

Wade Roberts

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Research interests	Ecological and evolutionary genomics of species diversity; genetics of flower development; evolutionary-developmental biology; phylogenetics and comparative biology; species boundaries and hybridization; biogeography and conservation
Appointments	Postdoctoral Fellow , University of Arkansas Jun 2018 – present PI: Dr. Andrew Alverson, Department of Biological Sciences
Education	Washington State University , Pullman, WA Aug 2012 – May 2018 Ph.D., Molecular Plant Sciences Dissertation title: Evolutionary genomics of flower diversification in the magic flowers (<i>Achimenes</i> , Gesneriaceae) Major supervisor: Dr. Eric H. Roalson Committee: Drs. Amit Dhingra, Joanna L. Kelley, and Andrew McCubbin Whitworth University , Spokane, WA Sep 2007 – May 2012 B.S., Biology B.A., Art Advisors: Dr. Lee Anne Chaney and Ms. Katie Creyts
Skills + expertise	Research – comparative genomics and transcriptomics, phylogenetic inference, biological network analysis Computational – R/Python/Perl/Git, genomic data processing, data visualization, parallel computing, multivariate statistics, Bayesian statistics Management – experimental design, grant application preparation, interdisciplinary collaboration Laboratory – molecular biology, RNA-seq and DNA-seq library preparation, qPCR, micropropagation and tissue culture, genetic transformation, microscopy, biochemistry Field – plant identification (Pacific Northwest and Palouse region), fieldwork in floristics, herbarium processing and databasing, greenhouse plant growth and maintenance Other – K-12 STEM outreach, student education and mentoring, public speaking, scientific writing
Publications	3. Roberts, W.R. , and E.H. Roalson. 2018. Phylogenomic analyses reveal extensive gene flow within the magic flowers (<i>Achimenes</i> , Gesneriaceae). <i>American Journal of Botany</i> in Press. 2. Roberts, W.R. , and E.H. Roalson. 2017. Comparative transcriptome analyses of flower development in four species of <i>Achimenes</i> (Gesneriaceae). <i>BMC Genomics</i> . 18(1): 240. DOI: 10.1186/s12864-017-3623-8 1. Roalson, E.H., and W.R. Roberts . 2016. Distinct processes drive diversification in different clades of Gesneriaceae. <i>Systematic Biology</i> . 65(4): 662-684. *Cover Image* DOI: 10.1093/sysbio/syw012
Manuscripts in prep	Roberts, W.R. , N. Zhang, and E.H. Roalson. Molecular evolution of anthocyanin and carotenoid pigmentation genes during transitions in floral pollination syndromes. (In prep) Roberts, W.R. , and E.H. Roalson. Co-expression network connectivity is an important determinant of selective constraint during flower diversification in <i>Achimenes</i> (Gesneriaceae). (In prep) Roberts W.R. , Crabb J.L., Dhingra A., Roalson E.H. Micropropagation and <i>Agrobacterium</i> -mediated genetic transformation of <i>Achimenes erecta</i> (Gesneriaceae). (In prep)
Oral presentations	Genomic evidence for gene flow between species of magic flowers (<i>Achimenes</i>, Gesneriaceae) Roberts, W.R., and E.H. Roalson Evolution, Portland, OR Jun 2017 (contributed)

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Oral cont'd

Evolutionary genomics in the magic flowers (*Achimenes*, Gesneriaceae)
Roberts, W.R.
Molecular Plant Sciences Seminar, Pullman, WA | Apr 2017 (departmental seminar)

Dissecting floral diversification in the magic flowers (*Achimenes*, Gesneriaceae)
Roberts, W.R., and E.H. Roalson
SBS Graduate Student Symposium, Pullman, WA | Mar 2017 (invited)

Floral diversification in Gesneriaceae: macroevolutionary and genomics approaches
Roberts, W.R.
Molecular Plant Sciences Seminar, Pullman, WA | Oct 2016 (departmental seminar)

Using comparative transcriptomics to understand flower diversification: an example from *Achimenes* (Gesneriaceae)
Roberts, W.R., and E.H. Roalson
SBS Graduate Student Symposium, Pullman, WA | Mar 2016 (invited)

Understanding flower diversification in *Achimenes* (Gesneriaceae) using a comparative transcriptomics approach
Roberts, W.R., and E.H. Roalson
Botany, Edmonton, AB | Jul 2015 (contributed)

Poster presentations

Phylogenomic analyses reveal extensive gene flow within the magic flowers (*Achimenes*, Gesneriaceae)
SBS Graduate Student Symposium, Pullman, WA | Mar 2018
WSU Academic Showcase, Pullman, WA | Mar 2018
WSU Plant Sciences Retreat, Pullman, WA | Mar 2018

Exploring phylogenetic relationships in *Achimenes* (Gesneriaceae) using transcriptome sequencing
SBS Graduate Student Symposium, Pullman, WA | Mar 2017
WSU Plant Sciences Retreat, Pullman, WA | Mar 2017

Using comparative transcriptomics to understand flower diversification: an example from *Achimenes* (Gesneriaceae)
Inland Northwest Genomics Research Symposium, Moscow, ID | May 2016 *Poster award*
WSU Academic Showcase, Pullman, WA | Mar 2016
WSU Plant Sciences Retreat, Pullman, WA | Mar 2016

Understanding flower diversification in *Achimenes* (Gesneriaceae) using a comparative transcriptomics approach
Pan-Am Evo Devo inaugural meeting, Berkeley, CA | Aug 2015

Geographic processes drive diversification in different clades of Gesneriaceae
SBS Graduate Student Symposium, Pullman, WA | Feb 2015
WSU Plant Sciences Retreat, Pullman, WA | Mar 2015

Cloning and evolutionary analyses of *SEPALLATA3* genes from dogwoods – deciphering the genetic links to bract petaloidy
NCSU Undergraduate Summer Research Symposium, Raleigh, NC | July 2011

Grants + awards

NSF Doctoral Dissertation Improvement Grant, Co-PI, (\$19,323) | 2016-2017
Global Plant Sciences Initiative Fellowship, Washington State University (\$10,000) | 2012-2017
Elvin McDonald Research Endowment Fund, The Gesneriad Society, (\$1,750) | 2016
Best Poster Presentation, Inland Northwest Genomics Symposium | 2016
Travel Award, American Society of Plant Taxonomists, (\$300) | 2015
NSF REU Fellow in Synthetic Biology, North Carolina State University (\$5,500) | 2011
Trustee Scholarship, Whitworth University (\$18,000 x4) | 2007-2012

Teaching

Graduate Teaching Assistant, Washington State University | Aug 2013 – current
Biol 332 Systematic Botany (3 semesters)
Biol 120 Introductory Botany (3 semesters)
Biol 106 Introductory Biology: Organismal Biology (5 semesters)

Guest Lecturer, Washington State University
Biol 332 Systematic Botany, "Berberidaceae, Papaveraceae, Saxifragaceae" | Mar 2018

Teaching Assistant / Supplemental Instructor, Whitworth University | Feb 2010 – May 2012

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Experience	Bio 363 Genetics Bio 153 Plant Biology (2 semesters) Bio 141 General Biology I: Organismal Biology Teaching Assistant, School of Biological Sciences, Washington State University 2013 – current Instructors: Drs. Lisa Carloye, Asaph Cousins, Hanjo Hellman, Ray Lee, Andrew McCubbin, and Sian Ritchie, Eric Roalson, School of Biological Sciences
	Research Assistant, Roalson Lab, Washington State University Aug 2012 – current PI: Dr. Eric Roalson, School of Biological Sciences
	Fieldwork + Floristics, Hudson Biological Reserve, Washington State University 2016, 2017 Supervisor: Dr. Eric Roalson, School of Biological Sciences
	Greenhouse worker, Biology Department, Whitworth University Sep 2010 – May 2012 Supervisor: Dr. Lee Anne Chaney, Biology Department
	Undergraduate Research Assistant, Whitworth University Sep – Dec 2011 PI: Dr. Finn Pond, Biology Department
	NSF Research Experience for Undergraduates, North Carolina State University May – Aug 2011 PI: Dr. Jenny Xiang, Department of Plant and Microbial Biology
Service + outreach	Faculty Representative , MPS Graduate Student Organization April 2016 – May 2018 Co-Lead Organizer , Plant Science Day Apr 2017 Co-Lead , Palouse Discovery Science Center Committee Nov 2014 – 2016 Exhibit Leader , Plant Science Day Apr 2016 Native Plant Guide , Palouse Outdoor Science Day Apr 2015 Greenhouse Tour Guide , Biology Open House Oct 2015, Oct 2014
Scientific Peer Review	<i>PhytoKeys</i> , <i>Plant Growth Regulation</i>
Training	Software Carpentry Workshop , Center for Environmental Research, Education, and Outreach Washington State University Aug 2017 Parallel Computing Workshop , Center for Institutional Research Computing Washington State University Jun 2017 Grant Writing Workshop , Graduate School Washington State University Apr 2013
Honorific names	‘Wade Riley’, M. Roberts, Tall Bearded Iris, The American Iris Society 2007
Student mentoring	Graduates Joseph Kleinkopf (Master’s student; Fall 2016 – May 2018) Nan Zhang (Sep 2017 – May 2018) Raimundo Luciano Soares Neto (visiting scholar; Jul 2017 – Oct 2017) Phoenix Conservancy Mara Huang (fieldwork; May 2017 – Aug 2017) Connor McLeod (fieldwork; May 2017 – Aug 2017) Tia Prudholm (fieldwork; May 2017 – Aug 2017) Bethany Tegt (fieldwork; May 2017 – Aug 2017) Undergraduates Julian Bennett-Ponsford (Fall 2015 – Spring 2016) Becca Saunders (Spring 2016)
Society membership	Botanical Society of America (2012 – current) The Gesneriad Society (2012 – current) American Society of Plant Taxonomists (2014 – current) Society for the Study of Evolution (2014 – current)

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References

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