

SCOTT H. MARKWITH
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Department of Geosciences
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CURRENT POSITION:

- Assistant Professor, Department of Geosciences, Florida Atlantic University, Boca Raton Florida, August 2007 – Present.

EDUCATION:

- Ph.D., Biogeography, University of Georgia, Athens, Georgia, May 2007.
Dissertation: "Multi-scale Analysis of Gene Flow in the Emergent Aquatic Macrophyte *Hymenocallis coronaria*." Advisor: Dr. Kathleen C. Parker.
- M.S., Biogeography, University of Georgia, Athens, Georgia, December 2001.
Thesis: "Regenerative Response of a Southern Appalachian Forest to Surface Wildfire and Canopy Gap Disturbances." Advisor: Dr. Kathleen C. Parker.
- B.A., Physical Geography, University of Mary Washington, Fredericksburg, Virginia, May 1997.
Advisor: Dr. Joseph Nicholas.

PROFESSIONAL EXPERIENCE:

Academic:

Florida Atlantic University, Assistant Professor, Fall 2007 – Present.

- Environment and Society, EVR 2017, Summer 2008, Spring 2009.
- Introduction to Physical Geography, GEO 2200, Fall 2009.
- Biogeography, GEO 4300/6938, Fall 2007, 2008, 2009.
- Seminar in Geographic Methodology, GEO 6117, Fall 2008.
- Environmental Restoration, GEO 6334, Spring 2008, 2009.

University of Georgia, Teaching Assistant, Fall 2000 – Summer 2006.

- Resources and the Environment, GEOG 1125, Primary instructor, Summer 2006, Lab instructor, Fall 2000-Spring 2001, Fall 2003 Spring 2004, Summer 2005.
- Introduction to Landforms, GEOG 1113, Primary instructor, Fall 2004 – Spring 2006.
- Physical Geography, GEOG 1111, Lab instructor, Spring 2003.
- Weather and Climate, GEOG 1112, Lab instructor, Fall 2002.

PROFESSIONAL EXPERIENCE, CONTINUED:

Additional:

- Hydrography Project Manager/GIS Specialist, Information Technology Outreach Services (ITOS), University of Georgia, August 1998 – August 2002.
- Hydrographer, Dewberry & Davis, Inc., June 1997-July 1998.

PUBLICATIONS:

Refereed Journals:

- Markwith, S. H. 2009. Temporal Change and Disturbance in a Mixed Hardwood Forest in Blood Mountain Wilderness Area. *Florida Geographer*, vol. 40, p. 14-30.
- Markwith, S. H., Davenport, L. J., Shelton, J., Parker, K. C., Scanlon, M. J. 2009. Ichthyochory, the Suwannee Strait, and Population Divergence in *Hymenocallis coronaria*. *Florida Scientist*, vol. 72, no. 1, p. 28-36.
- Markwith, S. H. and Leigh, D. S. 2008. Subaqueous Hydrochory: Open-Channel Hydraulic Modeling of Non-Buoyant Seed Movement. *Freshwater Biology*, vol. 53, no. 11, p. 2274-2286.
- Parker, K. C. and Markwith, S. H. 2007. Expanding Biogeography's Horizons with Genetic Approaches. *Geography Compass*, vol. 1, no. 3, p. 246-274.
- Markwith, S. H. and Scanlon, M. J. 2007. Multi-scale Analysis of *Hymenocallis coronaria* Genetic Diversity, Genetic Structure, and Gene Movement Under the Influence of Unidirectional Stream Flow. *American Journal of Botany*, vol. 94, no. 2, p. 151-160.
- Markwith, S. H. and Parker, K. C. 2007. Conservation of *Hymenocallis coronaria* Genetic Diversity in the Presence of Disturbance and a Disjunct Distribution. *Conservation Genetics*, vol. 8, p. 949-963.
- Markwith, S. H., Stewart, D. J., and Dyer, J. L. 2006. TETRASAT: A Program for the Population Analysis of Allotetraploid Microsatellite Data. *Molecular Ecology Notes*, vol. 6, p. 586-589.
- Markwith, S. H. and Scanlon, M. J. 2006. Characterization of Six Polymorphic Microsatellite Loci Isolated From *Hymenocallis coronaria* (J. LeConte) Kunth (Amaryllidaceae). *Molecular Ecology Notes*, vol. 6, no. 1, p. 72-74.
- Markwith, S. H. and Parker, K. C. 2003. Regenerative Response of a Southern Appalachian Forest to Surface Wildfire and Canopy Gap Disturbances. *Southeastern Geographer*, vol. 43, no. 1, p. 54-75.

In Preparation:

- Markwith, S. H. and Leigh, D. S. Experimental Analysis of Subaqueous Hydrochory. *River Research Applications*.
- Kupfer, J., Meentemeyer, R., Grissino-Mayer, H., Markwith, S. H., and Griffith, J. Frontiers in Biogeography. *Physical Geography*.

PRESENTATIONS AND CONFERENCES:

Conference Presentations:

- Markwith, S. H. "Variation in Hydrochory Patterns Among Restored and Non-restored Reaches of the Kissimmee River." To be presented at the 2010 Association of American Geographers Annual Meeting, Washington D.C.
- Markwith, S. H. "Prospects for Involvement of Biogeographers in Environmental Restoration." Presented at the 2009 Southeastern Division of the Association of American Geographers Annual Meeting, Knoxville, Tennessee.
- Markwith, S. H. and Leigh, D. S. "Experimental Analysis of Subaqueous Hydrochory." Presented at the 2009 Association of American Geographers Annual Meeting, Las Vegas, Nevada.
- Markwith, S. H., Davenport, L. J., Shelton, J., Parker, K. C., Scanlon, M. J. "Ichthyochory, the Suwannee Strait, and Population Divergence in *Hymenocallis coronaria*." Presented at the 2008 Southeastern Division of the Association of American Geographers Annual Meeting, Greensboro, North Carolina.
- Markwith, S. H. and Leigh, D. S. "Subsurface Hydrochory: Application of Hydrologic Modeling for Investigating Non-Buoyant Seed Movement." Presented at the 2007 Southeastern Division of the Association of American Geographers Annual Meeting, Charleston, South Carolina.
- Markwith, S. H. and Scanlon, M. J. "Multi-scale Analysis of *Hymenocallis coronaria* Genetic Diversity, Genetic Structure, and Gene Movement Under the Influence of Unidirectional Stream Flow." Presented at the 2007 Association of American Geographer's Annual Meeting, San Francisco, California.
- Markwith, S. H. "Assessment of range-wide potential for population restoration and conservation of genetic diversity in *Hymenocallis coronaria*." Presented at the 2006 Association of American Geographer's Annual Meeting, Chicago, Illinois.
- Markwith, S. H. "Topographic Barriers to Gene Movement and Resulting Population Genetic Structure in the Rare Aquatic Macrophyte *Hymenocallis coronaria*." Presented at the 2005 Association of American Geographer's Annual Meeting, Denver, Colorado.
- Markwith, S. H. "Influences of Water Quality and Water Resource Development on the Distribution of *Hymenocallis coronaria* (LeConte) Kunth." Presented at the 2004 Annual Meeting of the Georgia Academy of Sciences, Mount Berry College, Georgia.
- Markwith, S. H. "Regenerative Response of a Southern Appalachian Forest to Surface Wildfire and Canopy Gap Disturbances." Presented at the 2002 Annual Meeting of the Southeastern Division of the Association of American Geographers, Richmond, Virginia.

Other Presentations:

- Markwith, S. H. "Restoration of South Florida's Flow: Interactions with Plant Community Processes and Patterns." Florida Atlantic University Department of Geosciences Colloquium Series, Fall 2009, Boca Raton, Florida.
- Markwith, S. H. "Hydrochory, a fundamental process structuring aquatic plant populations and communities." South Florida Water Management District, Spring 2009, West Palm Beach, FL.
- Markwith, S. H. "Effects of Migration on the Genetic Structure of *Hymenocallis coronaria*." Florida Atlantic University Department of Biology Seminar Series, Spring 2008, Davie, Florida.

PRESENTATIONS AND CONFERENCES, CONTINUED:

Other Presentations:

- Markwith, S. H. "Migration and Population Genetic Processes and Patterns in Freshwater Systems." South Florida Natural Resources Center, Everglades and Dry Tortuga National Parks, Spring 2008, Homestead, Florida.
- Markwith, S. H. "Sigma Xi's G.I.A.R. and an Analysis of Chloroplast Lineages in *Hymenocallis coronaria*." Invited presentation at the 2005 UGA Chapter of Sigma Xi Grant-In-Aid of Research Workshop.

Other Conferences and Workshops Attended:

- Climate Change and Greater Everglades Restoration, Florida Atlantic University, February 6 – 7, 2008. Sponsored by the FAU Environmental Sciences Program and US Geological Survey.

GRANTS:

Funded Grants:

- Markwith, S. H. 2009 - 2011. FAU Environmental Sciences Everglades Fellowship Initiative, funding Dean Monette at Ph.D. level, for project titled, "Hydrochory Analysis in the Greater Everglades Ridge and Slough Ecosystem: Decompartmentalization and Sheet Enhancement's Potential to Restore Ecological Connectivity and Species Composition." \$68,491.
- Markwith, S. H. 2009. Association of American Geographers Research Grant for project titled, "Hydrochory Monitoring for Decompartmentalization and Sheet Flow Enhancement in Everglades National Park." \$1000.
- Markwith, S. H. 2006. Association of American Geographers Biogeography Specialty Group Student Research Grant for project titled, "Application of Hydrologic Modeling for Investigating Hydrochory in the Aquatic Macrophyte *Hymenocallis coronaria*." \$1000.00.
- Markwith, S. H. 2005 - 2007. University of Georgia Graduate School Travel Grants for travel to AAG meetings. Total of \$900.00.
- Parker, K. C. and Markwith, S. H. 2004-2006. National Science Foundation, Geography and Regional Sciences Program, Doctoral Dissertation Research Improvement Grant for project titled, "Multi-scale Analysis of Gene Flow in the Emergent Aquatic Macrophyte *Hymenocallis coronaria*." \$11,957.00.
- Markwith, S. H. 2004. Sigma Xi Grant-In-Aid of Research for project titled, "Multi-scale Analysis of Gene Flow in the Emergent Aquatic Macrophyte *Hymenocallis coronaria*." \$793.00.
- Markwith, S. H. 2003. Georgia Museum of Natural History Joshua Laerm Academic Support Award for project titled, "Multi-scale Analysis of Gene Flow in the Emergent Aquatic Macrophyte *Hymenocallis coronaria*." \$500.00.

GRANTS, CONTINUED:

In Review:

- Comas, X. and Markwith, S. H. 2009. National Science Foundation Earth Sciences: Instrumentation and Facilities Program for project titled, "Acquisition of Transportation Vehicles for Enhancing Everglades Wetlands Research and Student Training in South Florida." \$161,406.

Unfunded Submissions:

- Markwith, S. H. and Xie, Z. 2008. AAG Research Grants for project titled, "Modeling Gene Movement in Linear Environments: Spatial Genetic Patterns of Riverine Plants." \$1,000.
- Markwith, S. H. and Xie, Z. 2008. SEDAAG Early Career Small Grant Competition for project titled, "Modeling Gene Movement in Linear Environments: Spatial Genetic Patterns of Riverine Plants." \$750.
- Markwith, S. H. and Xie, Z. 2008 and 2009. National Science Foundation Geography and Regional Sciences Program for project titled, "Modeling Gene Movement in Linear Environments: Spatial Genetic Patterns of Riverine Plants." \$302,694 and \$264,778.

PROFESSIONAL SERVICE:

- Session Organizer for Biogeography and Geomorphology Specialty Groups Paper Session at the Association of American Geographers Annual Meeting in Washington D.C., Session Title: Environmental Restoration Research, Spring 2010 .
- Environmental Sciences Program Admissions Committee, Fall-Spring 2009.
- James P. and Eloise M. Latham Scholarship in Geography Committee, Fall 2009.
- Search Committee, Geosciences Remote Sensing search, Fall 2009.
- Guest Lecturer, GEO 6920 Geosciences Colloquium, Fall 2009.
- Program Committee Member, Southeastern Division of the Association of American Geographers, 2009.
- Proposal Selection and Awarding Committee, FAU Environmental Sciences Everglades Fellowship Initiative, Spring 2009.
- Chair, Tellers Committee, Southeastern Division of the Association of American Geographers, 2009.
- Search Committee, Geosciences GIS search, Davie campus, Spring 2009.
- Application for Addition of EVR 2017 Environment and Society to FAU's General Education Core Curriculum in Foundations of Society and Human Behavior, Spring 2009.
- Discussant, Biogeography Session I, 2008 Southeastern Division of the Association of American Geographers Annual Meeting, Greensboro, North Carolina.
- IGERT Development Committee, Geosciences, Florida Atlantic University, Spring 2008.
- Science Olympiad Judge, Spring 2008.
- Development of New Graduate Course, Environmental Restoration, Accepted by Faculty Senate, Spring 2008.
- Graduate Course Name and Description Revision, Seminar in Geographic Methodology, Accepted by Faculty Senate, Spring 2008.

PROFESSIONAL SERVICE, CONTINUED:

- Development of New Graduate Course, Biogeography, Special Topics Designation, Fall 2008.
- Session Chair, Biogeography Session, 2007 Southeastern Division of the Association of American Geographers Annual Meeting, Charleston, South Carolina.
- Discussant, Biogeography Session, 2007 Southeastern Division of the Association of American Geographers Annual Meeting, Charleston, South Carolina.
- Guest Lecturer, GEO 6838 Research in the Geosciences, Fall 2007, 2008.
- Human-Environment Committee, Department of Geosciences, Florida Atlantic University, Fall 2007 – Present.
- Faculty, Environmental Sciences Program, Florida Atlantic University, Fall 2007 – Present.
- University of Georgia, Geography Student Association Faculty Representative, 2005-2006.
- Judge for 6th and 7th Annual University of Georgia Geography Department Undergraduate Conferences, 2005-2006.
- University of Georgia Geography Department Representative to the Graduate Student Association's Graduate and Professional Student Council, 2004-2005.
- University of Georgia Geography Student Association Colloquium Speaker's Committee, 2004-2005.

JOURNAL AND GRANT REFEREE:

2009:

- Freshwater Biology (2)

2008:

- National Science Foundation, Geography and Regional Science Program
- Natural Areas Journal
- Freshwater Biology
- Molecular Ecology Resources

2007:

- Aquatic Botany
- Journal of Biogeography

HONORS AND AWARDS:

- Biogeography Specialty Group Best PhD Paper Competition Winner, Association of American Geographers Annual Conference, 2007.
- University of Georgia Graduate School Dissertation Completion Assistantship Award for the 2006-2007 academic year.
- Outstanding Graduate Teaching Assistant, University of Georgia Geography Department, 2006.
- Georgia Commissioner of Agriculture Award for Best Presentation in the Biological Sciences Division, Georgia Academy of Sciences Annual Conference, 2004.

HONORS AND AWARDS, CONTINUED:

- Southeastern Geographer Outstanding Article Award, 2003.
- Master's Research Honors Competition Winner, Southeastern Division of the Association of American Geographers, 2002.
- Cum Laude, University of Mary Washington, 1997.
- Gamma Theta Upsilon, National Geography Honor Society, University of Mary Washington, 1997.
- Phi Gamma Mu, National Social Sciences Honor Society, University of Mary Washington, 1997.
- President's List, University of Mary Washington, 1996.

PROFESSIONAL DEVELOPMENT:

- Teaching Workshop conducted by Dr. Robin Jordan, Florida Atlantic University, August 22, 2007.
- Geography Faculty Development Alliance Workshop, University of Colorado, June 3-10, 2006.
- Teaching Workshop conducted by Dr. Eric Fournier, University of Georgia, January 21, 2005.
- ESRI certified Working with ARC TIN course, March 8, 2000.
- ESRI certified Introduction to Avenue course, February 25, 1999.

PROFESSIONAL ASSOCIATIONS:

- Association of American Geographers, National and Southeastern Division.
- Botanical Society of America.
- Florida Academy of Sciences.
- Sigma Xi.

ADVISING:

Ph.D.:

- Dean Monette, Fall 2009 – Present
- John Zahina, Fall 2009 – Present

Committee Membership:

- Ericka Helmick, M.S. Student, Department of Biology, Fall 2008 – Present

Undergraduate:

- Shaun Floyd, Fall 2008 – Spring 2009
- Todd Phillips, Fall 2008 – Spring 2009
- James Singer, Fall 2008 – Spring 2009
- Megan Sizler, Fall 2008 – Spring 2009
- Laura Thornton, Spring 2008 – Spring 2009

ADVISING, CONTINUED:

Directed Independent Study:

- Dylan Imlah, Fall 2009, Project: Everglades Hydrochcory
- Alissa Arbuckle, Fall 2009, Project: Everglades Hydrochcory
- Justin Dee, Spring 2009, Project: Kissimmee River Hydrochcory