

## ELIZABETH A. ADDIS

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### EDUCATION

#### University of Washington

Ph.D. in Zoology 2009

#### Carleton College

B.A. in Biology 2002

### EMPLOYMENT HISTORY

Assistant professor, Biology Department, Gonzaga University 2012-present

HHMI Science Teaching Post-doctoral Fellow 2010-12

(Position had a dual focus on biology education and traditional biology research)

Faculty Fellow, Biology Department, Colby College 2009-10

Massachusetts Institute of Technology, Center for Cancer Research. 2002-03

Lab technician.

### HONORS AND AWARDS

National Science Foundation FIRST IV Post-doctoral Scholar 2011-2013

HHMI Science Teaching Post-doctoral Fellowship 2010-2012

### GRANTS

Murdock Charitable Trust (\$43,000) 2014-2016

Learning and Technology Grant, ISU (\$33,400) 2011

### PUBLICATIONS (\* denotes undergraduate author)

K. Price\*, C. Kittridge\*, Z. Damby\*, S. Hayes, **E.A. Addis**, Relaxing life of the city: Allostatic load in yellow-bellied marmots along a rural-urban continuum. *In review at Conservation Physiology*.

**Addis, E.A.**, J.A. Powell-Coffman. (2018) Student and faculty views on process of science skills at a large, research-intensive university. *Journal of College Science Teaching*. 47: 72-82.

**Addis, E.A.**, E.J. Gangloff, M.G. Palacios, K.E. Carr\*, A.M. Bronikowski. (2017) Merging the “Morphology–Performance–Fitness” paradigm and life-history theory in the Eagle Lake garter snake research project. *Integrative and Comparative Biology*. 57: 423-435.

Reding, D.M., **E.A. Addis**, M.G. Palacios, T.S. Schwartz, A.M. Bronikowski. (2016) Environmental and genetic effects on insulin-like signaling and postnatal growth in garter snakes with divergent life histories. *General and Comparative Endocrinology*. 233: 88-99.

McGaugh, S.E., A.M. Bronikowski, C.H. Kuo, D.M. Reding, **E.A. Addis**, L. Flagel, F.J. Janzen, T.S. Schwartz. (2015) Rapid molecular evolution across amniotes of the IIS/TOR network (Insulin and Insulin-like Signaling/Target of Rapamycin). *Proceedings of the National Academy of Sciences*. 112: 7055-7060.

Telemeco, R.S., and **E.A. Addis**. (2014) Temperature has species-specific effects on corticosterone in alligator lizards. *General and Comparative Endocrinology*. 206: 184-192.

- Warner, D.A., **E.A. Addis**, W. Du, T. Wibbels, and F.J. Janzen (2014). Exogenous application of estradiol to eggs unexpectedly induces male development in two turtle species with temperature-dependent sex determination. *General and Comparative Endocrinology*. 206: 16-23.
- Quispe, R., C.P. Villavicencio, **E.A. Addis**, J.C. Wingfield, and R.A. Vasquez. (2014) Seasonal variations of basal cortisol and high stress response to captivity in *Octodon degus*, a mammalian model species. *General and Comparative Endocrinology*. 197: 65-72.
- Addis, E.A.**, A.D. Clark, R.A. Vasquez, and J.C. Wingfield. (2013) Seasonal modulation of testosterone during breeding in the Rufous-collared sparrow (*Zonotrichia capensis australis*) in Southern Patagonia. *Physiological and Biochemical Zoology*. 86: 782-790.
- Addis, E.A.**, K.M. Quardokus, D.C. Bassham, N.M. Boury, C.R. Coffman, J.A. Powell-Coffman. (2013) Implementing pedagogical change in introductory biology courses through faculty learning communities. *Journal of College Science Teaching*.
- Addis, E.A.**, A.D. Clark, and J.C. Wingfield. (2011) Modulation of testosterone in southern hemisphere temperate breeding sparrows (*Zonotrichia capensis*): An altitudinal comparison. *Hormones and Behavior*. 60: 195-201.
- Addis, E.A.**, J.E. Davis, B.E. Miner and J.C. Wingfield. (2011) Variation in circulating corticosterone levels is associated with range expansion in a passerine bird. *Oecologia*. 167: 369-378.
- Addis, E.A.**, D.S. Busch, A.D. Clark and J.C. Wingfield. (2010) Seasonal and social modulation of testosterone in the Costa Rican rufous-collared sparrow (*Zonotrichia capensis costaricensis*). *General and Comparative Endocrinology*. 166: 581-589.
- Busch, D.S., **E.A. Addis**, A.D. Clark and J.C. Wingfield. (2010) Modulation of the Hypothalamo-pituitary-adrenal cortex axis in Costa Rican Rufous-collared sparrows, *Zonotrichia capensis costaricensis*. *Physiological and Biochemical Zoology*. 83: 87-96.
- Wingfield, J.C., I.T. Moore, R.A. Vasquez, P. Sabat, S. Busch, A. Clark, **E.A. Addis**, F. Prado, H. Wada. (2008) Modulation of the adrenocortical responses to acute stress in northern and southern populations of *Zonotrichia*. *Ornitologia Neotropical*. 19 (Suppl.): 241-251.
- Wingfield, J.C., S.L. Meddle, I. Moore, S. Busch, D. Wacker, S. Lynn, A. Clark, R.A. Vasquez, **E.A. Addis**. (2007) Endocrine responsiveness to social challenges in northern and southern hemisphere populations of *Zonotrichia*. *Journal of Ornithology*. 148 (Suppl. 2): S435-S441.
- Andresen, J.M., J. Gayan, S.S. Cherny, D. Brocklebank, G. Alkorta-Aranburu, **E.A. Addis**, L.R. Cardon, D.E. Housman, N.S. Wexler. (2007) Replication of twelve association studies for Huntington's disease residual age of onset in large Venezuelan kindreds. *Journal of Medical Genetics*. 44: 44-50.
- Forbis, T., J. Lamore, and **E.A. Addis**. (2007) Temporal patterns in seedling establishment on pocket gopher disturbances. *Oecologia*. 138: 112-121.

## CONFERENCES

### National

Society of Integrative and Comparative Biology, January 2018, oral presentation: Country life may not be stress-free: Fecal glucocorticoids in yellow-bellied marmots along a Rural-Urban Continuum

Society of Integrative and Comparative Biology, January 2016, oral presentation: Is there physiological variation between urban and rural dwelling marmots (*Marmota*

*flaviventris*)?

Society for the Advancement of Biology Education Research, July 2014, poster: How important are process of science skills? Student and faculty views

Society of Integrative and Comparative Biology, January 2014, oral presentation: The insulin-like signaling pathway (IIS) as a regulator of life histories in Western terrestrial garter snakes

Society of Integrative and Comparative Biology, January 2013, oral presentation: Insulin-like signaling and life history trade-offs in garter snakes with divergent life histories

Society of Integrative and Comparative Biology, January 2012, oral presentation: The insulin like growth factor axis as a mediator of life history trade-offs

Society of Integrative and Comparative Biology, January 2012, poster: Scientific reasoning skills in introductory biology

Society for the Advancement of Biology Education Research, July 2011, poster: Scientific reasoning skills in introductory biology

Society of Integrative and Comparative Biology, January 2009, poster: Breeding variation of testosterone in the high latitude Rufous-collared sparrow, *Zonotrichia capensis australis*

American Ornithological Union Conference, August 2008, oral presentation: Contrasting testosterone use during the breeding life history stage of two species of the genus *Zonotrichia*

### Regional

Center for the Integration of Research, Teaching, and Learning, October 2011, poster: Helping introductory biology students learn scientific reasoning skills

### Invited talks

Gonzaga University, 2015: Dean's Forum: The Cosmopolitan Marmot?

Gonzaga University, 2012: Evolution of reproductive life-history mechanisms

Carleton College, 2012: Breeding synchrony and testosterone

Iowa State University, 2011: Reptilian mechanisms of reproductive life history trade-offs

Iowa State University, 2010: Inquiry-based learning: The right approach?

Colgate University, 2010: Investigating the role of testosterone as a mediator of reproductive trade-offs.

Colby College, 2009: The importance of social cues in reproduction: A story of testosterone.

### Invited workshops

NSF, HHMI, NIH PULSE NW Workshop, Vancouver, B.C., 2015

NSF, HHMI, NIH PULSE NW Workshop, Seattle, WA, 2014

Western Conversations, Gonzaga University, 2014

HHMI-CRE Workshop, Hope College, 2013

## **TEACHING EXPERIENCE**

Senior Colloquium (discussion, Gonzaga) 2014,16,18

Comparative Vertebrate Endocrinology (lecture and lab, Gonzaga) 2014,16,18

Seminar on high altitude physiology (Gonzaga) 2017

Energy Flow in Biological Systems (lecture, Gonzaga) 2017

Animal Behavior (lecture, Gonzaga) 2015-16

Ecology (lab, Gonzaga)	2014-15, 2017
Physiological Ecology (lecture, Gonzaga)	2014
Biodiversity and Physiology (lecture and lab; Gonzaga)	2013-17
Advanced Physiology (lecture and lab; Gonzaga)	2012-17
Seminar on behavioral endocrinology (Gonzaga)	2012-13
Animal Behavior (lecture and lab; Colby College)	2010
Biodiversity (Colby College)	2009
Comparative Vertebrate Endocrinology (Colby College)	2009

## **SERVICE**

### University

Faculty Senate	2015-2016
University Library Committee	2016-present
ATC Working Group	2017-present

### College

Committee on Teaching Assessment	2016-present
CURCI Advisory Board	2016-present
Student Research Task Force	2015-2016
Vision 2018—GU CAS strategic plan working group	2014-2015
CTA Advisory Board, Gonzaga	2014-2015
Hughes Research Advisory Committee, Gonzaga	2012-2014

### Department

Biology Department Library Liaison	2015-present
Curriculum Committee, chair	2016-present

### Community

Carleton College Alumni Interviewer	2002-present
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### Profession

Reviewer for *Nature Education*, *Journal of Chemical Education*, *The Auk*, *Journal of Field Ornithology*, *General and Comparative Endocrinology*, *Neuroscience and Neuroeconomics*, *Journal of College Science Teaching*, *Journal of Experimental Zoology Part A*, *Peer J*, *CBE-Life Sciences*, *Journal of Photobiology*, *Journal of Comparative Physiology Part B*, *Conservation Physiology*

Reviewer of NSF IOS pre-proposals, 2015

## **PROFESSIONAL MEMBERSHIPS**

Society for the Advancement of Biology Education Research  
 Society of Integrative and Comparative Biology  
 Sigma Xi