

Cody T. Ross

Curriculum Vitæ

Dept. of Anthropology
1 Shields Ave. Davis, CA 95616
☎ (714) 203-4986
✉ ctross@ucdavis.edu
www.codytross.com
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Education

- 2014 **PhD, Anthropology**, University of California, Davis.
Specialization in Bayesian Data Analysis and Mathematical Modeling
- 2010–2013 **Master of Arts, Anthropology**, University of California, Davis.
Specialization in Human Behavioral Ecology and Molecular Anthropology
- 2008–2010 **Master of Arts, Anthropology**, California State University, Fullerton.
Specialization in Applied Anthropology, Conservation, and Land-Use Management
- 2005–2008 **Bachelor of Arts, Anthropology**, California State University, Fullerton.

Expertise

Bayesian Statistics, Multi-level Modeling, Mathematical Methods in Evolution and Ecology, Applied Anthropology, Gene-Culture Coevolution, Human Behavioral Ecology

Publications

- [20] **Ross, C.T.** (2015). Land-use change, environmental service payments, and non-financial incentives: A case study in Costa Rica. *Ecological Economics*. In Review.
- [19] **Ross, C.T.**, Borgerhoff Mulder, M., Winterhalder, B., Uehara, R., Headland, J., and Headland, T. (2015). Evidence for quantity-quality trade-offs, sex-specific parental investment, and variance compensation in colonized Agta foragers undergoing demographic transition. *Evolution and Human Behavior*. In Review.
- [18] **Ross, C.T.** (2015). Identifying the drivers of the exceptionally high rates of lethal and racially-biased violence by police in the United States requires geographically-resolved data and analysis. *Sociological Forum*. In Press.
- [17] **Ross, C.T.** (2015). A multi-level Bayesian analysis of racial bias in police shootings at the county-level in the United States, 2011-2014. *PLOS One*. In Press.
- [16] Roodgar, M., **Ross, C.T.**, Tarara, R., Lowenstine, L., Dandekar, S., and Smith, D.G. (2015). Gene expression and TB pathogenesis in rhesus macaques: NR2C2(TR4), CD40, CD40L, Fas (CD95), FASL (CD95L), IL7, NRAMP, and TNF are host genetic markers in peripheral blood mononuclear cells that are associated with severity of TB lesions. *Infection, Genetics, and Evolution*. In Press.
- [15] **Ross, C.T.**, and Winterhalder, B. (2015). Sit-and-wait versus active search hunting: A behavioral ecological model of hunting strategies. *Journal of Theoretical Biology*. In Press.

- [14] **Ross, C.T.**, Strimling, P., Ericksen, K., Lindenfors, P., and Borgerhoff Mulder, M. (2015). Adaptive phylogenetic modeling of cultural traits: The origins and maintenance of female genital modification. *Human Nature*. In Press.
- [13] Winterhalder, B., Puleston, C., and **Ross, C.T.** (2015). Production risk, inter-annual food storage by households, and population-level consequences in prehistoric agrarian societies. *Environmental Archaeology: The Journal of Human Palaeoecology*. In Press.
- [12] **Ross, C.T.**, and Winterhalder, B. (2015). A hierarchical Bayesian analysis of parasite prevalence and socio-cultural outcomes: The mediating role of structural racism and sanitation infrastructure. *American Journal of Human Biology*. In Press.
- [11] **Ross, C.T.**, Joyas Campino, P., and Winterhalder, B. (2015). Frequency-dependent social transmission and the interethnic transfer of female genital modification in the African diaspora and Indigenous populations of Colombia. *Human Nature*. In Press.
- [10] Richerson, P., Baldini, R., Bell A., Demps, K., Frost, K., Hillis, V., Mathew, S., Naar, N., Newson, L., Newton, E., **Ross, C.T.**, Smaldino, P., Waring, T., and Zimmerman, M. (2015). Cultural group selection plays an essential role in explaining human cooperation: A sketch of the evidence. *Behavioral and Brain Sciences*. 5, 1-71.
- [9] Roodgar, M., **Ross, C.T.**, Kenyon, N., Marcelino, G., and Smith, D.G. (2015). *iNOS* regulatory region variation in non-human primates. *Infection, Genetics, and Evolution*. 31, 236-244
- [8] **Ross, C.T.**, Roodgar, M., and Smith, D.G. (2015). Evolutionary distance of amino acid sequence orthologs across macaque subspecies: Candidate genes for SIV resistance in Chinese rhesus macaques. *PLOS One* 10 (4), e0123624.
- [7] **Ross, C.T.**, and Richerson, P.J. (2014). New frontiers in the study of human cultural and genetic evolution. *Current Opinion in Genetics & Development* 29. 103-109.
- [6] **Ross, C.T.**, Weise, J.A., Bonnar, S., Nolin, D., Satkoski Trask, J., Smith, D.G., ... and Kanthaswamy, S. (2014). An empirical comparison of short tandem repeats (STRs) and single nucleotide polymorphisms (SNPs) for relatedness estimation in Chinese rhesus macaques (*Macaca mulatta*). *American Journal of Primatology*. 76 (4), 313-324.
- [5] **Ross, C.T.**, Richerson, P.J., and Rogers, D. (2013). Mechanisms of cultural change and the transition to sustainability. In *Global Environmental Change: The Handbook of Global Environmental Pollution*. Springer. Edited by Bill Freedman.
- [4] Kanthaswamy, S., Ng, J., **Ross, C.T.**, Trask, J.S., Smith, D.G., Buffalo, V.S., ... and Lin, D. (2013). Identifying human-rhesus macaque gene orthologs using heterospecific SNP probes. *Genomics*. 101(1), 30-37.
- [3] Kanthaswamy, S., Trask, J.S., **Ross, C.T.**, Kou, A., Houghton, P., Smith, D.G., and Lerche, N. (2012). A large-scale SNP-based genomic admixture analysis of the captive rhesus macaque colony at the California National Primate Research Center. *American Journal of Primatology*, 74(8), 747-757.
- [2] **Ross, C.T.** (2014). Bayesian Methods in Applied Anthropology and Human Behavioral Ecology. PhD Dissertation, University of California, Davis. ISBN 9781321363838.

- [1] **Ross, C.T.** (2010). *Pura vida* in a land of chemicals and pasture: An anthropological exploration of the *Pagos por Servicios Ambientales* program, linking conservation, human needs, and sustainable land-use in Costa Rica. MA Dissertation, California State University, Fullerton. Dissertations & Theses: A&I. (Publication No. AAT 1486164).

Working Papers, or Papers in Preparation (PDFs Available Upon Request)

- [IP1] **Ross, C.T.** and Beheim, B. The cultural evolution of Chess strategy. Completed Draft.
- [IP2] Oh, S.Y., Bowles, S., Borgerhoff Mulder, M., and **Ross, C.T.**. The decline of polygyny: An interpretation. Completed Draft.
- [IP3] **Ross, C.T.**, and Frost, K. Rethinking the presentation of data in the CDC-NCHHSTP HIV/STD Atlas: Multi-level Bayesian models can improve inference on STD prevalence and better ensure the anonymity of individual-level data. Completed Draft.
- [IP4] Blackwell, A., and **Ross, C.T.** Modeling the ecological and demographic conditions underlying martyrdom: A mathematical model of perceived inclusive fitness outcomes via self-sacrifice. Completed Draft.
- [IP5] **Ross, C.T.** Oh, S.Y., Borgerhoff Mulder, M., and Bowles, S. The polygyny threshold in the context of rival and non-rival wealth: A case study of Kipsigis agropastoralists. In Progress.
- [IP6] **Ross, C.T.**, Grote, M. and Winterhalder, B. A multi-level analysis of spatial and temporal variation in Medieval English cereal yields with implications for models of agrarian social development and resilience. In Progress.
- [IP7] **Ross, C.T.**, Grote, M. and Winterhalder, B. A time series Bayesian network linking ecology, population, and political economy in agrarian England, 1280-1400. In Progress.
- [IP8] **Ross, C.T.**, Winterhalder, B., Kennett, D. Grote, M. and Bartruff, J. Ideal free pre-historic settlement of the Northern Channel Islands: A spatially explicit analysis of settlement patterning. In Progress.
- [IP9] **Ross, C.T.** The rise and persistence of Somali piracy: An approach to policy rooted in human behavioral ecological modeling. In Progress.
- [IP10] **Ross, C.T.** An econometric analysis of wealth transmission from slaves to slave-owners and the inter-generational persistence of injustice. In Progress.
- [IP11] Schacht, R. and **Ross, C.T.**. Partner preferences in the Makushi: A Bayesian ℓ_1 regularization approach to analysis of multi-dimensional Likert-scale data. In Progress.

Presentations at Professional Meetings

Papers, Invited Talks, and Art Performances

- 2015 **Ross, C.T.** Evolutionary demographic analysis of colonized Agta foragers undergoing demographic transition. Department of Anthropology Colloquium, UC Davis.
- 2015 **Ross, C.T.** Queerness and closet doors: Reclaiming representation. Third Space Art Collective.
- 2015 **Ross, C.T.** Big data approaches to the study of human social learning: The cultural evolution of Chess strategy. Inaugural presentation of the UC Davis Data Sciences Workshop.

- 2015 **Ross, C.T.** The polygyny puzzle: Addressing empirical challenges. Santa Fe Institute Workshop on the Dynamics of Wealth Inequality and Family Structure.
- 2015 **Ross, C.T.** Art is Offensive: Integrative art and social justice. UC Davis Leonardo Art Science Evening Rendezvous.
- 2014 **Ross, C.T.** Winterhalder, B., Puleston, C. Impacts of environmental variability and food storage on the demography and development of agricultural societies. Evolutionary Demography Society Meeting, Stanford.
- 2014 **Ross, C.T.**, Borgerhoff Mulder, M., Winterhalder, B., Joyas Campino, P., Strimling, P., Lindenfors, P., and Ericksen, K. The evolutionary dynamics of female genital modification: Origins, maintenance, and transmission. Human Behavior and Evolution Society. Natal, Brazil.
- 2014 **Ross, C.T.**, Joyas Campino, P., and Winterhalder, B. The social transmission of female genital modification in Colombia. California Workshop on Evolutionary Social Sciences. San Luis Obispo, California.
- 2012 Winterhalder, B., Puleston, C. and **Ross, C.T.** Household-level storage and population-level consequences in a temperate zone, agrarian production system. Workshop on Neolithic Technologies - Amerind Foundation, Dragoon, Arizona.
- 2009 **Ross, C.T.** Land-use allocation and stakeholder concerns: Community conservation in Limón, Costa Rica. Society for Applied Anthropology. Santa Fe, New Mexico.
- 2008 **Ross, C.T.** Closed Doors: Assassinations and 'altitude sickness.' Southwestern Anthropological Association. Fullerton, California.

Posters

- 2015 **Ross, C.T.** and Frost, K. From data to models in conveying HIV/STD prevalence information to the public: How multi-level models can be used to improve inference and better ensure the anonymity of released information. MCMski, Lenzerheide.
- 2012 **Ross, C.T.**, Ng, J., Trask, J.S., Smith, D.G., Buffalo, V.S., Fass, J., Lin, D. and Kanthaswamy, S. Identifying and cataloguing human-rhesus macaque gene orthologs using heterospecific SNPs. Poster. International Conference on Primate Genomics. Houston, Texas.
- 2011 **Ross, C.T.** The rise and persistence of Somali piracy: An approach to policy rooted in human behavioral ecology. Poster. Institute on Global Conflict and Cooperation. Berkeley, California.
- 2010 **Ross, C.T.**, Mas por Menos: Integrating prestige and social status into conservation incentive programs. Poster. Human Behavior and Evolution Society. Eugene, Oregon.
- 2009 **Ross, C.T.**, Land-use, profitability, and conservation in Limón, Costa Rica. Poster. Society for Applied Anthropology. Santa Fe, New Mexico. (Second place in poster competition).

Professional Experience

Teaching, Research, and Employment

- 2014-2015 **Postdoctoral Scholar**, *Santa Fe Institute*, New Mexico, under Sam Bowles and Monique Borgerhoff Mulder.

- 2012-2014 **Graduate Student Researcher**, *Department of Anthropology, UC Davis, California*, under Bruce Winterhalder.
- 2010-2012 **Teaching Assistant**, *Department of Anthropology, UC Davis, California*.
- 2011-2012 **Junior Specialist**, *Molecular Anthropology Laboratory, UC Davis, California*.
- 2009-2010 **Academic Tutor**, *University Learning Center, CSUF, California*.

Data Analysis and Contract Work

- 2014-2015 **Data Analysis**, *NIMBioS*.
Cross-cultural analysis of reproductive skew in humans.
- 2012-2013 **Bayesian Analysis**, *BloodSource*, Mather, CA.
Report for BloodSource: A descriptive and inferential statistical analysis of the BloodSource donor base.
- 2011 **Genetic Analysis**, *Molecular Anthropology Laboratory, UC Davis, California*.
Report for Allergan Pharmaceuticals: An estimation of relatedness between two microcephalic long-tailed macaques.

Anthropological Fieldwork

- 2014-2015 **Colombia, Bogotá**, 6 months.
I am currently working on a long-term photodocumentary project about the political street art of Bogotá, which will eventually be published as part of a collection of essays written by Colombian scholars and citizens. This work will document both the shifting artistic landscape of Bogotá, and link images of these works to background material on the historical context of, and personal testimonials about, the themes discussed in the street art (e.g., forced displacements, war, ecological destruction, hope, extrajudicial assassination, ecological beauty, inequality, colonialism, racism, brotherhood, and revolution).
- 2012-2013 **Colombia, Chocó and Riseralda**, 5 months.
I conducted a study on the social transmission of female genital modification from the Afrocolombian population to specific indigenous groups.
- 2011-2012 **Lebanon, Beirut**, 6 months.
I conducted a pilot study on ethnic tensions and the effects of collateral damage on attitudes about the use of violence.
- 2010 **Costa Rica, All regions**, 5 months.
I conducted fieldwork on environmental service payments, and the perceived value of non-monetary incentives among land-owners of varying socioeconomic status.

Grants and Fellowships

- 2014 Graduate Student Travel Award, Graduate Studies. UC Davis. (\$1,000).
- 2012 EVOL Summer Research Award, Dept. of Anthropology. UC Davis. (\$4,000).
- 2011 EVOL Summer Research Award, Dept. of Anthropology. UC Davis. (\$3,537).
- 2009 Sadvovsky International Research Award, Dept. of Anthropology, CSUF. (\$300).
- 2011 Emeriti Memorial Award, Emeriti Association (2009), CSUF. (\$600).
- 2011 Golden State Scholarshare Trust, Governor's Scholarship Program (2004), State of California. (\$1,300).

Awards

- 2014 Dean's Prize for Best Artwork (*for* Closed Doors: Assassinated Activists and Political Prisoners), Interdisciplinary Graduate Symposium. UC Davis. (\$1,000).
- 2013 Dean's Prize for Best Artwork (*for* A Doorway Burned Open: Mohamed Bouazizi and the Arab Spring), Interdisciplinary Graduate Symposium. UC Davis. (\$1,000).
- 2010 Outstanding Individual Achievement Award, Lambda Alpha Honor Society.
- 2010 Masters Thesis Award in Anthropology, Dept. of Anthropology, CSUF.
- 2009 Student Poster Competition 2nd Place (2009), The Society for Applied Anthropology. (\$200).

Computer skills

Mathematical R, Stan, BUGS, JAGS, Mathematica
Data R, Excel, OpenOffice
Typesetting L^AT_EX, Microsoft Office, OpenOffice
Other HTML, Inkscape, Git

Languages

English *Native speaker*
Spanish *Non-native speaker, fluent*
Arabic *Basic communication abilities*
French *Basic communication abilities*
German *Basic communication abilities*