'Steen, S, S Eby, and **J Bunce** (2001) Sex and speed: do courtship locomotor skills predict skills when escaping predators? *American Zoologist* 41(6):1544-1545. Society for Integrative and Comparative Biology (SICB) Annual Meeting, Anaheim, CA, USA January 2002.

CONFERENCE PRESENTATIONS AND TALKS

- 2023 “Cultural dynamics and health in an Amazonian population: New theory and new tools”, invited presentation in the Department of Anthropology, University of California, Davis (online)
- 2023 “Cultural dynamics in an Indigenous Amazonian population: An exploration of intra- and inter-ethnic causal mechanisms (with C. Revilla-Minaya), invited presentation at the Center for Behavior, Evolution and Culture, University of California, Los Angeles (online)
- 2023 “Causal models of human growth: New tools to explore linked dynamics of culture and health”, oral paper (with C. Fernández and C. Revilla-Minaya) presented at the European Human Behaviour and Evolution Association meeting, London, U.K.
- 2022 “A longitudinal study of cultural dynamics in Amazonian boarding schools”, oral paper presented at the Cultural Evolution Society meeting (online)
- 2022 “Dinámicas culturales de integración Indígena”, invited presentation for the Department of Social and Cultural Anthropology, Universitat Autònoma de Barcelona, Spain (online)
- 2021 “Cultural diversity in unequal societies sustained through cross-cultural competence and identity valuation”, oral paper presented at the Cultural Evolution Society meeting (online)
- 2021 “Cross-cultural competence: measurement in the field and implications for cultural dynamics”, oral paper presented at the European Human Behaviour and Evolution Association meeting (online)
- 2019 “Cultural group identity in cross-cultural research”, invited presentation at the workshop: Reorganizing Social Organization: Building a Science of Human Societies, Max Planck Institute for Evolutionary Anthropology, Leipzig, Germany
- 2018 “Is quantity just a matter of quality”, one of two principal invited speakers for inaugural Layton Dialogue between biological and sociocultural anthropologists, Department of Anthropology, Durham University, UK
- 2018 “Boarding schools and cultural dynamics in a multi-ethnic Amazonian population”, oral paper presented at the Cultural Evolution Society meeting, Tempe, AZ, USA

- 2017 “Why do some ethnic minorities assimilate and others colonize? Theoretical and empirical evidence for five mechanisms influencing cultural dynamics at ethnic boundaries”, oral paper presented at the American Anthropological Association annual meeting, Washington, DC, USA
- 2017 “Educación inter-étnica, poder de negociación, y cambio cultural en una frontera étnica Matsigenka-Mestiza en las tierras bajas del Perú”, oral paper presented at the Society for the Anthropology of Lowland South America meeting, Lima, Perú
- 2016 “Cultural change at an Amazonian ethnic boundary: Insights from evolutionary models and ethnography”, invited presentation for the Center for Studies in Demography and Ecology Seminar Series, University of Washington, Seattle, WA, USA
- 2016 “An evolutionary perspective on cultural change at an Amazonian ethnic boundary”, invited presentation for the Center for Latin American and Caribbean Studies, Minority Languages and Cultures Seminar Series, Indiana University, Bloomington, IN, USA
- 2015 “Cross-cultural perceptions of norm distributions at an Amazonian ethnic boundary: Causes and consequences of cultural dynamics”, oral paper presented at the American Anthropological Association annual meeting, Denver, CO, USA
- 2015 “Cultural Change at an Amazonian Ethnic Boundary: Insights from Evolutionary Models and Fieldwork”, invited presentation for the Department of Anthropology Seminar Series, Indiana University, Bloomington, IN, USA
- 2015 “An evolutionary model of ethnic boundaries and the persistence of Indigenous culture”, oral paper presented at the Human Behavior and Evolution Society annual meeting, Columbia, MO, USA
- 2014 “Ethnic Boundaries, Norms, and Cultural Change in an Amazonian Population”, oral paper presented at the American Anthropological Association annual meeting, Washington, DC, USA
- 2012 “Neotropical Primate Color Vision: On the Trail of an Elusive Selective Advantage”, invited presentation in the Department of Biology, Vanderbilt University, Nashville, TN, USA
- 2010 “Ecology and Genetics of Color Vision in a Neotropical Monkey”, invited presentation for the Department of Psychology Neuroscience Seminar Series, Vanderbilt University, Nashville, TN, USA
- 2009 “The Ecology, Genetics, and Evolution of Color Vision in a Neotropical Monkey (*Callicebus brunneus*)”, invited presentation in the Department of Anthropology, University of California, Santa Cruz, CA, USA

- 2008 “Does Colour Vision Explain Variation In Foraging Behaviour For Wild Titi Monkeys (*Callicebus brunneus*)?”; oral paper presentation at the XXII Congress, International Primatological Society, Edinburgh, UK
- 2007 “Ecological Genetics of Color Vision in a Neotropical Monkey”, invited presentation to the Evolutionary Genetics Group in the Zoology Department, University of Cambridge, Cambridge, UK
- 2007 “La Ecología de la Visión de Color para *Callicebus brunneus* en el Parque Nacional del Manu”, invited presentation, Universidad Nacional Mayor de San Marcos (UNMSM), Lima, Perú
- 2006 “La Ecología de la Visión de Color de un Mono del Nuevo Mundo”, invited presentation, Universidad Nacional Agraria La Molina (UNALM), Lima, Perú
- 2002 “Does C-start Performance Predict Survival of Prey Encountering Predators?”, poster presentation (with S. Eby and S. O’Steen) at the Society for Integrative and Comparative Biology Annual Meeting, Anaheim, CA, USA

MEMBERSHIP IN PROFESSIONAL AND HONOR SOCIETIES

European Human Behav. and Evol. Assoc.	Phi Beta Kappa – general academics
Cultural Evolution Society	Phi Sigma - biological sciences
(executive board, 2023 -)	Sigma Xi - scientific research

STUDENT SUPERVISION

2020- Dr. Catalina Fernández, Postdoctoral Researcher, Dept. of Human Behavior Ecology, and Culture, Max Planck Inst. for Evolutionary Anthropology
(co-supervised with Dr. Caissa Revilla Minaya)

LANGUAGES AND COMPUTER PROGRAMMING

English (native), Spanish (advanced written and oral certification in School of Linguistics, Universidad Nacional Mayor de San Marcos, Lima, Peru, 2011), Matsigenka (conversational), German (intermediate)

R, Stan, Mathematica