

# RICHARD E.W. BERL

*Ph.D. in Conservation Social Science*

Human Dimensions of Natural Resources  
Colorado State University  
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## RESEARCH INTERESTS

I am a computational social scientist with a background in evolutionary theory, behavior, and cultural change, and a passion for conserving biocultural diversity and improving social good and sustainability. Past and present projects include: working with researchers and U.S. state wildlife agencies to understand public values toward wildlife, prepare and implement strategies for systems change within agencies to adapt to increasing social change, and address the social issues surrounding wolf recovery in Colorado; 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, ensuring long-term survival of seedlings 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 non-Western hunter-gatherers and horticulturalists in the Central African Republic; and describing variation in the social behavior of gray wolves 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 scientific approach informed by experience in the biological and social sciences on how humans learn and behave, my work addresses the issues that arise from complex interactions between humans, society, and the environment.

## EDUCATION

<b>Ph.D. Human Dimensions of Natural Resources</b>	2019
<b>Graduate Certificate in Applied Statistics</b>	2017
Colorado State University, Fort Collins, CO	
<b>M.S. Zoology</b>	2015
Washington State University, Pullman, WA	
<b>B.A. Biological Sciences, Honors</b>	2009
<b>B.A. Anthropology, Honors</b>	2009
University of Delaware, Newark, DE	

## RESEARCH EXPERIENCE

- Co-Investigator, "Organizational Change for Effective Adaptation in State Fish and Wildlife Agencies"** *2019-Present*  
Colorado State University, Fort Collins, CO  
PIs: Michael Manfredo, Colorado State University and Mark Gasta, University of Colorado, Boulder  
Co-Investigator: Leeann Sullivan, Colorado State University
- Co-Investigator, "The Social Habitat for Wildlife"** *2019-Present*  
Colorado State University, Fort Collins, CO  
PI: Michael Manfredo, Colorado State University  
Co-Investigator: Tara Teel, Colorado State University
- Co-Primary Investigator, "The Effects of Migration, Demographic Processes, and Subsistence Changes in Southwestern Ethiopia"** *2018-Present*  
Oromiya, Gambella, and SNNP Regions, Ethiopia  
Co-PIs: Barry Hewlett, Washington State University Vancouver and Brenna Henn, University of California Davis
- Co-Investigator, "The Effects of Social Transmission Biases on Human Cultural Evolution"** *2015-2019*  
Colorado State University, Fort Collins, CO and University of Bristol, United Kingdom  
PIs: Michael Gavin, Colorado State University and 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: Barry Hewlett and Bonnie Hewlett, Washington State University Vancouver, Samuel Dira, University of West Florida  
Collaborators: Marcus Feldman, Stanford University, 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: 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: Larry Hufford and Kelly Cassidy, Washington State University
- Field Assistant, Lomas Barbudal Monkey Project** *2009-2010*  
Reserva Biológica Lomas Barbudal, Guanacaste, Costa Rica  
PI: Susan Perry, University of California Los Angeles

## TEACHING EXPERIENCE

- Adjunct Professor, Applied Statistical Computing with R** *Spring 2019*  
Human Dimensions of Natural Resources, Colorado State University
- 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.** & Gavin, M.C. (*in prep.*). A unified framework of prestige: Bridging concepts from theory, experiment, and cross-cultural research.
- Berl, R.E.W.\***, Samarasinghe, A.N.\*, Roberts, S.G., Jordan, F.M., & Gavin, M.C. (*in prep.*). Prestige and content biases in the experimental transmission of narratives.
- Samarasinghe, A.N., **Berl, R.E.W.**, Gavin, M.C., & Jordan, F.M. (*in prep.*). Regional accents of speech as a proxy for prestige in studies of cultural transmission and evolution.
- Gopalan, S.\*, **Berl, R.E.W.\***, Belbin, G., Kaewert, S., Bustamante, C.D., Gignoux, C.R., Feldman, M.W., Hewlett, B.S., & Henn, B.M. (*in review*). Genomic data reveals diverse recent demographic histories in African hunter-gatherers. Preprint: bioRxiv, 517730. doi: 10.1101/517730
- Berl, R.E.W.**, Samarasinghe, A.N., Jordan, F.M., & Gavin, M.C. (*in review*). The Position-Reputation-Information (PRI) scale of individual prestige.
- 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

\*Co-first authors

## NON-PEER REVIEWED PUBLICATIONS

- Hewlett, B.S., **Berl, R.E.W.**, & Roulette, C.J. 2016. Teaching and overimitation among Aka hunter-gatherers. In: Terashima, H. & Hewlett, B.S., editors. *Social learning and innovation in contemporary hunter-gatherers*. Springer. pp. 35–45. doi: 10.1007/978-4-431-55997-9\_3
- 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

- Manfredo, M., **Berl, R.E.W.**, Teel, T., & Dietsch, A. *Sep 23, 2019*  
"Social habitats for wildlife in the U.S. with an application to wolf reintroduction in Colorado." (Podium)  
Pathways 2019: Human Dimensions of Wildlife Conference, Estes Park, CO
- Berl, R.E.W.** *May 15, 2019*  
"Prestige: Concept, measurement, and the transmission of culture." (Podium)  
Doctoral Defense Public Seminar, Colorado State University, Fort Collins, CO
- Berl, R.E.W.**, Samarasinghe, A.N., Roberts, S.G., Jordan, F.M., & Gavin, M.C. *Oct 24, 2018*  
"Tell me a story: Comparing the effects of prestige and content biases on cultural transmission." (Podium)  
Second Meeting of the Cultural Evolution Society, Tempe, AZ
- Berl, R.E.W.**, Gopalan, S., Belbin, G.M., Gignoux, C.R., Feldman, M.W., Henn, B.M., & Hewlett, B.S. *Oct 23, 2018*  
"Demographic and cultural history of the Chabu hunter-gatherers of southwestern Ethiopia." (Podium)  
Second Meeting of the Cultural Evolution Society, Tempe, AZ
- Gopalan, S., **Berl, R.E.W.**, Gignoux, C., Feldman, M.W., Hewlett, B.S., & Henn, B.M. *July 24, 2018*  
"Characterizing an ongoing agricultural transition in southwest Ethiopia using genetic data." (Podium)  
12<sup>th</sup> International Conference on Hunting and Gathering Societies, Penang, Malaysia
- Gopalan, S., Henn, B., Hewlett, B.S., & **Berl, R.E.W.** *June 20, 2018*  
"Understanding agricultural transitions in southwest Ethiopia using genetic data." (Podium)  
24<sup>th</sup> 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. *Nov 2, 2017*  
"What is said is more important than who says it: An experimental study of content and prestige biases in social learning." (Poster)  
Graduate Student Showcase, Colorado State University, Fort Collins, CO
- Berl, R.E.W.**, Samarasinghe, A.N., Jordan, F.M., & Gavin, M.C. *Sep 13, 2017*  
"Toward a unified framework of prestige." (Podium)  
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. *May 30, 2016*  
"Prestige of regional accents and effects on cultural transmission." (Poster)  
28<sup>th</sup> 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) *Mar 21, 2015*  
Biennial Meeting of the Society for Research in Child Development, Philadelphia, PA

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) *Oct 19, 2014*  
64<sup>th</sup> Annual Meeting of the American Society of Human Genetics, San Diego, CA

**Berl, R.E.W.** "Social behavior of gray wolves (*Canis lupus*) in captivity and the wild." (Poster) *Aug 11, 2014*  
51<sup>st</sup> Annual Conference of the Animal Behavior Society, Princeton, NJ

**Berl, R.E.W.** "Social behavior of gray wolves (*Canis lupus*) in captivity and the wild." (Poster) *Apr 26, 2014*  
6<sup>th</sup> Biennial Meeting of EVO-WIBO: Evolutionary Biology in the Pacific Northwest, Port Townsend, WA

**Berl, R.E.W.** & Hewlett, B.S. "Overimitation in the Aka and Ngandu of the Congo Basin." (Podium) *Apr 12, 2014*  
83<sup>rd</sup> Annual Meeting of the American Association of Physical Anthropologists, Calgary, AB, Canada

**Berl, R.E.W.** "A group-level perspective in modeling social learning processes." (Poster) *Mar 29, 2013*  
Washington State University Academic Showcase, Pullman, WA

**Berl, R.E.W.** "A group-level perspective in modeling social learning processes." (Poster) *Mar 1, 2013*  
School of Biological Sciences Graduate Student Research Symposium, Pullman, WA

**Berl, R.E.W.** & Hewlett, B.S. "Overimitation in the Aka and Ngandu of the Congo Basin." (Podium) *Mar 1, 2013*  
School of Biological Sciences Graduate Student Research Symposium, Pullman, WA

**Berl, R.E.W.** "A group-level perspective in modeling social learning processes." (Poster) *Feb 1, 2013*  
Dr. William R. Wiley Research Exposition, Pullman, WA

**Berl, R.E.W.** & Hewlett, B.S. "Overimitation in the Aka and Ngandu of the Congo Basin." (Podium) *Feb 1, 2013*  
Dr. William R. Wiley Research Exposition, Pullman, WA

**Berl, R.E.W.** "The role of adaptiveness in the evolution of social learning and culture." (Poster) *Mar 3, 2012*  
School of Biological Sciences Graduate Student Research Symposium, Pullman, WA

## GRANTS AND AWARDS

<b>Populations Collaboration Grant (\$10,000 plus materials)</b> 23andMe	2018
<b>Graduate Student Showcase Finalist</b> Office of the Vice President for Research, Colorado State University	2017
<b>GAUSSI Traineeship</b> NSF Research Traineeship in Generating, Analyzing, and Understanding Sensory and Sequencing Information, Colorado State University	2016-2019
<b>Youth Athletic Facilities Grant, City of Colfax, WA (\$250,000)</b> Washington State Recreation and Conservation Office	2015
<b>William S. Pollitzer Student Travel Award</b> American Association of Physical Anthropologists	2014
<b>NWSA Student Research Grant (\$1,500)</b> Northwest Scientific Association	2014
<b>James R. King Fellowship in Zoology</b> School of Biological Sciences, Washington State University	2014
<b>Exploration Fund Award (\$2,500)</b> The Explorers Club	2013
<b>IPEM Research Fund Award (\$6,000)</b> NSF IGERT Program in Evolutionary Modeling, Washington State University	2013
<b>IPEM Graduate Fellowship</b> NSF IGERT Program in Evolutionary Modeling, Washington State University	2012-2013
<b>Carl H. Elling Award (\$8,000)</b> School of Biological Sciences, Washington State University	2012-2014
<b>NSF GRFP Honorable Mention</b> NSF Graduate Research Fellowship Program	2012

## TRAINING & WORKSHOPS

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

## PROFESSIONAL SERVICE

<b>Seminar Coordinator, Frontiers of Conservation Social Science Seminar Series &amp; Diversity and Inclusion in Conservation Seminar Series</b> Human Dimensions of Natural Resources, Colorado State University	2015-2017
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**Seminar Coordinator, Biology Graduate Student Association** 2014-2015  
School of Biological Sciences, Washington State University

**Co-Founder, Palouse Interdisciplinary Graduate Society** 2014  
Washington State University & University of Idaho

**Chair, School of Biological Sciences Graduate Student Research Symposium** 2014  
School of Biological Sciences, Washington State University

**President, Biology Graduate Student Association** 2013-2014  
School of Biological Sciences, Washington State University

**Vice President, Biology Graduate Student Association** 2012-2013  
School of Biological Sciences, Washington State University

**Organizer, School of Biological Sciences Graduate Student Research Symposium** 2011-2014  
School of Biological Sciences, Washington State University

**Consultant**  
Trees, Water & People  
*National Geographic Magazine*

**Reviewer**  
*Proceedings of the National Academy of Sciences*  
*Behavioural Processes*  
*Psychological Reports*  
*PLOS ONE*

**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** 2018-Present  
Trees, Water & People, Fort Collins, CO

**Volunteer Educator, Skype a Scientist Program** 2017  
Steindorf STEAM School, San Jose, CA  
Ray Miller Elementary, Kirksville, MO

**Volunteer Educator, March for Science Denver** 2017  
Civic Center Park, Denver, CO

**Logo Designer, March for Science Denver** 2017  
Civic Center Park, Denver, CO

**Volunteer Educator, "Beasts Evolve!" Outreach Module** 2017  
Skyview Elementary School, Windsor, CO

<b>Lead Developer, "Beasts Evolve!" Outreach Module</b> NSF Research Traineeship in Generating, Analyzing, and Understanding Sensory and Sequencing Information, Colorado State University	<i>2017</i>
<b>Parks and Recreation Coordinator</b> City of Colfax, WA	<i>2015</i>
<b>Volunteer Educator, Biology Open House</b> Washington State University, Pullman, WA	<i>2014</i>
<b>Volunteer Educator, Biology Family Science Saturday</b> Palouse Discovery Science Center, Pullman, WA	<i>2013</i>
<b>Apartment Coordinator, Family and Graduate Housing</b> Housing and Residence Life, Washington State University, Pullman, WA	<i>2013-2015</i>
<b>Lead Organizer, Palouse Outdoor Science Day</b> Virgil Phillips Farm Park, Moscow, ID	<i>2013-2015</i>
<b>Exhibit Designer, Educational Exhibits for Young Visitors</b> Charles R. Conner Vertebrate Museum, Washington State University, Pullman, WA	<i>2011-2012</i>
<b>Biological Aide, Environmental Stewardship Program</b> Delaware Division of Parks and Recreation, Dover, DE	<i>2011</i>
<b>Guest Presenter, Classroom STEM Talks and Activities</b> Wilmington Friends School, Wilmington, DE	<i>2010</i>
<b>Volunteer, Environmental Education and Community Outreach</b> Guanacaste, Costa Rica	<i>2009-2010</i>