Paul D. Blischak

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Education

In progress – Ph.D., Evolution, Ecolology, & Organismal Biology (EEOB), The Ohio State University (OSU). Graduate minor in Statistics (completed).

2012 – B.Sc., Mathematics, The Ohio State University. Minors: Statistics, Spanish.

Professional Experience

2015–current – Graduate Research Associate, Dept. of EEOB, OSU.

2014 – Teaching Associate, MBI Undergraduate Summer Program (Phylogenetics Lab), OSU.

2013–2015 – Graduate Teaching Associate, Dept. of EEOB, OSU.

2012–2013 – Graduate Student Research Fellow, Dept. of EEOB, OSU.

2011–2012 – Undergraduate Research Fellow, RUMBA Program, OSU.

Publications

4. **Blischak, P. D.**, L. S. Kubatko, and A. D. Wolfe. *In Revision*. SNP genotyping and parameter estimation in polyploids using low-coverage sequencing data.
3. Wolfe, A. D., T. Necamp, S. Fassnacht, **P. D. Blischak**, and L. S. Kubatko. 2016. Population genetics of *Penstemon albomarginatus* (Plantaginaceae), a rare Mojave Desert species of conservation concern. *Conservation Genetics* **17**: 1245–1255.
2. **Blischak, P. D.**, L. S. Kubatko, and A. D. Wolfe. 2016. Accounting for genotype uncertainty in the estimation of allele frequencies in autopolyploids. *Molecular Ecology Resources* **16**: 742–754.
1. **Blischak, P. D.**, A. J. Wenzel, and A. D. Wolfe. 2014. Gene prediction and annotation in *Penstemon* (Plantaginaceae): a workflow for marker development from extremely low-coverage genome sequencing. *Applications in Plant Sciences* **2**: 1400044.

Presentations

(*presenting author, ‡undergraduate author)

11. **Blischak, P. D.***, L. S. Kubatko, and A. D. Wolfe. June 2016. Developing models for genotype uncertainty, inbreeding, and allelic inheritance in non-model polyploids. Evolution 2016. Austin, TX. fig**share**, doi: https://dx.doi.org/10.6084/m9.figshare.3436619.v1.
10. **Blischak, P. D.*** April 2016. Hierarchical models for genotype uncertainty in autopolyploids. NHS meeting, Dept. of Human Genetics, Univ. of Chicago. Chicago, IL.
9. **Blischak, P. D.***, L. S. Kubatko, and A. D. Wolfe. July 2015. Estimating allele frequencies in non-model autopolyploids using high throughput sequencing data. Botany 2015. Edmonton, Alberta. fig**share**, doi: http://dx.doi.org/10.6084/m9.figshare.1495514.

8. Wolfe, A. D.*, B. Stone‡, N. Padmalwar‡, **P. D. Blischak**, and L. S. Kubatko. July 2015. *Hyobanche sanguinea* (Orobanchaceae): there's more than meets the eye. Botany 2015. Edmonton, Alberta.

7. Zacarias-Correa, A. G., A. J. Wenzel, **P. D. Blischak**, A. D. Wolfe*, E. P. Calix, and M.-S. Perez. July 2015. Molecular phylogeny of *Penstemon* section *Fasciculus* (Plantaginaceae) based on single copy orthologous genes (COSII). Botany 2015. Edmonton, Alberta.

6. **Blischak, P. D.*** More genomes, more problems. February 2015. Graduate Student Forum Speed-Talks, OSU.

5. **Blischak, P. D.***, A. D. Wolfe, and L. S. Kubatko. October 2014. Phylogenomics and the coalescent model: new tools for new data. EEOB Graduate Student Talks, OSU.

4. **Blischak, P. D.***, A. D. Wolfe, and L. S. Kubatko. July 2014. Inferring large phylogenies under the coalescent model using SNPs from next-generation sequence data. Botany 2014: Boise, ID. fig**share**, doi: http://dx.doi.org/10.6084/m9.figshare.1436072.

3. Wolfe, A. D.* and **P. D. Blischak**. July 2014. Patterns of diversity in *Penstemon* (Plantaginaceae). Botany 2014: Boise, ID.

2. **Blischak, P. D.***, A. J. Wenzel, M. R. Stevens, and A. D. Wolfe. August 2013. How low can you go? Gene predictions and putative annotations in four species of *Penstemon* (Plantaginaceae) from ultra low-coverage 454 sequencing. Botany 2013: New Orleans, LA.

1. Wenzel, A. J.*, **P. D. Blischak**, and A. D. Wolfe. August 2013. Molecular phylogenetic analysis of *Penstemon* (Plantaginaceae) section *Ericopsis*: evaluating relationships and taxonomic affinities. Botany 2013: New Orleans, LA.

Software

EBG: empirical Bayes genotyping of biallelic SNPs in polyploids. Available on GitHub (https://github.com/pblischak/polyploid-genotyping).

POLYFREQS: an R package for Bayesian population genomics in autopolyploids. Available on GitHub (https://github.com/pblischak/polyfreqs) and CRAN (https://cran.r-project.org/package=polyfreqs).

Grants and Awards

2016 – NSF Doctoral Dissertation Improvement Grant ($20,020.00).

2015 – ASPT Graduate Student Research Grant ($800.00).

2014 – SSB Graduate Student Research Award ($1,915.00).

2014 – NSF Graduate Research Fellowship, Honorable Mention.

2014 – NIMBioS Visiting Graduate Student Fellowship (advised by Dr. Brian O'Meara).

2013 – Beatley Award for Field Work in Plant Systematics, OSU Herbarium ($1,050.00).

2012 – Distinguished University Fellowship, OSU Graduate School.

2011 – Undergraduate Research Fellowship, RUMBA Program, OSU.

Service

2016–current – Graduate Student Representative: Admissions Committee.

2015 – Graduate Student Representative: Advisory Committee; Graduate Student Advisor: Undergraduate Evolution and Ecology Club.

2014 – Judge: OSU Denman Undergraduate Research Forum.

2014 – Graduate Student Representative: Diversity Committee.

2013 – Volunteer: OSU Museum of Biological Diversity Open House.

2013 – Graduate Student Representative: Seminar Committee.

Journal reviews – *Applications in Plant Sciences, Molecular Ecology, Molecular Ecology Resources, Molecular Phylogenetics and Evolution, PeerJ*.

Undergraduate Mentoring

2015–current: Coleen Thompson and Emiko Waight; **2014**: Naharika Padmalwar and Benjamin Stone; **2013** Evan Carfagno and Benjamin Stone; **2012** Erin Harvey and Shannon Kilkenny.

Membership

2013–current – American Penstemon Society (APS), American Society of Plant Taxonomists (ASPT), Botanical Society of America (BSA), Society of Systematic Biologists (SSB), Society for the Study of Evolution (SSE).

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