



## Brian A. Gill

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### EDUCATION

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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
Study Abroad	The School for Field Studies Atenas, Costa Rica Advisors: Gerardo Avalos and Edgardo Arevalo	Summer 2008

### PROFESSIONAL APPOINTMENTS

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Postdoctoral Research Associate, Brown University	2017–Current
International Presidential Fellow, Colorado State University	2016–2017
Sustainability Leadership Fellow, Colorado State University	2014–2015
Student Affairs Manager, The School for Field Studies Costa Rica	2010–2011

### DISCIPLINARY CONCENTRATIONS

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Ecology, evolutionary biology, and conservation with expertise in molecular and tropical ecology, systematics, limnology, entomology, and mammology.

### REFEREED JOURNAL ARTICLES

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1. 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. 2017. Climate variability predicts thermal limits of aquatic insects across elevation and latitude. *Functional Ecology*, 31(11) 2118–2127
  - Featured on cover of *Functional Ecology*.
2. 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. 2017. Genetic diversity and gene flow decline with elevation in montane mayflies. *Heredity*, 119(2):107–116

3. 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
4. **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
  - Featured on cover of *Proceedings of the Royal Society London B: Biological Sciences*.
  - Featured in the **CSU SOURCE** online newsletter (June 15, 2016)
  - Featured on **ScienceDaily.com** (June 15, 2016)
  - Featured on **Phys.org** (June 15, 2016)
  - Undergraduate mentee coauthor.
5. **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
6. 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
7. **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
8. 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
9. **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
  - Invited paper as part of a special issue on "Molecular Approaches in Freshwater Ecology"
10. 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
11. 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
12. 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

#### **SUBMITTED JOURNAL ARTICLES**

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13. 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 Revision).

Narrow thermal tolerance and low dispersal drive tropical diversification. *Proceedings of National Academy of Sciences of the United States of America*.

- Joint first author with N.R. Polato and A.A. Shah.

14. **B.A. Gill**, P.M. Musili, S. Kurukura, A.A. Hassan, J.R. Goheen, W.J. Kress, M. Kuzmina, R. M. Pringle, T.R. Kartzinel. (In Review). Plant DNA-barcode library and community phylogeny for a semi-arid East African savanna. *Molecular Ecology Resources*.

## GRANTS AND FELLOWSHIPS

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**NSF Dissertation Improvement Grant**, Colorado State University, 2015–2017, **\$19,331**  
**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**

## AWARDS AND HONORS

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**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**

## CONFERENCE PRESENTATIONS

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- 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**, Milwaukee, 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**

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- Member** of the **Society for Freshwater Science** “Ad hoc Inclusivity Committee”, June 2017.
- 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 2013 and 2014.

## **WORKING GROUPS AND COORDINATION**

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- Invited** to “Giraffe Conservation Science Symposium” to produce a 2030 conservation framework for giraffe. **Smithsonian Conservation Biology Institute**. May 2018.
- Co-organized** a workshop on “DNA barcoding: Ecology and systematics in East African ecosystems” at the **National Museums of Kenya**. January 2018.

## REPORTS

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**Co-authored** report entitled “Preliminary Report on Forage Availability and Resource Use by Reticulated Giraffe Inside Versus Outside of the Pyramid Black Rhino Sanctuary at Ol Jogi Conservancy, Laikipia, Kenya”. July 2018.

**Co-authored** report entitled “Preliminary Report on Forage Availability and Resource Use by Reticulated Giraffe at Mugie Conservancy, Laikipia, Kenya”. August 2018.

## RESEARCH MENTORSHIP

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### Graduate Student Mentorship:

- Courtney Reed (Brown Ecology and Evolutionary Biology PhD, 2018 –).
- Edmund Basham (University of Florida Wildlife Ecology PhD, 2018 –).
- Patrick Freeman (Brown Ecology and Evolutionary Biology PhD, 2017 –).
- Bianca Brown (Brown Ecology and Evolutionary Biology PhD, 2017 –)
  - NSF Graduate Research Fellow

### Undergraduate Mentorship:

- Molly Magid (Brown Ecology and Evolutionary Biology, 2017 –)
  - Awarded Voss Environmental Fellowship
- Murphy Huebner (Colorado State University Zoology, 2016 – 2017)
- John Glover (Colorado State University Zoology, 2016)
- Amanda Burton (Colorado State University Biomedical Science, 2016)
- Cristina Salgado (Postbaccalaureate Researcher, 2015 – 2016)
- Mitchel LeRoy (Colorado State University Microbiology, 2015 – 2016)
- Grace Andrews (Colorado State University Zoology, 2015 – 2016)
  - Completed independent study.
- Sam McLean (Colorado State University Zoology, 2015)
- Carolyn Cummins (Colorado State University Zoology, 2014 – 2015)
  - Currently PhD student at University of Georgia
- Charmaine Holloway (Postbaccalaureate Researcher, 2013 – 2014)
- Kate Alexander (Colorado State University Equine Science, 2013 – 2014)
  - Currently DVM candidate at Colorado State University
- Chris Counts (Colorado State University Biomedical Science, 2013)
  - Currently MD candidate at Johns Hopkins School of Medicine
- Mengyan Li (Colorado State University Microbiology, 2012 – 2013)
  - Currently PhD candidate at Albert Einstein College of Medicine
- Dustin Gannon (Colorado State University Ecosystem Science, 2011 – 2015)
  - Completed independent study
  - Co-authored publication
  - Currently PhD student at University of Oregon

## TEACHING

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### Courses Taught:

Tropical Ecology and Evolution (BZ349, Colorado State University)                      Fall 2015

### Teaching Assistantships:

Molecular Genetics (BZ350, Colorado State University)	Summer 2016
	Spring 2017
Invertebrate Biology (BZ212, Colorado State University)	Fall 2016
Sustainable Development Studies (The School for Field Studies Costa Rica)	Fall 2009
	Summer 2010
	Spring 2010
Fifth Grade Science (James Buchanan Elementary School)	Spring 2009

### Guest Lectures:

Conservation in the Genomics Age (Biology 1515/2015, Brown University)	Fall 2018
Population Genetics Seminar (University of Montana)	Fall 2017
Molecular Ecology (BZ425/525, Colorado State University)	Fall 2014
Biology of Organisms (LIFE103, Colorado State University)	Spring 2013

## SERVICE TO PROFESSION

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### Journal Peer Reviews:

Reviewer for the following journals: *American Journal of Botany*, *Freshwater Science*, *Genome*, *Molecular Ecology*, *Neotropical Biodiversity*, *Oecologia*, and *Zootaxa*

## SERVICE TO PROGRAM/DEPARTMENT

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**Review Panelist** for Department of Ecology and Evolution's Dissertation Improvement Grants. **Brown University**. November 2017.

**Graduate Student Representative** to Graduate Degree Program in Ecology Executive Committee. **Colorado State University**. 2014–2015.

**Graduate Student Representative** to Graduate Degree Program in Ecology Committee for Curricular Review. **Colorado State University**. 2014–2015.

**Undergraduate Student Representative** to Department of Biology Bioinformatics Search Committee. **Colorado State University**. 2008–2009.

## COMMUNITY OUTREACH

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**Science Fair Judge** for Putnam Elementary School. 2016.

**Presentation Judge** for Front Range Student Ecology Symposium and Undergraduate Research and Creativity Showcase at **Colorado State University**. 2013–2016.

**Scientist** for the **National Geographic Bioblitz** at Rocky Mountain National Park. 2012.

**Environmental Educator** for stream ecology module taught through **The School for Field Studies** for Costa Rican school students and scouts. 2010.

**Coordinator** for English lessons at **The School for Field Studies** in Costa Rica. 2010.

**“Leaf Pack Network” Trainer** for school teachers at **Stroud Water Research Center**. 2009.

## **MEDIA TRAINING**

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**COMPASS Science Communication Training** with Liz Neely, Christopher Joyce, Daniel Glick, Virginia Gewin, and Sarah Simpson (September 2014)

## **FOREIGN LANGUAGES**

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**Spanish:** Near fluent.

**Swahili:** Basic communication skills.

## **PROFESSIONAL MEMBERSHIPS**

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American Genetics Association, Association for Tropical Biology and Conservation, Entomological Society of America, Guild of Rocky Mountain Ecologists and Evolutionary Biologists, Brown University Out in Science, Technology, Engineering and Mathematics, Society for Freshwater Science, and Society for the Study of Evolution

## **REFERENCES**

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Tyler Kartzinel, Assistant Professor  
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