

**ELIZABETH HEPPENHEIMER**

*Curriculum Vitae*

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**Ph.D. Candidate**

Dept. of Ecology & Evolutionary Biology  
Princeton University  
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**Education**

Ph.D.	Princeton University, Ecology & Evolutionary Biology <i>Advisor: Dr. Bridgett vonHoldt</i>	Anticipated 2019
B.A.	Franklin & Marshall College, Biology <i>Magna Cum Laude, Departmental Honors in Biology</i>	2014

**Research Interests**

Population & landscape genomics, genomic consequences of hybridization, ecological epigenetics, molecular convergence, phenotype evolution, quantitative genetics in wild populations

**Technical Skills**

Laboratory

DNA Extraction & Quantification  
PCR & Gel Imaging  
NGS Library Prep (RADseq & RRBS)

Computational

Linux/Unix command-line  
Bash scripting (e.g. AWK, sed, grep)\*  
High performance computing cluster  
R

\*custom scripts available at <https://www.elizabethheppenheimer.com/bioinformatics.html>

**Funding & Awards**

Professional Development Travel Fund Award, Princeton University	2016
Summer Institute in Statistical Genetics Travel Award, University of Washington	2015
Women in Conservation Science Award, National Fish & Wildlife Foundation	2015
Graduate Student Research Award, Princeton University	2015
Phi Beta Kappa	2014
Carl & Ellen Pike Senior Biology Award, Franklin & Marshall College	2014
Michelle Ann Kayal Memorial Award in Biology, Franklin & Marshall College	2013
Isaac E. Roberts Prize in Biology, Franklin & Marshall College	2013

**Peer- Reviewed Publications (!=undergraduate student coauthor; †= equal contribution)**

Cavedon M, Goubili C, **Heppenheimer E**, vonHoldt B, Mariani S, Hebblewhite M, Hegel T, Hervieux D, Serrouya R, Steenwig R, Weckworth BV, Musiani M. (Accepted). Genomics, environment and balancing selection in behaviorally bimodal populations: the caribou case. *Molecular Ecology*. <https://doi.org/10.1111/mec.15039>

Hinton JW, **Heppenheimer E**, West KM, Caudill D, Earthman M, Kilgo JC, Mayer J, Miller KV, vonHoldt B, Chamberlain MJ. (Accepted). Geographic patterns in morphometric and genetic variation for coyote populations in North America with consideration of coyotes in the southeastern United States. *Ecology and Evolution*. <https://doi.org/10.1002/ece3.4966>

DeCandia A, Brzeski K, **Heppenheimer E**, Caro C<sup>1</sup>, Camenisch G, Wandeler P, Driscoll C, vonHoldt B. (2019). Exploring urban colonization through multiple genetic lenses: the city-fox phenomenon revisited. *Ecology and Evolution*. <https://doi.org/10.1002/ece3.4898>

**Heppenheimer, E**<sup>†</sup>, Brzeski KE<sup>†</sup>, Wooten R, Waddell W, Rutledge LY, Chamberlain MJ, Stahler DR, Hinton JW, vonHoldt BM. (2018). Rediscovery of red wolf ghost alleles in a canid population along the American Gulf Coast. *Genes*. 9(12): 618.

<https://doi.org/10.3390/genes9120618>

bioRxiv preprint: <https://doi.org/10.1101/420356>

- Featured Media: [The Associated Press](#), [Gizmodo](#), [The Wildlife Professional](#), [Princeton University](#), [The Daily Mail](#), [The Galveston County Daily News](#), and other media outlets.

**Heppenheimer E**<sup>†</sup>, Harrigan RJ<sup>†</sup>, Rutledge LY, Koepfli KP, Horwath R, DeCandia AL, Brzeski KE, Benson JF, Wheeldon T, Patterson BR, Kays R, Hohenlohe PA, vonHoldt BM. (2018). Population genomic analysis of North American eastern wolves (*Canis lycaon*) supports their conservation priority status. *Genes*. 9(12): 606. <https://doi.org/10.3390/genes9120606>

**Heppenheimer E**, Brzeski KE, Hinton JW, Patterson BR, Rutledge LY, DeCandia AD, Wheeldon T, Fain SR, Hohenlohe PA, Kays R, White BN, Chamberlain MJ, vonHoldt BM. (In Press). High genomic diversity and candidate genes under selection associated with range expansion in eastern coyote (*Canis latrans*) populations. *Ecology and Evolution*. 8(24): 12641-12655. <https://doi.org/10.1002/ece3.4688>

- Featured Media: [The New York Times](#)

**Heppenheimer E**, Cosio DS<sup>1</sup>, Brzeski KE, Caudill D, Van Why K, Chamberlain MJ, Hinton JW, vonHoldt B. (2018). Demographic history influences spatial patterns of genetic diversity in recently expanded coyote (*Canis latrans*) populations. *Heredity*. 120:183-195 [Editor's Choice]. <https://doi.org/10.1038/s41437-017-0014-5>

vonHoldt B, **Heppenheimer E**, Petrenko V, Croonquist P, Rutledge LY. (2017). Ancestry-specific methylation patterns in admixed offspring from an experimental coyote and gray wolf cross. *Journal of Heredity*. 108: 341- 348 [cover image]. <https://doi.org/10.1093/jhered/esx004>

**Additional Manuscripts (submitted, in review, or in revision)**

**Heppenheimer E**, DeCandia AL, Brzeski KE, Braz C<sup>1</sup>, Rodgers D<sup>1</sup>, Johnson K<sup>1</sup>, d’Orgeix D, vonHoldt B. Genetic convergence among sky island populations of Slevin’s bunchgrass lizards (*Sceloporus slevini*). In Revision.

vonHoldt BM, **Heppenheimer E**, Koch IJ, Brzeski KE, Quimby K, Stahler, DR, Sinsheimer JS. Heritable aggression in a wild pedigreed gray wolf population is associated with neurogenetic variation. In Revision.

**Non- Peer Reviewed Publications**

**Heppenheimer, E.** (2015). The Jumpers *In* Tortoise: A Journal of Writing Pedagogy, Issue 2: Rethinking the gap between science and the humanities. [Feature Article].

**Academic Presentations**

Evolution in Philadelphia Conference 2018  
 Poster Presentation: *High genomic diversity and candidate genes under selection associated with range expansion in eastern coyote (Canis latrans) populations*

Student’s Conference on Conservation Science- New York 2017  
 Poster Presentation: *Genetic variation in recently expanded eastern coyote (Canis latrans) populations*

The Wildlife Society Annual Meeting 2017  
 Oral Presentation: *Genetics to genomics: Insights into eastern coyote populations*

Northeastern Natural History Conference 2016  
 Oral Presentation: *Genetic survey of coyote (Canis latrans) expansion and hybridization in the eastern U.S.*

**Teaching Experience**

Teaching Transcript Program, McGraw Center for Teaching and Learning 2014-Present  
 Princeton University

**Teaching Assistantships**

EEB 409: Evolution of Adaptive Systems, Princeton University 2017  
 EEB 346: Biology of Coral Reefs, Princeton University 2017  
 EEB 309: Evolutionary Biology, Princeton University 2014, 2015  
 BIO 305: Genetics, Franklin & Marshall College 2013  
 FND 161: The Nature of Disease, Franklin & Marshall College 2013  
 BIO 110: Evolution, Ecology, and Heredity, Franklin & Marshall College 2013

**Additional Experiences**

Biology Tutor, Quantitative and Science Center, Franklin & Marshall College 2014

Curriculum Developer, Intro to Biology Lab, Franklin & Marshall College 2012  
Education Coursework, EDU 211: Foundations of Modern Education;  
EDU 241: Psychological Foundation of Teaching, Millersville University 2012

**Scientific Outreach**

Open Labs Research Café, Princeton, NJ 2018  
Oral Presentation for Local High School Students: Coyote Genomes

March for Science, Princeton, NJ 2017  
Children’s Activity: How Genes Work Together to Build a Dog

**Professional Activities**

Society Memberships:	Reviewer for:
The Wildlife Society (TWS)	<i>Conservation Genetics</i>
Society for the Study of Evolution (SSE)	<i>Evolutionary Applications</i>