

Reid S. Brennan

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Research and Professional Experience

- 2017-Present **Postdoctoral Associate**, University of Vermont
Mentor: Dr. Melissa Pespeni
- 2012-2017 **Graduate Student Researcher**, University of California, Davis
Mentor: Dr. Andrew Whitehead
- 2010-2012 **Graduate Student Researcher**, Louisiana State University
Mentor: Dr. Andrew Whitehead
- 2007 **Research Assistant**, University of Cincinnati
Mentor: Dr. Ken Greis

Education

- 2017 **Ph.D., Ecology, University of California, Davis**
Advisor: Andrew Whitehead; Committee: Nann A. Fangué, Michael R. Miller
Dissertation: The genomic and physiological basis of adaptive divergence between populations of the killifish *Fundulus heteroclitus*
Affiliate Member: Center for Population Biology
- 2009 **B.S., University of Dayton**
Biology Major, Chemistry Minor

Publications

Underlined names indicate undergraduate mentee.

- Garrett, A.D., **Brennan, R.S.**, Steinhart, A.L., Pelletier, A.M., Pespeni, M.H., Unique genomic and phenotypic responses to extreme and variable pH conditions in purple urchin larvae. *In review*.
- Brennan, R.S.**, deMayo, J.A., Dam, H.G., Finiguerra, M., Baumann, H., Pespeni, M.H., Global change adaptation limits future resilience. *In review*.
- Brennan, R.S.**, Garrett, A.D., Huber, K.E., Hargarten, H. and Pespeni, M.H., 2019. Rare genetic variation and balanced polymorphisms are important for survival in global change conditions. *Proceedings of the Royal Society B*, 286(1904), 20190943. doi: 10.1098/rspb.2019.0943
- Healy, T.M., **Brennan, R.S.**, Whitehead, A. and Schulte, P.M., 2019. Mitochondria, sex and variation in routine metabolic rate. *Molecular Ecology*. doi: 10.1111/mec.15244
- McKenzie, J.L., Chung, D.J., Healy, T.M., **Brennan, R.S.**, Bryant, H.J., Whitehead, A. and Schulte, P.M., 2019. Mitochondrial ecophysiology: assessing the evolutionary forces that shape mitochondrial variation. *Integrative and Comparative Biology*. doi: 10.1093/icb/icz124
- Brennan, R.S.**, Healy, T.M., Bryant, H.J., La, M.V., Schulte, P.M., and Whitehead, A. 2018. Integrative population and physiological genomics reveals mechanisms of adaptation in killifish. *Molecular Biology and Evolution*, 35(11), 2639-2653. doi: 10.1093/molbev/msy154

Healy, T.M., **Brennan, R.S.**, Whitehead, A. and Schulte, P.M., 2018. Tolerance traits related to climate change resilience are independent and polygenic. *Global Change Biology*, 24(11), 5348-5360. doi: 10.1111/gcb.14386

Brennan, R.S., Hwang, R., Tse, M., Fangue, N.A. and Whitehead, A., 2016. Local adaptation to osmotic environment in killifish, *Fundulus heteroclitus*, is supported by divergence in swimming performance but not by differences in excess post-exercise oxygen consumption or aerobic scope. *Comparative Biochemistry and Physiology Part A: Molecular & Integrative Physiology*, 196:11-19. doi: 10.1016/j.cbpa.2016.02.006

Brennan, R.S., Galvez, F. and Whitehead, A., 2015. Reciprocal osmotic challenges reveal mechanisms of divergence in phenotypic plasticity in the killifish *Fundulus heteroclitus*. *The Journal of Experimental Biology*. 218:1212-1222. doi: 10.1242/jeb.110445

Kozak, G.M., **Brennan, R.S.**, Berdan, E.L., Fuller, R.C. and Whitehead, A., 2014. Functional and population genomic divergence within and between two species of killifish adapted to different osmotic niches. *Evolution*. 68:63-80. doi: 10.1111/evo.12265

Carstens, B.C., **Brennan, R.S.**, Chua, V., Duffie, C.V., Harvey, M.G., Koch, R.A., McMahan, C.D., Nelson, B.J., Newman, C.E., Satler, J.D. and Seeholzer, G., 2013. Model Selection as a Tool for Phylogeographic Inference: An Example From the Willow *Salix melanopsis*. *Molecular Ecology*. 22:4014-4028. doi: 10.1111/mec.12347

Grants and Awards

2017	Michael Guyer Postdoctoral Fellowship, University of Wisconsin-Madison <i>Declined in order to accept postdoc at UVM</i>
2017	AAAS Science Policy Workshop, Washington, DC. UC Davis selected representative.
2016	National Science Foundation Doctoral Dissertation Improvement Grant (\$18,040)
2016	Henry A. Jastro Research Fellowship, UC Davis Graduate Group in Ecology (\$2,100)
2015	UC Davis Graduate Group in Ecology Fellowship (Tuition and salary, 1 quarter)
2015	Henry A. Jastro Research Fellowship, UC Davis Center for Population Biology (\$1,600)
2014	Daphne and Ted Pengelley Award in Evolutionary Biology, UC Davis Center for Population Biology (\$1,500)
2014	Henry A. Jastro Research Fellowship, UC Davis Graduate Group in Ecology (\$1,388)
2014	UC Davis Graduate Group in Ecology Fellowship (Tuition and salary, 1 quarter)
2013	Henry A. Jastro Research Fellowship, UC Davis Graduate Group in Ecology (\$1,882)
2013	George Maier Foundation Grant (\$1,000)
2010	Economic Development Assistantship, Louisiana State University (\$100,000)
2011	Louisiana State University Biology Graduate Student Association Grant (\$300)
2009	John J. Comer Ecological Undergraduate Research Award, University of Dayton

Seminars and Presentations

Invited Seminars:

2019	Smithsonian Environmental Research Center.
2019	University of Maryland, Behavior, Ecology, Evolution, and Systematics Seminar.
2019	University of Maryland, Department of Entomology.
2017	University of Vermont, Department of Biology.
2017	National Institutes of Health, Human Genome Research Institute.

Contributed

- 2019 Society for the Study of Evolution. Providence, RI.
2018 University of Vermont, Ecology, Evolution, and Environment Biology Seminar.
2017 University of Vermont, Biolunch Seminar Series.
2016 Society for the Study of Evolution, Austin, TX.
2014 American Physiological Society Comparative Approaches to Grand Challenges in Physiology. San Diego, CA.
2013 University of California Davis, Center for Population Biology Seminar Series.

Teaching Experience

- 2020 Guest Lecturer
Epigenetics analysis and interpretation, Ecological Genomics, University of Vermont
2015-2016 Teaching Assistant
Comparative Genomics BIS181, Department of Microbiology and Molecular Genetics, University of California-Davis
2013-2015 Teaching Assistant
Genetics and Society, Department of Science and Society, University of California-Davis
2015 Lead Teaching Assistant
Introductory Biology BIS2A, Department of Ecology and Evolution, University of California-Davis
2013-2014 Guest Lecturer
Conservation Genetics, Genetics and Society, Dept. of Science and Society, University of California-Davis
2012, 2014 Teaching Assistant
Introductory Biology BIS2B, Dept. of Ecology and Evolution, University of California-Davis
2013 Teaching Assistant
Introductory Biology BIS2A, Dept. of Ecology and Evolution, University of California-Davis

Professional Society Memberships

- Society for the Study of Evolution
American Physiological Society

Professional Service

- Journal Reviews: *BMC Genomics, Conservation Physiology, Evolution, Evolutionary Applications, Frontiers Marine Science, Genome Biology and Evolution, Heredity, Journal of Fish Biology, Molecular Biology and Evolution, Molecular Ecology, Molecular Ecology Resources, Physiological and Biochemical Zoology, Royal Society Open Science*
2016-Present Contributing writer, The Molecular Ecologist Blog
2014 Student Representative: Ecology Graduate Group Admission Committee
2015 Organizational Committee, UC Davis Center for Population Biology Workshop: Questions and methods in ecological genetics

Mentoring and Public Outreach

- 2012-2017 UC Davis picnic day: outreach event to build connection between the university and the surrounding community
- 2015-2016 Graduate Academic Achievement and Advocacy Program
Mentor program to support underrepresented undergraduate students interested in attending graduate school
- 2013-2014 EnvironMentors: Mentoring program for underrepresented high school students. Focused on exposing students to environmental science.

Research Mentor

- 2017 Rachael Sniderman, University of California-Davis
Genomics of adaptive introgression between species of killifish
Currently: Undergraduate at UC Davis
- 2015-2017 Angeliki Ioannidis, University of California-Davis
Genetic divergence between ecologically isolated populations of killifish
Currently: PhD student at UCLA
- 2015-2017 Man Van La, University of California-Davis
Morphological divergence following the colonization of a freshwater habitat
Currently: Masters student at UC Davis
- 2012-2014 Michelle Tse, University of California-Davis
Environmentally dependent swimming performance in populations of killifish
- 2012-2014 Ruth Hwang, University of California-Davis
Environmentally dependent swimming performance in populations of killifish
Currently: Masters student at UCLA
- 2010-2012 Walter Guillory, Louisiana State University
Reproductive isolation between locally adapted populations of killifish.
Currently: Medical student at LSU

References

Dr. Melissa Pespeni
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Dr. Patricia Schulte
Department of Zoology
University of British Columbia
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Dr. Andrew Whitehead
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