

Benjamin Paul Oswald

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Education

Ph.D. - Bioinformatics and Computational Biology, University of Idaho, Moscow ID, 2010
Dissertation: *Neopolyploid establishment and evolution*.

B.A. - Mathematics, Computer Science emphasis, Western State College, Gunnison CO, 2002
Psychology Minor, Graduated Magna Cum Laude

Publications

- Garrison, E., Treeck, M., Ehret, E., Butz, H., Garbuz, T., Oswald B. P., Settles, M., Boothroyd, J. & Arrizabalaga, G. (2012) *A forward genetic screen reveals calcium-dependent protein kinase 3 regulates egress in Toxoplasma*. PLoS Pathogens.
- Oswald, B. P. & Nuismer, S.L. (2011) *A unified model of autopolyploid establishment and evolution*. American Naturalist 178(6), 687-700.
- Oswald, B. P. & Nuismer, S.L. (2011) *Neopolyploidy and diversification in Heuchera grossulariifolia*. Evolution 65, 1667-1679.
- J. B. Yoder, E. Clancey, S. Des Roches, J. M. Eastman, L. Gentry, W. K. W. Godsoe, T. Hagey, D. Jochimsen, B. P. Oswald, J. Robertson, B. A. J. Sarver, J. J. Schenk, S.F. Spear, L. J. Harmon. (2010) *Ecological opportunity and the origin of adaptive radiations*. Journal of Evolutionary Biology 23, 1581-1596.
- Oswald, B. P. & Nuismer, S. L. (2007) *Neopolyploidy and pathogen resistance*. Proceedings of the Royal Society B: Biological Sciences 274, 2393-2397.
- Nuismer, S. L., Ridenhour, B. J. & Oswald, B. P. (2007) *Antagonistic coevolution mediated by phenotypic differences between quantitative traits*. Evolution 61, 1823-1834.

Grants, Fellowships and Awards

FIRST IV Postdoctoral Scholar (2011 - 2013) National Science Foundation

FIRST IV (Faculty Institutes for Reforming Science Teaching) is a program to reform undergraduate biology education through professional development of postdocs who design inquiry-based, learner-centered undergraduate biology courses. (Grant 0817224 DUE to Michigan State University)

Student Grant (2009) Student Grant Program, University of Idaho \$1,335

"Gene expression in *Heuchera grossulariifolia*" This competitive grant funded the development of *H. grossularifolia* primers to measure gene expression in potential rust fungus resistance genes.

Doctoral Research Fellowship (2008) College of Graduate Studies, University of Idaho \$50,000

The competitive fellowship is the university's most prestigious award offered to a graduate student, and included a living stipend, tuition waver, and travel funds for presentation of research.

Doctoral Dissertation Improvement Grant (2008) National Science Foundation \$8,980

"The role of pathogen resistance in the establishment and persistence of polyploid lineages" This grant provided funding for both field experiments and theoretical work using the model species *H. grossulariifolia*. Experiments were successfully conducted and resulted in two publications.

Student Grant (2007) Student Grant Program, University of Idaho \$1,352

"Ploidy determination in *Heuchera grossulariifolia*" This competitive grant funded preliminary results for further doctoral research.

Teaching

CRC Workshops (Sept 2015 - present) University of Idaho
Command Line Basics and HPC Cluster Computing

Instructor (Jan 2012 - May 2012) University of Notre Dame
Evolution and Society (BIOS 10119)

Lecturer (Aug 2010 - Dec 2010) University of Idaho
Advanced Evolution/Population Dynamics (BIOL 421)

EMS Instructor (Sept 2008 - Present) Idaho Dept. of Health and Welfare
EMT, Advanced EMT, and CPR Classes for the Moscow Vol. Fire Department.

Employment

CRC Director
May 2015 - present

University of Idaho
IBEST
Computational Resources Core
Moscow, ID 83844

Systems Administrator
April 2013 - May 2015

University of Idaho
IBEST
Computational Resources Core
Moscow, ID 83844

Postdoctoral Research Associate
July 2012 - April 2013
Phylogenetic models for The Adaptive Evolution Database
PI: David Liberles

University of Wyoming
Department of Molecular Biology
Laramie, WY 82071

Postdoctoral Research Associate
Jan 2011 - July 2012
Spatially explicit epidemiologic models of influenza with vaccination
PI: Benjamin Ridenhour

University of Notre Dame
Department of Biology
Notre Dame, IN 46556

Lecturer
August 2010 - December 2010
Advanced Evolution/Population Dynamics

University of Idaho
Department of Biology
Moscow, ID 83844

Researcher
July 2010 - December 2010
Bioinformatics - SNP detection and metagenomic analysis.

University of Idaho
IBEST
Moscow, ID 83844

Doctoral Fellow
August 2008 - May 2010
Evolution of polyploidy, including modeling, simulation, and emperical studies using
Heuchera grossulariifolia
PI: Scott Nuismer

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