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Education

Rhodes College
Bachelor of Science, Biology 1996

Texas State University
Master of Science, Biology 2000
Research topic: Ecological determinants of gall size variation.

University of Maryland, College Park
Doctor of Philosophy, Biology 2008
Research topics: Natural selection on floral traits,
Quantitative genetic analysis of floral traits,
Floral specialization and evolution of pollination syndromes.

University of Alabama at Birmingham
Section on Statistical Genetics, Department of Biostatistics
Post-doctoral Fellow, 2008-Present
Research topics: Applied work and methodology development in genetic association,
multivariate phenotypic selection, QTL mapping

Publications

Li, J, **R.J. Reynolds**, D. Pomp, D.B. Allison, N. Yi. Mapping Interacting QTL for Count Phenotypes Using Hierarchical Poisson and Binomial Models: an Application to Reproductive Traits in Mice. *Genetics Research*. *in press*

Reynolds, R.J., D. Childers, and N. Pajewski. The distribution and hypothesis testing of eigenvalues from the canonical analysis of the gamma matrix of quadratic and correlational selection gradients. *Evolution*. *doi:10.1111/j.1558-5646.2009.00874.x*

Reynolds, R.J., J. Kelley, L. Hughes, N. Yi, and S.L. Bridges. 2010. Genetic association of htSNPs across the major histocompatibility complex with rheumatoid arthritis in an African American population. *Genes and Immunity* 11:94-97.

Reynolds, R.J., M.R. Dudash, C.B. Fenster. 2010. Multi-year study of multivariate linear and nonlinear phenotypic selection on floral traits of hummingbird-pollinated *Silene virginica*. *Evolution*. 64: 358–369.

Reynolds, R.J., M.J. Westbrook, A.S. Rohde, J.M. Cridland C.B. Fenster, and M.R. Dudash. 2009. Pollinator specialization and pollination syndromes of three related North American *Silene*. *Ecology* 90:2077-2087. *Ecology* 90:2077-2087.

Reynolds, R.J. and C.B. Fenster. 2008. Point and interval estimation of pollinator importance: A study using pollination data of *Silene caroliniana*. *Oecologia* 156:325-332.

Kephart, S., **R.J. Reynolds**, M.T. Rutter, C.B. Fenster, and M.R. Dudash. 2006. Pollination and seed predation by moths on *Silene* and allied Caryophyllaceae: Evaluating a model system to study the evolution of mutualisms. *New Phytologist* 169:637-651.

Fenster, C.B., G. Cheely, M.R. Dudash, and **R.J. Reynolds**. 2006. Nectar reward and advertisement in hummingbird-pollinated *Silene virginica*, (Caryophyllaceae) *American Journal of Botany* 93: 1800-1807.

Papers in Review

Reynolds, R.J., A. Kula, C.B. Fenster, and M.Dudash. Evaluating spatial and temporal variation in the ecological determinants of the sign of the interaction between the nursery pollinator, *Hadena ectypa* (Lepidoptera: Noctuidae) and its host, *Silene stellata* (Caryophyllaceae)

Papers in Prep

Hughes, L.B., **R.J. Reynolds**, E. E. Brown, B. Thomson, D.L. Conn, B.L. Jonas et al. Most Common SNPs Associated with Rheumatoid Arthritis in Subjects of European Ancestry Confer Risk of Rheumatoid Arthritis in African-Americans.

Reynolds, R.J., A. Kula, M. Dudash and C.B. Fenster. Phenotypic selection on floral traits in nocturnal moth pollinated *Silene stellata*.

Reynolds, R.J., and C.B. Fenster. Quantitative genetic analysis of floral trait expression in the closely related hummingbird-pollinated *Silene virginica* and nocturnal moth-pollinated *S. stellata*.

Papers Presented

Reynolds, R.J., M.R.Dudash, and C.B. Fenster 2009. European Society for the study of Evolution, Turin, Italy

Reynolds, R.J. and N.M. Pajewski. 2009. Society for the Study of Evolution (SSE).

Reynolds, R.J., C.B. Fenster, and M.R. Dudash. 2008. SSE.

Reynolds, R.J., C.B. Fenster, and M.R. Dudash. 2006. Ecology Society of America.

Reynolds, R.J., C.B. Fenster, and M.R. Dudash. 2006. SSE.

Ott, J.R., M.C. Hall, L. Jones, J.N. Lund, **R.J. Reynolds**, J. Russell, S.P. Egan, and

G.T. Cryer. 2006. Southwestern Association of Naturalists Meeting.
Reynolds, R.J., C.B. Fenster, and M.R. Dudash. 2005. Scandinavian Association of
Pollination Ecology, Tjarno, Sweden.
Fenster, C.B., C. Williams, **R.J. Reynolds**, and M.R. Dudash. 2005. Scandinavian
Association of Pollination Ecology, Tjarno, Sweden.
Fenster, C.B., M.R. Dudash, and **R.J. Reynolds**. 2005. Society for the Study of
Evolution.
Hall, M.C., L. Jones, J. Lund, **R.J. Reynolds**, J. Russell, S.P. Egan, and J.R. Ott.
2002. Ecological Society of America.
Reynolds, R.J. and J. R. Ott. 2000. Southwestern Association of Naturalists
Meeting.
Reynolds, R.J. and J.R. Ott. 2000. Ecology Society of America.
Reynolds, R.J. and J.R. Ott. 1999. Entomological Society of America.
Galusky, P., J.R. Ott, **R.J. Reynolds**, and T. Boussetot. 1999. Southwestern
Association of Naturalists.
Reynolds, R.J., J.R. Ott, P. Galusky, and T. Boussetot. 1999. Southwestern
Association of Naturalists.
Reynolds, R.J. 1996. Tennessee Academy of Sciences.

Grants Funded

Quantifying mating system, outcrossing rate, and genetic variation in a small
Potomac River Gorge population of *Silene caroliniana*, awarded summer 2006,
Biodiversity Conservation Research Fund, The Nature Conservancy, \$2900.

Partitioning pollinator contributions to fitness components in a Potomac Basin
population of *Silene caroliniana* (Caryophyllaceae) awarded spring 2004, Washington
Biologists Field Club. \$2000.

Parasitoids as determinants of gall size variation for *Belonocnema treatae* on *Quercus*
fusiformis. 1998. Theodore Roosevelt Memorial Grant, \$640

Host plant and site induced variation on gall size and emergence success of the host
specific gall former *Belonocnema treatae*. 1998 Sigma Xi, \$700.

Short Courses

NSF Short Course on Statistical Genetics 21-25 July 2008
University of Alabama at Birmingham

The Analysis of Cross-Classified Categorical Data 27-28 September 2007
Short course, American Statistical Society Headquarters, Alexandria, VA.

Professional Affiliations

Ecology Society of America
Society for the Study of Evolution

Journal Refereeing

New Phytologist
Evolution
American Journal of Botany
American Midland Naturalist

Awards

Third place post-doc presentation, UAB School of Public Health Research Day, 2009

Work Experience

Parsons, Austin, TX,
Associate Scientist 2000-2002
Environmental risk assessment, statistical analysis.

Teaching Experience

University of Maryland Teaching Assistant,
Principles of Genetics 2004-2007
Eukaryotic Genetics 2004
Introduction to Ecology and Evolution 2002-2003

Texas State University Teaching Assistant,
Animal Physiology 2000
Zoology 1999-2000
Ecology 1998-1999
Anatomy and Physiology 1997-1998

Undergraduate Mentoring

University of Alabama at Birmingham
Taylor Garrett, 2009. Now undergraduate student at Washington and Lee.

Mountain Lake Biological Station (MLBS).

George Cheely, 2002. Now medical student University of Pennsylvania
Peter Stevens, 2002. Now masters student Cornell University
Jody Westbrook, 2003. Now Ph.D. student University of California, Berkeley
Jeremy Ash, 2003.
MS Miami University '2007, Now Ph.D. student at University of Florida
Sasha Rhode, 2005. Now Ph.D. student University of Pittsburgh

University of Maryland McNair Fellows in conjunction with MLBS
Chris Williams, 2005. Now Ph.D. student Georgetown University

University of Maryland

Julie Cridland Now Ph.D. student University of California, Irvine 2005-2006
Naveeda Mahmood B.S. Biology University of Maryland, College Park 2005

Software and programming experience

SAS, R, AWK, Microsoft Visual Basic, STRUCTURE, PLINK, UNIX and Windows

based operating systems