

Brian A. Gill

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EDUCATION

PhD	Colorado State University Fort Collins, CO Advisors: Chris Funk and Boris Kondratieff	2011–2017
BA	Franklin and Marshall College Lancaster, PA Advisor: Dan Ardia	2005–2009

PROFESSIONAL APPOINTMENTS

Postdoctoral Research Associate, Brown University	2017–Current
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PUBLICATIONS

Refereed journal articles:

- Shah, A.A., **B.A. Gill**, A.C. Encalada, A.S. Flecker, W.C. Funk, J.M. Guayasamin, B.C. Kondratieff, N.L. Poff, S.A. Thomas, K.R. Zamudio, and C.K. Ghalambor. (in press). Climate variability predicts thermal limits of aquatic insects across elevation and latitude. *Functional Ecology*.
- Polato, N.R., M.M. Gray, **B.A. Gill**, K.L. Anderson, C.G. Becker, A.S. Flecker, B.C. Kondratieff, A.C. Encalada, N.L. Poff, W.C. Funk, and K.R. Zamudio. (in press). Genetic diversity and gene flow decline with elevation in montane mayflies. *Heredity*.
- Lessmann, J., J.M. Guayasamin, K.L. Casner, A.S. Flecker, W.C. Funk, C.K. Ghalambor, **B.A. Gill**, I. Jácome-Negrete, B.C. Kondratieff, N.L. Poff, J. Schreckinger, S.A. Thomas, E. Toral-Contreras, K.R. Zamudio, and A.C. Encalada. 2016. Freshwater vertebrate and invertebrate diversity patterns in an Andean-Amazon basin: Implications for conservation efforts. *Neotropical Biodiversity*, 2:1, 99–114
- Gill, B.A.**, B.C. Kondratieff, K.L. Casner, A.C. Encalada, A.S. Flecker, D.G. Gannon, C.K. Ghalambor, J.L. Guayasamin, N.L. Poff, M.P. Simmons, S.A. Thomas, K.R. Zamudio, and W.C. Funk. 2016. Cryptic species diversity reveals biogeographic support for the ‘mountain passes are higher in the tropics’ hypothesis. *Proceedings of the Royal Society London B: Biological Sciences*, 283:20160553
- Gill, B.A.**, J.B. Sandberg, and B.C. Kondratieff. 2015. Evaluation of the morphological species concepts of 16 Western Nearctic *Isoperla* species (Plecoptera: Perlodidae) and their respective species groups using DNA barcoding. *Illiesia*, 11(11): 130–146

- Stark, B.P., B.C. Kondratieff, J.B. Sandberg, **B.A. Gill**, C.J. Verdone, and A.B. Harrison. 2015. *Sierraperla* Jewett, 1954 (Plecoptera: Peltoperlidae), distribution, egg morphology and description of a new species. *Illiesia*, 11(2): 8–22
- Gill, B.A.**, B.C. Kondratieff, B.P. Stark, and J.B. Sandberg. 2015. The banded-wing *Moselia infuscata* (Claassen) phenotype from California and Oregon, U.S.A. (Plecoptera: Leuctridae). *Zootaxa*, 3911(4): 593–597
- Heinold, B.D., **B.A. Gill**, T.P. Belcher, and C.J. Verdone. 2014. Discovery of new populations and DNA barcoding of the Arapahoe Snowfly *Arsapnia arapahoe* (Plecoptera: Capniidae). *Zootaxa*, 3866(1): 131–137
- Gill, B.A.**, R.A. Harrington, B.C. Kondratieff, K.R. Zamudio, N.L. Poff, and W.C. Funk. 2014. Morphological taxonomy, DNA barcoding, and species diversity in Southern Rocky Mountain headwater streams. *Freshwater Science*, 33(1): 288–301
- Heinold, B.D., **B.A. Gill**, and B.C. Kondratieff. 2013. Recent collection and DNA barcode of the rare Coffee Pot Snowfly *Capnia nelsoni* (Plecoptera: Capniidae). *Illiesia*, 9(02): 14–17
- Stark, B.P., B.C. Kondratieff, and **B.A. Gill**. 2012. Notes on *Claudioperla tigrina* (Klapálek) in Ecuador (Plecoptera: Gripopterygidae). *Illiesia*, 8(14): 141–146
- Stark B.P., B.C. Kondratieff, and **B.A. Gill**. 2012. New species and records of *Anacroneuria* (Plecoptera: Perlidae) from Ecuador and Paraguay. *Illiesia*, 8(6): 78–93

Manuscripts in preparation (available upon request):

- Polato, N.R., **B.A. Gill**, A.A. Shah, M.M. Gray, A. Barthelet, P. Messer, J.M. Guayasamin, A.C. Encalada, C.K. Ghalambor, N.L. Poff, W.C. Funk, and K.R. Zamudio. (in preparation). Narrow thermal tolerance and low dispersal drive tropical diversification. *Science*.

AWARDS AND HONORS

- Best Presentation Emphasizing Methodology**, The Society for Freshwater Science, 2015, **\$250**
- Research and Scholarly Excellence Award**, Colorado State University, 2011, **\$2,000**
- Edward and Phyllis Reed Scholarship**, Colorado State University, 2012, **\$10,500**
- Dimensions of Biodiversity Travel Award**, National Science Foundation, 2015, **\$1,170**
- Biology Department Travel Award**, Colorado State University, 2014, **\$2,190**
- Biology Department Travel Award**, Colorado State University, 2013, **\$1,000**
- Society Travel Award**, Association for Tropical Biology and Conservation, 2013, **\$200**
- Society Travel Award**, Entomological Society of America, 2012, **\$1000**

GRANTS AND FELLOWSHIPS

- International Presidential Fellowship**, Colorado State University, 2016–2017
- NSF Dissertation Improvement Grant**, Colorado State University, 2015–2017, **\$19,331**

Sustainability Leadership Fellowship, Colorado State University, 2014–2015

NSF Graduate Research Fellowship, Colorado State University, 2013–2016, **\$132,000**

Graduate Degree Program in Ecology Grant, Colorado State University, 2013–2014, **\$2,000**

Rotary International Grant, Longwood Rotary, 2010–2011, **\$1,500**

CONFERENCE PRESENTATIONS/ORGANIZATION

Papers presented:

- B.A. Gill**, B.C. Kondratieff, A.C. Encalada, N.L. Poff, and W.C. Funk. 2016. Determining latitudinal differences in effects of space for time sampling tradeoffs using DNA metabarcoding. Contributed paper presentation at the **Society for Freshwater Science Annual Meeting**, Sacramento, CA, May 22, 2016
- B.A. Gill**, B.C. Kondratieff, A.C. Encalada, C.K. Ghalambor, N.L. Poff, M.P. Simmons, and W.C. Funk. 2015. Latitudinal differences in the richness and elevational range sizes of Mayflies (Ephemeroptera) support the Mountain Passes Hypothesis. Contributed paper presentation at the **The Society for the Study of Evolution**, Guarujá, Brazil, June 30, 2015
- B.A. Gill**, B.C. Kondratieff, A.C. Encalada, C.K. Ghalambor, N.L. Poff, M.P. Simmons, and W.C. Funk. 2015. Measuring elevation range sizes to test the Climate Variability Hypothesis and assess latitudinal differences in species vulnerability to climate change. Contributed paper presentation at the **The Society for Freshwater Science**, Milwaukie, May 19, 2015
- B.A. Gill**, M.P. Simmons, B.C. Kondratieff, N.L. Poff, C.K. Ghalambor, A.C. Encalada, and W.C. Funk. 2014. No difference in elevational ranges of mountain stream insects between Colorado and Ecuador. Contributed paper presentation at **The Guild of Rocky Mountain Ecologists and Evolutionary Biologists**, Pingree Park, Colorado, September 20, 2014
- B.A. Gill**, B.C. Kondratieff, A.C. Encalada, N.L. Poff, and W.C. Funk. 2014. Has historical climatic variability impacted contemporary elevational distributions of mountain stream insects? Contributed paper presentation at **The Society for Freshwater Science**, Portland, Oregon, May 20, 2014
- B.A. Gill**, B.C. Kondratieff, A.C. Encalada, N.L. Poff, K.R. Zamudio, A.S. Flecker, C.K. Ghalambor, J.M. Guayasamin, K.L. Anderson, and W.C. Funk. 2013. Does a generalizable elevational richness pattern exist for mountain stream insects? Contributed paper presentation at the **Association for Tropical Biology and Conservation Annual Meeting**, San Jose, Costa Rica, June 27, 2013
- B.A. Gill**, B.C. Kondratieff, A.C. Encalada, N.L. Poff, K.R. Zamudio, A.S. Flecker, C.K. Ghalambor, J.M. Guayasamin, and W.C. Funk. 2013. Overcoming tropical taxonomic limitations to test for latitudinal differences in elevational range sizes. Contributed paper presentation at the **Society for Freshwater Science Annual Meeting**, Jacksonville, Florida, May 22, 2013
- B.A. Gill**, B.C. Kondratieff, A.C. Encalada, N.L. Poff, K.R. Zamudio, A.S. Flecker, C.K. Ghalambor, and W.C. Funk. 2012. An integrative taxonomic approach for fine scale taxonomic resolution of stream insect communities along gradients. Contributed paper presentation at the **Entomological Society of America Annual Meeting**, Knoxville,

Tennessee, November 11, 2012

B.A. Gill, B.C. Kondratieff, A.C. Encalada, N.L. Poff, K.R. Zamudio, A.S. Flecker, C.K. Ghalambor, J.M. Guayasamin, and W.C. Funk. Do headwater stream insects follow the latitudinal diversity gradient? Contributed paper presentation at the **Society for Freshwater Science Annual Meeting**, Louisville, Kentucky, May 22, 2012

Conference organization:

Co-organized special session entitled “Next-generation sequencing in freshwater science” at the annual meeting of the **Society for Freshwater Science**, May 2016

Chaired committee (abstracts and program) for **Front Range Student Ecology Symposium** at Colorado State University, February 2016

Co-organized meeting of the **Guild of Rocky Mountain Ecologists and Evolutionary Biologists** Annual Meetings, September 2014

Co-organized meeting of the **Guild of Rocky Mountain Ecologists and Evolutionary Biologists** Annual Meetings, September 2013 (cancelled because of catastrophic floods)

TEACHING EXPERIENCE

Colorado State University:

Invertebrate Biology (Graduate Teaching Assistant)	Fall 2016
Molecular Genetics (Graduate Teaching Assistant)	Summer 2016 Spring 2017
Tropical Ecology and Evolution (Instructor of Record)	Fall 2015

The School for Field Studies Costa Rica:

Sustainable Development Studies (Teaching Assistant)	Fall 2009 Spring 2010
Sustainable Development Studies (Student Affairs Manager)	Summer 2010

James Buchanan Elementary School:

Fifth Grade Science (Student Teacher)	Spring 2009
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RESEARCH EXPERIENCE

Colorado State University:

Graduate Research Assistant (Field and Laboratory Work) Understanding Vulnerability of Freshwater Biodiversity of Climate Change	2011–2013
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The School for Field Studies Costa Rica:

Research Assistant (Field Work) 2009–2010
Stream Insect Communities of Braulio Carrillo National Park, Costa Rica

The Stroud Water Research Center:

Aquatic Entomology Internship (Laboratory Work) 2009
Long-term biomonitoring of the Schuylkill River watershed

The University of Pennsylvania New Bolton Center:

Support Staff (Laboratory Work) 2004–2005
Animal transgenesis and germ cell research

SERVICE TO PROFESSION

Journal Peer Reviews:

Reviewer for the following journals: *Freshwater Science*, *Genome*, *Molecular Ecology*, *Neotropical Biodiversity* and *Zootaxa*

DEPARTMENTAL/UNIVERSITY SERVICE

Colorado State University:

Graduate Degree Program in Ecology Executive Committee
Student Representative 2014–2015

Graduate Degree Program in Ecology Committee for Curricular Review
Student Representative 2014–2015

Franklin and Marshall College:

Department of Biology Bioinformatics Search Committee
Student Representative 2009

COMMUNITY OUTREACH

Science Fair Judge
Putnam Elementary School (K–5) 2016

Conference Presentation Judge
Front Range Student Ecology Symposium at Colorado State University 2015, 2016

Conference Presentation Judge
Research and Creativity Showcase at Colorado State University 2013

Research Scientist/Educator

National Geographic Bioblitz at Rocky Mountain National Park	2012
Outreach Coordinator/Environmental Educator	
Freshwater science education with Costa Rican public school student	2010
Outreach Coordinator/Environmental Educator	
Freshwater science education with Costa Rican scouts	2010
Outreach Coordinator/English Educator	
English lessons for neighborhood in Costa Rica	2010
Instructor for “Leaf Pack Network”	
Training for public school teachers at Stroud Water Research Center	2009

MEDIA

Proceedings B paper (283:20160553) featured in CSU SOURCE (Ju Manning, Anne, June 15, 2016), ScienceDaily.com, and Phys.org.

COMPASS Science Communication Training (Neeley, Liz, September 2014)

Collaborative NSF Dimensions of Biodiversity project featured by *Nature* in their Features section (Rosner, Hilary, *Nature*, 2013, 494:22-23)

FOREIGN LANGUAGES

Spanish: Read, write and speak fluently

PROFESSIONAL MEMBERSHIPS

American Genetics Association, Association for Tropical Biology and Conservation, Entomological Society of America, Guild of Rocky Mountain Ecologists and Evolutionary Biologists, Society for Freshwater Science, and Society for the Study of Evolution