Megan V. Phifer-Rixey

http://www.eebweb.arizona.edu/nachman/people.htm

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Education

2003-2009	Ph.D.,Univeristy of Pennsylvania, Department of Biology
1997-2001	B.S. in Biology with Distinction, Magna cum laude, Duke University
	Semester Abroad: Spring 99, Organization for Tropical Studies, Costa Rica
	Semester Abroad: Winter 99, Duke University Marine Lab, Beaufort, N.C.

Appointments, Honors and Support

08/09	Postdoctoral Researcher, University of Arizona
5/09	Scholarship, Summer Institute for Statistical Genetics
5/09	Travel Grant, AGA meeting 2009
4/09	Travel Grant, Marie Curie ITN, Theory of Speciation Workshop
9/08-present	Center for Teaching and Learning (CTL) Senior Graduate Fellow
9/08-present	"Entering Mentoring" Workshop Facilitator Honoriarium
9/08-7/09	SAS Dissertation Completion Fellowship, University of Pennsylvania
9/08	Travel Grant, ISOLBE, Malacological Soceity of London
6/07-6/09	NSF Doctoral Dissertation Improvement Grant
9/07-5/08	CTL Graduate Fellow for Teaching Excellence
8/03-05/08	Teaching Assistantship, University of Pennsylvania
3/06, 6/08	GSAC Travel Grant, University of Pennsylvania
7/05, 7/06	Binns-Williams Fund for Research, University of Pennsylvania
8/98-5/01	Presidential Research Fellow, Duke University
12/00	Rhodes Scholarship Finalist
07/00	NSF REU, Nyanza Project, Lake Tanganyika
01/00	NSE Environmental Research Forum Grantee, Duke University
09/99	Undergraduate Research Grantee, Duke University
07/99	NSF REU, University of Minnesota, St Paul
07/98	Howard Hughes Fellowship for Undergraduate Research, Duke University

Selected Research Experience

Doctoral dissertation research, University of Pennsylvania, Dr. Paul Schmidt, 2003-present
Understanding how environmental variation affects the evolution of populations is a fundamental goal of evolutionary biology. My dissertation is focused on understanding the effects of environmental variation on patterns of morphological and molecular polymorphism in populations of *Littorina obtusata* across the Gulf of Maine. Using a combination of inferential and experimental approaches, we have found evidence that clines in shell color morph frequencies and MPI allelomorph frequencies are driven by gradients in thermal stress. Current efforts include characterization of neutral structure via microsatellites and investigation of shell color frequencies at smaller spatial scales.

The Nyanza Project, Tanzania, Summer 2000.

The Nyanza project is devoted to training biology, geology, and limnology students from both the U.S. and Africa. As part of this program, I researched the extent of selection pressure exerted by a freshwater crab on *Lavigeria,* a genus of snails, as well as the extent of morphological variation in the genus across several sites and depths in Lake Tanganyika. This genus of snails is of particular interest from an evolutionary perspective because they are largely endemic and are exceptionally diverse.

Meetings/Workshops

Summer Institute of Statistical Genetics, 2009
Genetics and Genomics of Environmental Change, AGA 2009, poster
Marie Curie ITN: Theory of Speciation Workshop, 2009, poster
International Symposium on Littorinid Biology and Evolution, 2008, oral presentation
Society for the Study of Evolution, 2006, 2008, oral presentation
European Society for Evolutionary Biology, poster presentation
Benthic Ecology Meeting, 2006, oral presentation
Philadelphia Shell Club, 2006, oral presentation

Teaching Experience

9/08-present	CTL Senior Graduate Fellow, School of Arts and Sciences (SAS)
9/08-present	"Entering Mentoring" Seminar Facilitator, Dept. of Biology
8/07, 8/08	CTL, SAS TA Training Graduate Coordinator
Spring 2008	Teaching Assistant, Guest Lecturer, Evolution, Dr. Paul Schmidt.
9/07-9/08	CTL Graduate Fellow
Fall 04-07	Teaching Assistant, Statistics for Biologists, Dr. Warren Ewens.
Spring 05, 07	Teaching Assistant, Advanced Statistics for Biologists, Dr. Warren Ewens and Dr. Peter Petraitis.
Fall 03, Spring 04, 06	Teaching Assistant, Intro. Bio., Dr. Greg Guild, Dr. Paul Sneigowksi, Dr. Evan Goldman, Dr. Paul Schmidt, Dr. Mark Beakey.
8/06	CTL SAS TA Training Workshop Leader.

Memberships

Society for the Study of Evolution, Sigma Xi, Phi Beta Kappa, Phi Eta Sigma, Alpha Phi Omega

Service

University Service	CTL Advisory Committee (2007-2008), CTL Hiring Committee (2008-2009)
Leadership/Mentorship	Mentored four students in the Schmidt Lab (2003-present) and two from Northeastern University Marine Science Center (2007-present). Served as mentor to students interested in pursuing careers in science, University of Pennsylvania (2007-present). Co-coordinated development seminars for graduate students and post-docs, Department of Biology, University of Pennsylvania.
Community Outreach	Worked with NSF Teaching fellow to adapt research for use in public school biology classes

Publications

Phifer-Rixey, M., Heckman, M., Trussell, G. and P.S. Schmidt. Maintenance of clinal variation for shell colour phenotype in the flat periwinkle *Littorina obtusata*. Journal of Evolutionary Biology 21(4):966-978.

Schmidt, P.S., M. Phifer-Rixey, G.M. Taylor and J. Christner. 2007. Genetic heterogeneity among intertidal habitats in the flat periwinkle, *Littorina obtusata*. Molecular Ecology 16(11): 2393-2404.

In preparation

Phifer-Rixey, M. and M. Heckman. Variation in shell color, shell patterning, and degree of body pigmentation in Gulf of Maine populations of *Littorina obtusata*. *For submission to The Journal of Molluscan Studies.*.

Phifer-Rixey, M. and P.S. Schmidt. Polymorphic microsatellite markers for the flat periwinkle, *Littorina obtusata. For submission to Molecular Ecology Notes*.

Phifer-Rixey, M. and P.S. Schmidt. Patterns of microsatellite variation across thermal gradients in *Littorina obtusata. For submission to Molecular Ecology*.

Phifer-Rixey, M. et al. The functional significance of shell color in the flat periwinkle, *Littorina obtusata. For submission to Evolutionary Ecology.*

Non-peer reviewed

Phifer, M. and C. Paczkowski.Great galls of wasps:an investigation of galls on a Rubiaceae shrub. p.166-168 *in* Deinert, E., Hensel, E., Ivey, C.,Villalobos, E., editors. Organization for Tropical Studies Undergraduate Semster Abroad Program Spring 1999.

Phifer, M. and B. Edmonds. Drip tips, epiphyll cover, and reproductive success in *Chameadorea tepejilote* and *Piper sancti-felicis*. p.274-279 *in* Deinert, E., Hensel, E., Ivey, C.,Villalobos, E., editors. Organization for Tropical Studies Undergraduate Semster Abroad Program Spring 1999.

Phifer, M., McIntyre, P.B. & Michel, E. The response of *Lavigeria nassa* shell armoring characters to crab attack. Abstracts, World Congress of Malacology 2001, Vienna, Austria, (L. Salvini-Plawen, J. Voltzow, H. Sattmann & G. Steiner, eds), Unitas Malacologica p. 275. *in absentia*