

RICHARD E.W. BERL

Ph.D. Candidate in Human Dimensions of Natural Resources

Human Dimensions of Natural Resources
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RESEARCH INTERESTS

I am a social data scientist with a background in evolution, social learning biases, and cultural change, and a passion for applying my work toward the improvement of social good and environmental sustainability for all. Past and present projects include: determining the effects of cognitive biases on cultural transmission and the dynamics of cultural evolution, specifically the influence of prestige in determining what and from whom people choose to learn, and how the concept of prestige varies across cultures; improving reforestation efforts on Pine Ridge Reservation through the use of the Lean Six Sigma methodology and the application of machine learning techniques, with the aim of increasing seedling survival under future conditions of climate change; illuminating the genetic, demographic, cultural, and linguistic history of the Chabu, an isolated and threatened group of hunter-gatherers in southwestern Ethiopia, and using these data to advocate for their rights and sovereignty; investigating differences in the use of the social learning mechanisms of imitation and emulation between young children in Western cultures and in hunter-gatherers and horticulturalists in the Central African Republic; and describing variation in the social behavior of gray wolves (*Canis lupus*) between captivity and the wild, as well as their potential for social learning and cultural variation in behavior. Through the use of a data-centric approach informed by statistics and by theory from social science on how we learn and how culture evolves, I intend to continue my career in social data science in pursuit of the goals of enhancing social good and conserving biocultural diversity.

EDUCATION

Ph.D. Candidate, Human Dimensions of Natural Resources
Graduate Certificate in Applied Statistics
Colorado State University, Fort Collins, CO

Antic. 2018
2017

M.S. Zoology
Washington State University, Pullman, WA

2015

B.A. Biological Sciences, Honors
B.A. Anthropology, Honors
University of Delaware, Newark, DE

2009
2009

RESEARCH EXPERIENCE

- Co-Investigator, "The Effects of Social Transmission Biases on Human Cultural Evolution"** *2015-Present*
Colorado State University, Fort Collins, CO and University of Bristol, United Kingdom
PIs: Dr. Michael Gavin, Colorado State University and Dr. Fiona Jordan, University of Bristol
Co-Investigator: Alarna Samarasinghe, University of Bristol
- Co-Primary Investigator, "Demography, Subsistence, Culture, and Genetic Variation of the Chabu Hunter-Gatherers of Southwest Ethiopia"** *2013-Present*
Oromiya, Gambella, and SNNP Regions, Ethiopia
Co-PIs: Dr. Barry Hewlett and Dr. Bonnie Hewlett, Washington State University Vancouver, Dr. Samuel Dira, University of West Florida
Collaborators: Dr. Marcus Feldman, Stanford University, Dr. Brenna Henn, University of California Davis, Shyamalika Goplan, Stony Brook University, Christopher Gignoux, University of Colorado Anschutz Medical Campus
- Co-Primary Investigator, "Overimitation in the Aka and Ngandu of the Congo Basin"** *2012-2015*
Bagandou, Central African Republic
Co-PI: Dr. Barry Hewlett, Washington State University Vancouver
- Primary Investigator, "Comparative Social Behavior of Gray Wolves (*Canis lupus*) in Captivity and the Wild"** *2012-2015*
Wolf Park, Battle Ground, IN and Yellowstone National Park
- Research Assistant, Charles R. Conner Vertebrate Museum** *2011-2012, 2013, 2014*
Washington State University, Pullman, WA
PIs: Dr. Larry Hufford and Dr. Kelly Cassidy, Washington State University
- Field Assistant, Lomas Barbudal Monkey Project** *2009-2010*
Reserva Biológica Lomas Barbudal, Guanacaste, Costa Rica
PI: Dr. Susan Perry, University of California Los Angeles

TEACHING EXPERIENCE

- Teaching Assistant, General Biology** *Spring 2015*
School of Biological Sciences, Washington State University
- Teaching Assistant, General Ecology** *Fall 2014*
School of Biological Sciences, Washington State University

PUBLICATIONS

- Berl, R.E.W.**, Samarasinghe, A.N., Jordan, F.M., & Gavin, M.C. (in review). The Position-Reputation-Information (PRI) scale of individual prestige. *PLOS ONE*.
- Berl, R.E.W.** & Hewlett, B.S. 2015. Cultural variation in the use of overimitation by the Aka and Ngandu of the Congo Basin. *PLOS ONE* 10(3): e0120180. doi: 10.1371/journal.pone.0120180

NON-PEER REVIEWED PUBLICATIONS

Berl, R.E.W. 2015. On the value of conserving human cultural diversity. *Northwest Science* 89(1): 100-101. doi: 10.3955/046.089.0110

INVITED TALKS

Berl, R.E.W. "Sociality and culture in gray wolves and humans." *Sep 27, 2013*
Morrison Institute for Population and Resource Studies, Stanford University,
Stanford, CA

Berl, R.E.W. "Social inheritance and the evolution of culture." *June 27, 2012*
Wolf Park, Battle Ground, IN

PRESENTATIONS

Gopalan, S., **Berl, R.E.W.**, Gignoux, C., Feldman, M.W., Hewlett, B.S., & Henn, B.M. "Characterizing an ongoing agricultural transition in southwest Ethiopia using genetic data." (Podium) *July 24, 2018*
12th International Conference on Hunting and Gathering Societies, Penang, Malaysia

Gopalan, S., Henn, B., Hewlett, B.S., & **Berl, R.E.W.** "Understanding agricultural transitions in southwest Ethiopia using genetic data." (Podium) *June 20, 2018*
24th Biennial Conference of the Society of Africanist Archaeologists, Toronto, ON, Canada

Berl, R.E.W. "The universe is made of stories." (Podium) *Feb 12, 2018*
Vice President for Research Fellowship Three Minute Challenge, Colorado State University, Fort Collins, CO

Berl, R.E.W., Samarasinghe, A.N., Jordan, F.M., & Gavin, M.C. "What is said is more important than who says it: An experimental study of content and prestige biases in social learning." (Poster) *Nov 2, 2017*
Graduate Student Showcase, Colorado State University, Fort Collins, CO

Berl, R.E.W., Samarasinghe, A.N., Jordan, F.M., & Gavin, M.C. "Toward a unified framework of prestige." (Podium) *Sep 13, 2017*
Inaugural Meeting of the Cultural Evolution Society, Max Planck Institute for the Science of Human History, Jena, Germany

Berl, R.E.W. "Cultural evolution and genome-culture coevolution." & "Prestige and cultural transmission." (Podium) *Sep 23, 2016*
GAUSSI Program Meeting, Colorado State University, Fort Collins, CO

Berl, R.E.W., Samarasinghe, A.N., Jordan, F.M., & Gavin, M.C. "Prestige of regional accents and effects on cultural transmission." (Poster) *May 30, 2016*
28th Annual Meeting of the Human Behavior and Evolution Society, Vancouver, BC, Canada

Berl, R.E.W. "Cultural variation in the use of overimitation by the Aka and Ngandu of the Congo Basin." (Podium) *Sep 15, 2015*
School of Biological Sciences BioLunch Seminar, Pullman, WA

Berl, R.E.W. & Hewlett, B.S. "Cultural variation in the use of overimitation by the Aka and Ngandu of the Congo Basin." (Podium) Biennial Meeting of the Society for Research in Child Development, Philadelphia, PA	<i>Mar 21, 2015</i>
Adams, A.F., Poznik, G.D., Berl, R.E.W. , Hammond, N.A., Mendez, F.L., Cornejo, O.E., Napel, M., Schertler, M., Underhill, P.A., Feldman, M.W., & Bustamante, C.D. "High-coverage sequencing of diverse Y chromosomes via in-solution capture." (Poster) 64 th Annual Meeting of the American Society of Human Genetics, San Diego, CA	<i>Oct 19, 2014</i>
Berl, R.E.W. "Social behavior of gray wolves (<i>Canis lupus</i>) in captivity and the wild." (Poster) 51 st Annual Conference of the Animal Behavior Society, Princeton, NJ	<i>Aug 11, 2014</i>
Berl, R.E.W. "Social behavior of gray wolves (<i>Canis lupus</i>) in captivity and the wild." (Poster) 6 th Biennial Meeting of EVO-WIBO: Evolutionary Biology in the Pacific Northwest, Port Townsend, WA	<i>Apr 26, 2014</i>
Berl, R.E.W. & Hewlett, B.S. "Overimitation in the Aka and Ngandu of the Congo Basin." (Podium) 83 rd Annual Meeting of the American Association of Physical Anthropologists, Calgary, AB, Canada	<i>Apr 12, 2014</i>
Berl, R.E.W. "A group-level perspective in modeling social learning processes." (Poster) Washington State University Academic Showcase, Pullman, WA	<i>Mar 29, 2013</i>
Berl, R.E.W. "A group-level perspective in modeling social learning processes." (Poster) School of Biological Sciences Graduate Student Research Symposium, Pullman, WA	<i>Mar 1, 2013</i>
Berl, R.E.W. & Hewlett, B.S. "Overimitation in the Aka and Ngandu of the Congo Basin." (Podium) School of Biological Sciences Graduate Student Research Symposium, Pullman, WA	<i>Mar 1, 2013</i>
Berl, R.E.W. "A group-level perspective in modeling social learning processes." (Poster) Dr. William R. Wiley Research Exposition, Pullman, WA	<i>Feb 1, 2013</i>
Berl, R.E.W. & Hewlett, B.S. "Overimitation in the Aka and Ngandu of the Congo Basin." (Podium) Dr. William R. Wiley Research Exposition, Pullman, WA	<i>Feb 1, 2013</i>
Berl, R.E.W. "The role of adaptiveness in the evolution of social learning and culture." (Poster) School of Biological Sciences Graduate Student Research Symposium, Pullman, WA	<i>Mar 3, 2012</i>

GRANTS AND AWARDS

Graduate Student Showcase Finalist Office of the Vice President for Research, Colorado State University	2017
GAUSSI Traineeship NSF Research Traineeship in Generating, Analyzing, and Understanding Sensory and Sequencing Information, Colorado State University	2016-Present
Youth Athletic Facilities Grant, City of Colfax, WA (\$250,000) Washington State Recreation and Conservation Office	2015
William S. Pollitzer Student Travel Award American Association of Physical Anthropologists	2014
NWSA Student Research Grant Northwest Scientific Association	2014
James R. King Fellowship in Zoology School of Biological Sciences, Washington State University	2014
Exploration Fund Award The Explorers Club	2013
IPEM Research Fund Award NSF IGERT Program in Evolutionary Modeling, Washington State University	2013
IPEM Graduate Fellowship NSF IGERT Program in Evolutionary Modeling, Washington State University	2012-2013
Carl H. Elling Award School of Biological Sciences, Washington State University	2012-2014
NSF GRFP Honorable Mention NSF Graduate Research Fellowship Program	2012

TRAINING & WORKSHOPS

Quantitative Methods in Cultural Evolution Master Class Max Planck Institute for the Science of Human History, Jena, Germany	Sep 8-9, 2016
IBM Datapalooza Denver Sie FilmCenter, Denver, CO	May 19, 2016

PROFESSIONAL SERVICE

Seminar Coordinator, Frontiers of Conservation Social Science Seminar Series & Diversity and Inclusion in Conservation Seminar Series Human Dimensions of Natural Resources, Colorado State University	2015-Present
Seminar Coordinator, Biology Graduate Student Association School of Biological Sciences, Washington State University	2014-2015

Co-Founder, Palouse Interdisciplinary Graduate Society Washington State University & University of Idaho	2014
Chair, School of Biological Sciences Graduate Student Research Symposium School of Biological Sciences, Washington State University	2014
President, Biology Graduate Student Association School of Biological Sciences, Washington State University	2013-2014
Vice President, Biology Graduate Student Association School of Biological Sciences, Washington State University	2012-2013
Organizer, School of Biological Sciences Graduate Student Research Symposium School of Biological Sciences, Washington State University	2011-2014
Consultant Trees, Water & People <i>National Geographic Magazine</i>	
Reviewer <i>Proceedings of the National Academy of Sciences</i> <i>Behavioural Processes</i> <i>Psychological Reports</i> <i>PLOS ONE</i>	
Member Cultural Evolution Society, Founding Member Data for Democracy, Founding Member The Explorers Club, Pacific Northwest & Rocky Mountain Chapters American Association of Physical Anthropologists	

SCIENCE OUTREACH & SERVICE

Volunteer Data Scientist Trees, Water & People, Fort Collins, CO	2018-Present
Volunteer Educator, Skype a Scientist Program Steindorf STEAM School, San Jose, CA Ray Miller Elementary, Kirksville, MO	2017
Volunteer Educator, March for Science Denver Civic Center Park, Denver, CO	2017
Logo Designer, March for Science Denver Civic Center Park, Denver, CO	2017
Volunteer Educator, "Beasts Evolve!" Outreach Module Skyview Elementary School, Windsor, CO	2017
Lead Developer, "Beasts Evolve!" Outreach Module NSF Research Traineeship in Generating, Analyzing, and Understanding Sensory and Sequencing Information, Colorado State University	2017

Parks and Recreation Coordinator City of Colfax, WA	<i>2015</i>
Volunteer Educator, Biology Open House Washington State University, Pullman, WA	<i>2014</i>
Volunteer Educator, Biology Family Science Saturday Palouse Discovery Science Center, Pullman, WA	<i>2013</i>
Apartment Coordinator, Family and Graduate Housing Housing and Residence Life, Washington State University, Pullman, WA	<i>2013-2015</i>
Lead Organizer, Palouse Outdoor Science Day Virgil Phillips Farm Park, Moscow, ID	<i>2013-2015</i>
Exhibit Designer, Educational Exhibits for Young Visitors Charles R. Conner Vertebrate Museum, Washington State University, Pullman, WA	<i>2011-2012</i>
Biological Aide, Environmental Stewardship Program Delaware Division of Parks and Recreation, Dover, DE	<i>2011</i>
Guest Presenter, Classroom STEM Talks and Activities Wilmington Friends School, Wilmington, DE	<i>2010</i>
Volunteer, Environmental Education and Community Outreach Guanacaste, Costa Rica	<i>2009-2010</i>