

**DR. SCOTT H. MARKWITH, PROFESSOR**

Department of Geosciences

Florida Atlantic University

777 Glades Rd.

Boca Raton, FL 33431

Phone: (561)297-2102

E-Mail: smarkwit@fau.edu

---

**PROFESSIONAL EXPERIENCE:**

- Professor, Department of Geosciences, Florida Atlantic University, Boca Raton, Florida, August 2020 – Present.
- Associate Professor, Department of Geosciences, Florida Atlantic University, Boca Raton, Florida, August 2013 – July 2020.
- Assistant Professor, Department of Geosciences, Florida Atlantic University, Boca Raton, Florida, August 2007 – July 2013.

**EDUCATION:**

- Ph.D., Geography, Specialization Biogeography, University of Georgia, May 2007.
- M.S., Geography, Specialization Biogeography, University of Georgia, December 2001.
- B.A., Geography, Concentration Physical Geography, University of Mary Washington, May 1997.

**INSTRUCTIONAL EXPERIENCE:**

**Professor, Associate and Assistant Professor, Florida Atlantic University, Fall 2007 – Present:**

- Environment and Society, EVR 2017, Spring 09, 10, 21 (Honors), Summer 08, 10, 11, 13, Fall 16, 18, 19, 20, 23 (Honors).
- Introduction to Physical Geography, GEO 2200, Fall 09 – 13, Summer 14 – 23.
- Quantitative Methods, GEO 4022, Spring 22, 23.
- Biogeography, GEO 4300/5305, Fall 07 – 09, 21 – 23, Spring 11 – 14, 17 – 20.
- Seminar in Geographic Methodology, GEO 6117, Fall 08, Spring 10.
- Advanced Topics in Biogeography Seminar, GEO 6938, Fall 16 – 17.
- Environmental Restoration, EVR 6334, Spring 08, 09, 17, 22, Fall 10 – 14, 19.
- Restoration Implementation and Management, EVR 6358, Spring 13 – 15, 18, 21, 23.

**Teaching Assistant, University of Georgia, Fall 2000 – Summer 2006:**

- Resources and the Environment, GEOG 1125, Instructor, 06, Lab instructor, 00 – 05.
- Introduction to Landforms, GEOG 1113, Instructor, Fall 04 – Spring 06.
- Physical Geography, GEOG 1111, Lab instructor, Spring 03.
- Weather and Climate, GEOG 1112, Lab instructor, Fall 02.

## PUBLICATIONS AND REPORTS:

### Refereed Journals:

- Paudel, A. and Markwith, S. H. In Press. Wildfire, shrub patch expansion, and landscape heterogeneity at multiple spatial scales in northern Sierra Nevada conifer forests. *Journal of Vegetation Science*.
- Smith, M., Chagaris, D., Paperno, R., and Markwith, S. H. In Press. Tropical Estuarine Ecosystem Change Under the Interacting Influences of Future Climate and Ecosystem Restoration. *Global Change Biology*.
- Smith, M., Paperno, R., Flaherty-Walia, K., and Markwith, S. H. 2023. Species Distributions in a Changing Estuary: Predictions under Future Climate Change, Sea-Level Rise, and Watershed Restoration. *Estuaries and Coasts*, <http://doi.org/10.1007/s12237-023-01219-5>.
- Parajuli, R., and Markwith, S. H. 2023. Quantity is foremost but quality matters: a global meta-analysis of correlations of dead wood volume and biodiversity in forest ecosystems. *Biological Conservation* vol. 283, 110100, <http://doi.org/10.1016/j.biocon.2023.110100>.
- Paudel, A., Merriam, K., Coppoletta, M., and Markwith, S. H. 2022. Persistent composition legacy and rapid structural change following successive fires in Sierra Nevada mixed conifer forests. *Forest Ecology and Management* vol. 509, 120079, <http://doi.org/10.1016/j.foreco.2022.120079>.
- Leskova, O., Frakes, R. A., and Markwith, S. H. 2022. Severing Habitat Connectivity of Endangered Species for the Transition to Renewable Energy: Utility-Scale Solar Energy Facilities in Florida Panther Dispersal Corridors. *Journal of Applied Ecology* vol. 59, no. 3, p. 822-834, <http://dx.doi.org/10.1111/1365-2664.14098>.
- Markwith, S. H. and Paudel, A. 2022. Beyond pre-Columbian fire: the impact of firewood collection on forest fuel loads. *Canadian Journal of Forest Research* vol. 52, no. 3, p. 365-371 <https://doi.org/10.1139/cjfr-2021-0207>.
- Steel, Z. L., Foster, D., Coppoletta, M., Lyderson, J. M., Stephens, S. L., Paudel, A., Markwith, S. H., and Collins, B. M. 2021. Ecological resilience and vegetation transition in the face of multiple large wildfires. *Journal of Ecology* vol. 109, p. 3340-3355.
- Greller, R., Mazzoil, M., Titcomb, E., Nelson, B., Paperno, R., and Markwith, S. H. 2021. Environmental drivers of habitat use by common bottlenose dolphins (*Tursiops truncatus*) in the Indian River Lagoon. *Marine Mammal Science* vol. 37, p. 512-532.
- Smith, M., Chagaris, D., Paperno, R., and Markwith, S. H. 2020. Ecosystem Structure and Resilience of the Florida Bay Estuary: An Original Ecosystem Model with Implications for Everglades Restoration. *Marine and Freshwater Research* vol. 72, p. 563-583.
- Paudel, A., Markwith, S. H., Konchar, K., Shrestha, M., and Ghimire, S. K. 2020. Anthropogenic fire, vegetation structure, and ethnobotany in an alpine shrubland of Nepal's Himalaya. *International Journal of Wildland Fire* vol. 29, p. 201-214, <https://doi.org/10.1071/WR19098>.
- Markwith, S. H., Evans, A., da Cunha, V. P., and de Souza, J. C. 2020. Scale, rank, and model selection in evaluations of land cover's influence on wildlife-vehicle collisions. *Wildlife Research* vol. 47, p. 44-54, <https://doi.org/10.1071/WR19108>.
- de Souza, J. C., Ramires, G. G., de Rezende, M. P. G., Gonçalves, V. T., de Souza, C. F., Popak, A., and Markwith, S. H. 2019. Richness and composition variation of bird species within the fragmented landscape of the Pantanal's Aquidauana region. *Ornitología Neotropical* vol. 30, p. 141-149

## PUBLICATIONS AND REPORTS, CONTINUED:

### Refereed Journals:

- Popak, A. and Markwith, S. H. 2019. Economic valuation of bee pollination services for passion fruit cultivation using the avoided cost method. *Journal of Economic Entomology* vol. 112, p. 2049-2054, <https://doi.org/10.1093/jee/toz169>.
- de Souza, J. C., da Sliva, R. M., Gonçalves, M., Jardim, R., and Markwith, S. H. 2018. Habitat use, ranching, and human-wildlife conflict in within a fragmented landscape in the Pantanal, Brazil. *Biological Conservation* vol. 217, p. 349-357.
- Merriam, K., Markwith, S. H., and Coppoletta, M. 2018. Excluding Livestock Alters Species Composition in Sierra Nevada Fens. *Applied Vegetation Science* vol. 21, no. 1, p. 3-11.
- Monette, D., Ewe, S., Dinkins, J. M., and Markwith, S. H. 2017. Interactions of Exotic and Native *Pomacea* with Wetland Vegetation Structure in the Greater Everglades, Florida, USA. *Fundamental and Applied Limnology* vol. 189, no. 4, p. 291-299.
- Monette, D., Markwith, S. H., and Ewe, S. 2017. Interspecies Competition and Growth Response of *Pomacea maculata* and *Pomacea paludosa*. *Florida Scientist* vol. 80, no. 1, p. 1-10.
- Monette, D., Markwith, S. H., and Ewe, S. 2016. Effects of the Consumption Behavior of *Pomacea paludosa* and *Pomacea maculata* on *Vallisneria americana*. *Southeastern Naturalist* vol. 15, no. 4, p. 689-696.
- de Souza, J. C., da Cunha, V. P., and Markwith, S. H. 2015. Spatiotemporal Variation in Human-Wildlife Conflicts Along Highway BR262 in the Brazilian Pantanal. *Wetlands Ecology and Management* vol. 23, no. 2, p. 227-239.
- Markwith, S. H., Mezza, G., Kennard, S., and Bousquin, S. 2014. Intra-Floodplain Seed Dispersal Limitation and Wetland Community Restoration. *Ecological Restoration* vol. 32, no. 3, p. 249-259.
- Markwith, S. H. 2013. Stream Restoration and Hydrochory: Seed Dispersal Variation in Restored and Degraded Reaches of the Kissimmee River, Florida. *Papers in Applied Geography* vol. 36, p. 27-36.
- Monette, D. and Markwith, S. H. 2012. Hydrochory in the Florida Everglades: Temporal and Spatial Variation in Seed Dispersal Phenology, Hydrology, and Restoration of Wetland Structure. *Ecological Restoration*, vol. 30, no. 3, p. 180-191.
- Markwith, S. H. and Leigh, D. S. 2012. Comparison of Estimated and Experimental Subaqueous Seed Transport. *Ecohydrology*, vol. 5, p. 346-350.
- Markwith, S. H. 2011. Biogeography and Environmental Restoration: An Opportunity in Applied Research. *Geography Compass*, vol. 8, p. 531-543.
- 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.

## PUBLICATIONS AND REPORTS, CONTINUED:

### Refereed Journals:

- 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 Resources*, 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 Resources*, 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 Review:

- Paudel, A., Yin-Hsuen, C., Brodylo, D., and Markwith, S. H. Predicting Landscape Heterogeneity of Vegetation Cover due to Climate Change Influences on High-Severity Fire in the Northern Sierra Nevada and Southern Cascade Regions of California. *Landscape Ecology*.

### In Progress:

- de Souza, J. C., de Souza, C. F., Ataide, K. R. da P., Markwith, S. H., Jardim, R. J. D., and da Silva, E. R. Sustainable productivity and conservation of wild animals on farms in the Pantanal and environs, Brazil. *COMFauna*.

### Book Chapters:

- de Souza, J. C., Paiva, L. M., Arruda, R. M. de S., Barros, W. M., Bassinello, P. Z., de Oliveira, G. F., de Souza, C. F., de Rezende, M. P. G., and Markwith, S. H. 2022. Animal production and conservation in the Pantanal plain: a sustainability outlook. In: *Imperiled: The Encyclopedia of Conservation*. Eds. DellaSala, D. A. and Goldstein, M. I. <https://doi.org/10.1016/B978-0-12-821139-7.00223-3>. ISBN 9780128211397. Elsevier, p. 392-399.

### Book Reviews:

- Markwith, S. H. 2013. Swamplife: people, gators, and mangroves entangled in the Everglades. *Southeastern Geographer*, vol. 53, no. 2, p. 233-235.

## **PUBLICATIONS AND REPORTS, CONTINUED:**

### **Technical Reports:**

- Markwith, S. H. 2015. Final Report: Central Lake Worth Lagoon Fisheries Monitoring Program. Submitted to the Florida Fish and Wildlife Conservation Commission in partial fulfillment of SOW Central Lake Worth Lagoon Fisheries Monitoring Program, MEHRMA 14/15.
- Markwith, S. H., Cooper, H., Kameronosky, A., Kunwar, R., Thibaut, C., Mulcan, M., So, Y. 2014. Pre-restoration Assessment of fish and invertebrate communities at the Grassy Flats restoration area, Lake Worth Lagoon, Florida. Submitted to the Department of Environmental Resources Management, Palm Beach County, FL.
- Markwith, S. H., Campbell, A., Coyle, J., Edwards, A., and Wilson, J. 2013. Pre-restoration Assessment on Selected Ecological Parameters at Lake Wyman and Rutherford Park. Submitted to the Department of Environmental Resources Management, Palm Beach Co, FL.
- Markwith, S. H. 2013. Final Report: Seed Dispersal in the Kissimmee River Floodplain (Year 2 of 2). Submitted to the South Florida Water Management District, PO 4500053356.
- Markwith, S. H. 2011. Final Report: Analysis of Kissimmee River Floodplain Seed Dispersal for Vegetation Community Restoration. Submitted to the South Florida Water Management District, PO 4500053356.
- Markwith, S. H. and Monette, D. 2011. Final Report: Hydrochory in the Florida Everglades: Floating Seed Pool Variation and Restoration of the Ridge and Slough Ecosystem. Submitted to the South Florida Natural Resources Center, Everglades National Park in fulfillment of the FAU Environmental Sciences Everglades Fellowship Initiative.

## **PRESENTATIONS, CONFERENCES, AND MEDIA:**

### **Conference Presentations:**

- Parajuli, R. and Markwith, S. H. Quantity is foremost but quality matters: a global meta-analysis of correlations of dead wood volume and biodiversity in forest ecosystems. Presented at the 2023 Florida Society of Geographers Annual Meeting, St. Augustine, FL.
- Parajuli, R. and Markwith, S. H. Consistently positive correlations between the amount of dead wood and biodiversity in the forest ecosystem across biogeographic regions. Presented at the 2023 American Association of Geographers Annual Meeting, Denver, CO.
- Markwith, S. H. and Paudel, A. Pre-Columbian Fuel Harvesting Lifeways in the Sierra Nevada, California, USA. Presented at the 2022 Association for Fire Ecology, Fire Ecology Across Boundaries: Connecting Science and Management Conference, Florence, Italy.
- Paudel, A., Yin-Hsuen, C., Brodylo, D., and Markwith, S. H. Predicting Landscape Heterogeneity of Vegetation Cover due to Climate Change Influences on High-Severity Fire in the Northern Sierra Nevada and Southern Cascade Regions of California. Presented at the 2022 Association of Pacific Coast Geographers Annual Meeting.
- Paudel, A., Yin-Hsuen, C., Brodylo, D., and Markwith, S. H. Predicting Landscape Heterogeneity of Vegetation Cover due to Climate Change Influences on High-Severity Fire in the Northern Sierra Nevada and Southern Cascade Regions of California. To be presented at the 2022 Guild of Rocky Mountain Ecologists and Evolutionary Biologists Annual Meeting at the University of Colorado Mountain Research Station.

## PRESENTATIONS, CONFERENCES, AND MEDIA, CONTINUED:

### Conference Presentations:

- Paudel, A. and Markwith, S. H. Vegetation heterogeneity due to multiple wildfires in northern Sierra Nevada forests. Presented at the 2022 American Association of Geographers Annual Meeting.
- Markwith, S. H. and Paudel, A. Native American fuelwood collection in the Sierra Nevada, a model for modern fuels management. Presented at the 2022 American Association of Geographers Annual Meeting.
- Paudel, A., Yin-Hsuen, C., Brodylo, D., and Markwith, S. H. Predicting landscape heterogeneity due to high severity fire in the mixed conifer forest of northern Sierra Nevada, California. Presented at the 2022 Florida Society of Geographers Annual Meeting.
- Smith, M., Chagaris, D., Paperno, R., and Markwith, S. H. The Florida Bay ecosystem under a future climate and restoration plan. 152nd Annual American Fisheries Society Conference, Spokane, Washington, August 21-25, 2022.
- Paudel, A. Coppoletta, M., Merriam, K., and Markwith, S. H. Persistent composition legacy and rapid structural change following successive fires in Sierra Nevada mixed conifer forests. Presented at the 2021 Association for Fire Ecology 9th International Fire Ecology and Management Congress.
- Paudel, A. and Markwith, S. H. Landscape heterogeneity due to multiple mixed-severity fires following prolonged fire suppression in northern Sierra Nevada conifer forests. Presented at the 2021 Association of Pacific Coast Geographers Annual Meeting.
- Markwith, S. H. and Paudel, A. Beyond pre-Columbian burning: the impact of firewood collection on forest fuel loads. Presented at the 2021 Association of Pacific Coast Geographers Annual Meeting.
- Paudel, A. and Markwith, S. H. Shifting pattern of landscape heterogeneity due to mixed-severity fire after prolonged fire suppression. Presented at the 2021 Florida Society of Geographers Annual Meeting.
- Paudel, A. Coppoletta, M., Merriam, K., and Markwith, S. H. Structural change in vegetation following fire in Sierra Nevada mixed conifer forests. Presented at the 2021 Florida Women in Mathematics Day.
- Smith, M., Chagaris, D., Paperno, R., and Markwith, S. H. Ecosystem Structure and Resilience of the Florida Bay Estuary: An Original Ecosystem Model with Implications for Everglades Restoration. Presented at the 2021 Greater Everglades Ecosystem Restoration conference.
- Paudel, A. and Markwith, S. H. Role of mixed-severity fire in the shifting pattern of landscape heterogeneity after prolonged fire suppression. Presented at the 2021 American Association of Geographers Annual Meeting.
- Markwith, S. H. The case of the missing fuels or beyond pre-European fire: complex cultural impacts on forest fuel loads. Presented at the 2020 Florida Society of Geographers Annual Meeting in Gainesville, FL.
- Paudel, A. and Markwith, S. H. Mixed conifer density and regeneration variation in a mixed-severity fire landscape of the northern Sierra Nevada Range, California. Presented at the 2020 Florida Society of Geographers Annual Meeting in Gainesville, FL.

## PRESENTATIONS, CONFERENCES, AND MEDIA, CONTINUED:

### Conference Presentations:

- Markwith, S. H., Paudel, A., Coppoletta, M., Merriam, K., and Collins, B. Successive large mixed-severity wildfires and vegetation and fuel dynamics in the Sierra Nevada, CA. Presented in the Fire-Driven Vegetation Change session at the 2019 American Association of Geographers Annual Meeting in Washington, D.C.
- Markwith, S. H., Paudel, A., Coppoletta, M., Merriam, K., and Collins, B. Analysis of vegetation change due to repeated large mixed-severity wildfires in the Sierra Nevada, CA. Presented at the 2019 Florida Society of Geographers Annual Meeting in Orlando, FL.
- Paudel, A., Markwith, S. H., Coppoletta, M., Merriam, K., and Collins, B. Fuel and vegetation response to frequent fire at different spatio-temporal scales in the dry conifer forests, northern Sierra Nevada range, CA. Presented at the 2019 Florida Society of Geographers Annual Meeting in Orlando, FL.
- Markwith, S. H., Paudel, A., Coppoletta, M., Merriam, K., and Collins, B. The effects of successive large mixed-severity wildfires on vegetation and fuels in the Sierra Nevada, CA. Presented at the 2018 Association of Pacific Coast Geographers Annual Meeting, Reno, Nevada.
- de Souza, J. C., Oliveira, G. F., Sliva, T. A., de Souza, C. F., Rezende, M. P. G., Barros, V., and Markwith, S. H. Riqueza de mastofauna e predação de animais domésticos em uma fazenda no Pantanal - Brazil. Presented at the XIII Congresso Internacional de Manejo de Fauna Silvestre en al Amazonía y Latinoamérica, May 7-11, 2018 in Ciudad del Este, Paraguay.
- Greller, R., Paperno, R., and Markwith, S. H. Habitat use by bottlenose dolphins (*Tursiops truncatus*) in the Indian River Lagoon. Presented at the 2018 Association of American Geographers Annual Meeting in New Orleans, Louisiana.
- Markwith, S. H., Evans, A., and de Souza, J. C. Scale, Land Cover, and Wildlife-Vehicle Collisions in the World's Largest Wetland. Presented at the 2018 Florida Society of Geographers Annual Meeting, February 2018 in Melbourne, Florida.
- de Souza, J. C., Oliveira, G. F., Sliva, T. A., de Souza, C. F., Rezende, M. P. G., Barros, V., and Markwith, S. H. "Predação de animais domésticos por *Panthera onca* (Onça pintada) na região do Pantanal." Presented at the XXXII Congresso Brasileiro de Zoologia, February 25 to March 2, 2018 in Foz do Iguaçu, Brazil.
- de Souza, J. C., da Sliva, R. M., Gonçalves, M. P. R., Jardim, R., de Souza, C. F., and Markwith, S. H. "Wild animals and livestock productions: in a sustainable production system." Presented at the International Conference on Ecology and Ecosystems, September 2017 in Toronto, Canada.
- de Souza, J. C., Barros, W., da Sliva de Arruda, R. M., Gonçalves, M. P. R., Oliveira, G., de Souza, C. F., and Markwith, S. H. "Cattle Jaguar (*Panthera onca*) attack distribution in Miranda, Pantanal-Brazil." Presented at the International Conference on Ecology and Ecosystems, September 2017 in Toronto, Canada.
- de Souza, J. C., Ramires, G. G., Gonçalves, M. P. R., Gonçalves, V. T., de Souza, C. F., and Markwith, S. H. "Pantanal Bird Species and Their Distribution in the Americas." Presented at the International Conference on Ecology and Ecosystems, September 2017 in Toronto, Canada.
- Markwith, S. H., de Souza, J. C., da Sliva, R. M., Gonçalves, M. P. R., and Jardim, R. "Ranching, trophic structure, and human-wildlife conflict in the Pantanal." Presented at the Florida Chapter of the Wildlife Society's 2017 Spring Conference, April 2017 in Orlando, Florida.

## PRESENTATIONS, CONFERENCES, AND MEDIA, CONTINUED:

### Conference Presentations:

- Markwith, S. H., de Souza, J. C., da Sliva, R. M., Rezende, M., and Jardim, R. "Wildlife Richness and Abundance Variation with Ranch Land Management Patterns in the Pantanal Region of Brazil." Presented at the 2016 Southeastern Division of the Association of American Geographers Annual Meeting in Columbia, South Carolina.
- Merriam, K., and Coppoletta, M., and Markwith, S. H. "On the Fens: Can Excluding Livestock Restore Degraded Fen Wetland Ecosystems?" Presented at the 2016 Northern California Botanists Symposium at Chico State University, Chico, California.
- de Souza, J. C., Moreira da Sliva, R., Jardim, R., and Markwith, S. H. "Sustainable Livestock Production System in the Pantanal Region – Mato Grosso do Sul, Brazil." Presented at the 2015 Canadian Society of Animal Science Annual Meeting in Ottawa, Ontario, Canada.
- Monette, D. and Markwith, S. H. "Vegetation Community Relationships with *Pomacea paludosa* and *Pomacea maculata* in Lake Okeechobee, Florida, United States." Presented at the 2015 Greater Everglades Ecosystem Restoration Biennial Meeting in Coral Springs, Florida.
- Markwith, S. H., de Souza, J., and da Cunha, V. "Spatiotemporal variation in human-wildlife conflicts along highway BR-262 in the Brazilian Pantanal." Presented at the 2014 Southeastern Division of the Association of American Geographers Annual Meeting in Athens, Georgia.
- Monette, D., Markwith, S. H., and Ewe, S. "A systems approach examining *Pomacea maculata* emergent behaviors, spatial patterns and impacts on *Vallisneria americana* communities." Presented at the 2014 Southeastern Division of the Association of American Geographers Annual Meeting in Athens, Georgia.
- Monette, D., Markwith, S. H., Salter, R., Noonburg, E., and Ewe, S. "*Pomacea maculata* Spatio-temporal Grazing Impact Model on *Vallisneria Americana* in South Florida." Presented at the Florida Chapter of the Wildlife Society's 2014 Spring Conference, April 2014 in Safety Harbor, Florida.
- Monette, D., Markwith, S. H., Ewe, S., and Evans, A. "Invasion Trajectory of *Pomacea maculata* in the Greater Everglades, Florida." Presented at the 2014 Association of American Geographers Annual Meeting in the Biogeographies of Invasive and Exotic Species Session in Tampa, Florida.
- Markwith, S. H., Cooper, H., Kameronosky, A., Kunwar, R., Thibaut, C., Mulcan, M., So, Y. "The Threshold of Restoration: Pre-project Assessment of Aquatic Fauna in Lake Worth Lagoon." Presented at the 2014 Florida Society of Geographers Annual Meeting, February 2014 in Orlando, Florida.
- Monette, D., Markwith, S. H., and Ewe, S. "Resource Competition and Vegetation Community Relationships with *Pomacea paludosa* and *Pomacea maculata* in Lake Okeechobee, Florida, United States." Presented at the 2013 2<sup>nd</sup> International Congress on Biological Invasions, October 2013 in Qingdao, China.
- Markwith, S. H. "Stream Restoration and Hydrochory: Seed Dispersal Spatial Variation Among Restored and Degraded Reaches of the Kissimmee River, Florida." Presented at the 2013 Applied Geography Conference, October 2013 in Annapolis, Maryland.
- Markwith, S. H. and Fischer, E. "The Influence of Abiotic and Biotic Seed Dispersal Vectors on Vegetation Structure in the Everglades and Pantanal." Presented at the 9th INTECOL International Wetland Conference Meeting, June 2012 in Orlando, Florida.

## PRESENTATIONS, CONFERENCES, AND MEDIA, CONTINUED:

### Conference Presentations:

- Pearlstine, E., Borkhataria, R., Markwith, S. H. "Conceptual model of human and natural systems interactions in the agricultural and ranching areas in the Everglades and Pantanal." Presented at the 9th INTECOL International Wetland Conference Meeting, June 2012 in Orlando, Florida.
- Markwith, S. H. "Drivers of Ecosystem Change in Large-Scale Wetlands: Anthropogenic Impacts in the Everglades." Presented at the International Congress in Rural Sustainable Development, April 2012 in Campo Grande, Mato Grosso do Sul, Brazil.
- Monette, D. and Markwith, S. H. "Hydrochory in the Florida Everglades." Presented at the 2011 Southeastern Division of the Association of American Geographers Annual Meeting in Savannah, Georgia.
- Markwith, S. H. "Modeling Gene Movement in Linear Spatial Arrays." Presented at the 2011 Association of American Geographers Annual Meeting in the Genetics and Biogeography session, Seattle Washington.
- Monette, D. and Markwith, S. H. "Hydrochory Analysis in the Greater Everglades Ridge and Slough Ecosystem." Presented at the 2011 Association of American Geographers Annual Meeting, Seattle Washington.
- Markwith, S. H. "Variation in Hydrochory Patterns Among Restored and Non-restored Reaches of the Kissimmee River." Presented at the 2010 Association of American Geographers Annual Meeting in the Environmental Restoration Research session, 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 in the Frontiers in Biogeography session, 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 in the New Voices session, 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.

## PRESENTATIONS, CONFERENCES, AND MEDIA, CONTINUED:

### Conference Presentations:

- 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.

### Conference Posters:

- Parajuli, R. and Markwith, S. H. Quantity is foremost but quality matters: a global meta-analysis of correlations of dead wood volume and biodiversity in forest ecosystems. Presented at the 2023 Florida Atlantic University Graduate and Professional Student Association Research Day, Boca Raton, FL. Awarded PhD Poster in Physical and Mathematical Sciences.
- Paudel, A., Yin-Hsuen, C., Brodylo, D., and Markwith, S. H. Predicting landscape heterogeneity due to high severity fire in the mixed conifer forest of northern California. Presented at the 2022 Graduate and Professional Student Association, FAU.
- Paudel, A., and Markwith, S. H. Landscape heterogeneity due to mixed-severity fire after prolonged fire suppression in a Sierra Nevada mixed conifer forest. Presented at the 2021 Ecological Society of America Conference, August 2-6, 2021.
- Paudel, A., Coppoletta, M., Merriam, K., and Markwith, S. H. Vegetation dynamics in frequently burned mixed conifer forests, northern Sierra Nevada Range, CA. Presented at the 2020 Ecological Society of America Conference, August 3-6, 2020.
- Markwith, S. H., Paudel, A., Coppoletta, M., and Merriam, K. Mixed conifer regeneration after successive large mixed-severity wildfires in the Sierra Nevada, CA. Presented at the 2019 Association for Fire Ecology 8<sup>th</sup> International Fire Ecology and Management Congress, November 18-22, 2019, Tucson, Arizona.
- de Souza, J. C. and Markwith, S. H. "The importance of vultures in the elimination and location of carcasses in the field." Presented at the Wildlife Research and Conservation Conference 2019 in Berlin, Germany.
- Paudel, A., Markwith, S. H., Coppoletta, M., Merriam, K., and Collins, B. Vegetation and fuel dynamics at different spatio-temporal scales in frequently burned mixed conifer forests, northern Sierra Nevada Range, California. Presented at the 2019 American Association of Geographers Annual Meeting in Washington, D.C.
- Markwith, S. H., Evans, A., and de Souza, J. C. Scale, Land Cover, and Wildlife-Vehicle Collisions in the World's Largest Wetland. Presented at the 2018 Association of American Geographers Annual Meeting in New Orleans, Louisiana.
- Markwith, S. H., Paperno, R., McDevitt, E., Anderson, E., and Whittington, J. "Local-scale estuarine habitat restoration and nekton community response in Lake Worth Lagoon, Florida." Presented at the 2017 Southeastern Division of the Association of American Geographers Annual Meeting in Starkville, Mississippi.

## PRESENTATIONS, CONFERENCES, AND MEDIA, CONTINUED:

### Conference Posters:

- Paperno, R., Markwith, S. H., McDevitt, E., Anderson, E., and Whittington, J. "Nekton Response to Habitat Restoration: A Case Study From Lake Worth Lagoon, Florida." Presented at the 2017 Coastal and Estuarine Research Federation Biennial Conference in Providence, Rhode Island.
- Teti, M., Winn, M., Sharfstein, B., Monette, D., and Markwith, S. H. "Susceptibility of Applesnail Eggs to Submersion in Increasing Water Levels." Presented at the 2016 Florida Society of Geographers Annual Meeting in Daytona Beach, Florida.
- Markwith, S. H., Merriam, K., and Coppoletta, M. "Don't Fens Me In?: Livestock Exclusion and Fen Restoration in the Northern Sierra Nevada." Presented at the 2015 Southeastern Division of the Association of American Geographers Annual Meeting in Pensacola, Florida.
- Markwith, S. H., Merriam, K., and Coppoletta, M. "On the Fens: Monitoring the Effects of Livestock Use in Northern Sierra Nevada Fens." Presented at the 2015 Tahoe Science Conference in Reno, Nevada.
- Romais, D., Markwith, S. H., and Porter, S. "Red Imported Fire Ants in the Dry Prairies of Central Florida: An Analysis of Habitat Suitability." Presented at the 2015 and 2016 FAU Graduate and Professional Student Association Research Days in Boca Raton, Florida.
- Edwards, A. and Markwith, S. H. "Habitat Suitability for Bartram's Scrub Hairstreak and Implications for Management." To be presented at the 2015 Greater Everglades Ecosystem Restoration Biennial Meeting in Coral Springs, Florida.
- Romais, D. and Markwith, S. H. "Fire Ants and the Endangered Florida Grasshopper Sparrow in the Dry Prairies of Central Florida." Presented at the Imported Fire Ant and Invasive Pest Ant Conference, May 2014 in Palm Springs, California.
- Cantaloube, M., Markwith, S. H., Sharfstein, B., and Monette, D. "A Method for Estimating Egg Numbers in Egg Clutches of the Exotic Apple Snail *Pomacea maculata* Without Affecting Clutch Viability." Presented at the FAU STEM Undergraduate Research Symposium, April 2014 in Boca Raton, Florida.
- Olivarria, A., Markwith, S. H., and Monette, D. "Determining Consumption Behavior of *Pomacea maculata* on *Vallisneria americana*." Presented at the FAU STEM Undergraduate Research Symposium, April 2014 in Boca Raton, Florida.
- de Souza, J. C., da Curnha, V. P., and Markwith, S. H. "Impacts of Highway BR 262 on Wild Fauna Between Anastácio and the Paraguay River Bridge, Brazil." Presented at the Florida Chapter of the Wildlife Society's 2013 Spring Conference, April 2013 in Melbourne, Florida.
- de Souza, J. C., Ramires, G. G., de Rezende, M. P. G., Terra, V. G., Baldwin, J., and Markwith, S. H. "Avian Richness Along Two Transects Near Aquadauana, Brazil: Common Species to the Pantanal and Everglades." Presented at the Florida Chapter of the Wildlife Society's 2013 Spring Conference, April 2013 in Melbourne, Florida.

### Conference Panels:

- Conducting Interdisciplinary Research in Biogeography: Practicalities and Pitfalls, Panel Participant. 2014 Association of American Geographers Annual Meeting, Tampa, Florida.

## PRESENTATIONS, CONFERENCES, AND MEDIA, CONTINUED:

### Invited Presentations:

- Markwith, S. H. "The past and future are behind us: the unobservable and forest and fuels management in the Sierras." Presented April 14, 2023 for Department of Geosciences colloquium series, Florida Atlantic University, Boca Raton, Florida.
- Markwith, S. H. "The past and future are behind us: the unobservable and forest and fuels management in the Sierras." Presented January 25, 2023 for Department of Forest and Rangeland Stewardship seminar series, Colorado State University, Fort Collins, Colorado.
- Schneider, J., Markwith, S. H., Whittington, J., McDevitt, E., Kobylski, A., and Paperno, R. A "History of Fisheries Monitoring Effort in Lake Worth Lagoon, Palm Beach County, Florida." Presented November 15, 2022 at the Lake Worth Lagoon Science Symposium, Riviera Beach, Florida.
- Markwith, S. H. "Everglades ecosystem and conservation projects." Presented December 17, 2020 for As diferentes faces da Biologia e suas aplicabilidades, Universidade Federal de Mato Grosso do Sul, Campo Grande, Mato Grosso do Sul, Brazil via teleconference from Boca Raton, Florida.
- Markwith, S. H., Evans, A., de Souza, J. C., and da Cunha, V. P. "Scale, rank, and model selection in evaluations of land cover's influence on wildlife-vehicle collisions." Poster. Florida Atlantic University 2019 Research Showcase, September 26-17, 2019, Boca Raton, Florida.
- Markwith, S. H., Paperno, R., McDevitt, E., Anderson, E., and Whittington, J. "Local-scale estuarine habitat restoration and nekton community response in Lake Worth Lagoon, Florida." Florida Atlantic University Charles E. Schmidt College of Science Interdepartmental Symposium, Spring 2018, Boca Raton, Florida.
- Markwith, S. H. "Human-Wildlife Conflicts: Managing Human Systems for Improved Economic and Ecological Outcomes." Florida Atlantic University Department of Geosciences Colloquium Series, Spring 2017, Boca Raton, Florida.
- Markwith, S. H. "FAU and FWC Fisheries Monitoring in Lake Worth Lagoon." Lake Worth Lagoon Initiative Habitat Working Group, Spring 2015, West Palm Beach, Florida.
- Monette, D., Markwith, S. H., Ewe, S., Noonburg, E., Berry, L., Salter, R., and Dinkins, M. "Resource Use, Grazing, Competition and Population Impact Model of the Island Apple Snail (*Pomacea maculata*)." South Florida Water Management District, Spring 2014, West Palm Beach, Florida.
- Monette, D., Markwith, S. H., Ewe, S., and Dinkins, M. "Pomacea maculata Spatial Patterns and Vegetation Community Relationship with *Pomacea paludosa* in Lake Okechobee, FL, U.S." Presented at the Snail Kite Coordinating Committee Meeting Fall 2013, Vero Beach, Florida.
- Markwith, S. H. "The Hydrology and Hydraulics of Seed Dispersal in Freshwater Systems: Conservation and Restoration Perspectives." Presented at the University of Florida Institute for Food and Agricultural Services Tropical Research and Education Center Symposium Series 2011, Homestead, Florida.
- Markwith, S. H. "Stretch Goals and Backcasting: Goal Setting and Planning to Maximize Everglades-Pantanal Initiative Research Success." Presented at the Everglades-Pantanal Initiative Workshop 2011, Florida Atlantic University, Davie, Florida.

## PRESENTATIONS, CONFERENCES, AND MEDIA, CONTINUED:

### Invited Presentations:

- Markwith, S. H. "FAU and UF-IFAS Institutional Scientific Goals and Collaborative Interests." Presented at the Everglades-Pantanal Initiative Workshop 2011, Florida Atlantic University, Davie, Florida.
- Markwith, S. H. "Large-Scale Wetland Restoration: The Everglades." Presented at the January 24, 2011 1<sup>st</sup> International Forum for Environmental Issues for the Encontro Regional de Estudantes de Engenharia Ambiental - EREEAMB, Marabá, Pará, Brazil via teleconference from Boca Raton, Florida.
- Markwith, S. H. "Pantanal and Everglades International Research and Education Collaboration Initiative." Florida Atlantic University Department of Geosciences Colloquium Series, Spring 2011, Boca Raton, Florida.
- Markwith, S. H. "Pesquisa Sobre Zonas Húmidas de Larga-escala: Sustentabilidade e Conservação." Universidade Federal de Mato Grosso do Sul, December 10, 2010, Aquidauana, Mato Grosso do Sul, Brazil.
- 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.
- 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:

- Florida Society of Geographers Annual Meeting, St. Augustine, Florida, February 11-13, 2022.
- 2018 LANDIS Conference and Training, Madison, Wisconsin, June 27 – 29, 2018.
- International Council for the Exploration of the Sea Annual Science Conference, ICES ASC 2017, Ft. Lauderdale, Florida, September 18 – 21, 2017.
- Invasive Species Workshop, GEER 2015, Greater Everglades Ecosystem Restoration, Coral Springs, Florida, April 20, 2015.
- Recommendations for Everglades Restoration under a Future Climate Scenario, Florida Atlantic University, April 28 & 29, 2014. Sponsored by the USGS, FAU-CES, and Florida Sea Grant.
- Lake Worth Lagoon Initiative Symposium, Palm Beach Atlantic University, May 15, 2013. Sponsored by the Palm Beach County Department of Environmental Resources Management.
- Predicting Ecological Changes in the Florida Everglades in a Future Climate Scenario, FAU-CES, USGS, Florida Sea Grant Sponsored Technical Meeting, Florida Atlantic University Boca Raton Campus February 14 & 15, 2013.

## PRESENTATIONS, CONFERENCES, AND MEDIA, CONTINUED:

### Other Conferences and Workshops Attended:

- GEER 2010, Greater Everglades Ecosystem Restoration Policy, Planning, and Science Meeting, Naples, Florida, July 12 – 16, 2010.
- Climate Change and Greater Everglades Restoration, Florida Atlantic University, February 6 – 7, 2008. Sponsored by the FAU Environmental Sciences Program and US Geological Survey.

### Research in the Media:

- Bond, C. 2022. Solar projects threaten habitat of endangered Florida Panther. *E&E News* Apr. 18, 2022, URL: <https://subscriber.politicopro.com/article/eenews/2022/04/18/big-solar-projects-threaten-endangered-florida-panther-report-00001297>.
- Kobilinsky, D. 2022. Solar facilities impede Florida panther movement. *The Wildlife Society*, Feb. 28, 2022, URL: <https://wildlife.org/solar-facilities-impede-florida-panther-movement/>.
- Erblat, A. 2022. Are panthers losing out on land as solar power grows popular? FAU study raises concerns. *South Florida Sun Sentinel*, Jan. 26, 2022, URL: <https://www.sun-sentinel.com/news/environment/fl-ne-solar-energy-panther-population-20220126-aqj6pulzdrbjlb327kqllrcfw4-story.html>.
- Boyle, L. 2022. Solar farms found to block routes of endangered Florida panthers, scientists discover. *Independent*, Jan. 12, 2022, URL: <https://www.independent.co.uk/climate-change/news/solar-farms-florida-panthers-wildlife-b1991915.html>.
- Canfield, S. 2022. Expansion of solar power may come at expense of Florida panther. *Courthouse News Service*, Jan. 12, 2022, URL: <https://www.courthousenews.com/expansion-of-solar-power-may-come-at-expense-of-florida-panther/>.
- Hawking, C. 2022. A solar farm found to blocking the route of the endangered Florida panthers. *Florida News Times*, Jan. 12, 2022, URL: <https://floridanewstimes.com/a-solar-farm-found-to-be-blocking-the-route-of-the-endangered-florida-panthers/407888/>.
- Ionescu, A. 2022. Switching to solar energy affects endangered Florida panther. *Earth.com*, Jan. 12, 2022, URL: <https://www.earth.com/news/switching-to-solar-energy-affects-endangered-florida-panthers/>.
- Jones, H. 2022. An ecological tradeoff? Utility-scale solar energy impedes endangered Florida panthers. *News Concerns*, Jan. 13, 2022, URL: <https://newsconcerns.com/an-ecological-tradeoff-utility-scale-solar-energy-impedes-endangered-florida-panthers/>.
- Naujorks, J. 2018. 'Rodovia da Morte': seis animais morrem atropelados por dia na BR-262 que cruza o Pantanal de MS. *G1*, Nov. 20, 2018, URL: <https://g1.globo.com/ms/mato-grosso-do-sul/noticia/2018/11/20/rodovia-da-morte-seis-animais-morrem-atropelados-por-dia-na-br-262-que-cruza-o-pantanal-de-ms.ghtml>.
- Boyle, R. 2018. In Brazil, animals cross a road of no return. *New York Times*, Nov. 12, 2018, URL: <https://www.nytimes.com/2018/11/12/science/brazil-roadkill-wildlife.html>.
- Planeta Brazil. 2013. Everglades-Pantanal Initiative, Julio de Souza. *Planeta Brazil*, Sept. 14, 2013, URL: <https://youtu.be/5JPu0UMwGyY>.

## GRANTS AND CONTRACTS:

### Funded Grants and Contracts:

- Markwith, S. H. (PI), and Smith, M. (Co-PI). 2021-2022. National Science Foundation, Geography and Spatial Sciences Program, Doctoral Dissertation Improvement Grant for project titled, "Doctoral Dissertation Research: Estuarine Ecosystem Spatio-Temporal Dynamics Due to Climate Change, Sea-Level Rise, and Watershed Restoration." \$12,450.
- Coppoletta, M., Markwith, S. H., Collins, B., Merriam, K., and Wing, B. 2016-2020. USDA Bureau of Land Management Joint Fire Science Program for project titled, "Effects of post-fire management activities on vegetation and fuels following successive fires." Total \$279,393, Sub-contract to FAU \$151,319.
- Markwith, S. H. 2015-2017. The Curtis and Edith Munson Foundation Grant Program for project titled, "Game Fish Life-History and Ecological Restoration: Outdoor Secondary Education and Teacher Training." \$20,000.
- Markwith, S. H. and Polsky, C. 2014. Coral Reef Commons, Inc. for project titled, "Bartram's Scrub Hairstreak and Pineland Croton Habitat Requirements, Landscape Management, and Survey Protocols." \$24,613.
- Markwith, S. H. 2014 - 2015. Florida Fish and Wildlife Conservation Commission, for project titled, "Monitoring of Fish Community Structure for Lake Worth Lagoon Restoration." \$21,761.
- Scarlatos, P., Meeroff, D., Markwith, S., Root, T., Hindle, T., Ivy, R, Ilyas, M., Sudhagar, N. 2013-2015. Distinction Through Discovery Curriculum Grant Program for project titled, "Expanding the Student-Centered Undergraduate Research Culture Across the Curriculum." \$20,000.
- Markwith, S. H. 2012. South Florida Water Management District, for project titled, "Seed Dispersal and Vegetation Community Restoration in the Kissimmee River Floodplain – 2<sup>nd</sup> Year of 2 Year Project." \$49,964.
- Markwith, S. H. 2010 - 2011. South Florida Water Management District, for project titled, "Analysis of Kissimmee River Floodplain Seed Dispersal for Vegetation Community Restoration." \$49,918.
- Markwith, S. H. 2010. Pre-contract Supplementary Funding from South Florida Water Management District via the Center for Environmental Studies Riverwoods Field Laboratory FAU for project titled, "Kissimmee River Seed Dispersal and Vegetation Community Restoration, Fall 2010." \$14,717.
- Markwith, S. H. 2009 - 2011. Everglades National Park and 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.

## GRANTS AND CONTRACTS, CONTINUED:

### Funded Grants and Contracts:

- 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.

### In Review:

- Markwith, S. H. Rocky Mountain Conservancy and Continental Divide Research and Learning Center, Rocky Mountain National Park Scholar-in-Residence Program, for project titled, "Ecosystem Service-Focused Adaptive Fuels Management in Wildland-Urban Interface Socio-Ecological Systems." \$5,000 stipend and housing.

## PROFESSIONAL SERVICE:

### Continuing

- Faculty, Environmental Sciences Program, Florida Atlantic University, Fall 2007 – Present.
- Faculty, Marine Science and Oceanography Graduate Program, Florida Atlantic University, Fall 2017 – Present.
- Chair, Restoration Certificate Committee, Environmental Sciences Program, Fall 2013-Present.
- Chair, Personnel Committee, Department of Geosciences, Fall 2022-Present.
- Promotion and Tenure Committee, Department of Geosciences, Fall 2013-Present.
- Sustained Performance Evaluation Committee, Department of Geosciences, Fall 2016-Present, and College of Science Representative, Fall 2022.
- Junior Faculty Mentor, Dr. Erik Johanson, Department of Geosciences, Fall 2017-Present.
- Environmental Sciences Program, Program Committee, Fall 2010-Present.

### Term

- Presenter, Planet & People: an Earth Day teach-in, Spring 2023.
- Chair, Code of Conduct Development Committee, Department of Geosciences, Spring 2023.
- Judge, Environmental Science Program Annual Retreat Graduate Student Poster Competition, Spring 2017, 2018, 2019, 2023.
- Judge, Graduate and Professional Student Association Research Day, Spring 2017, 2018, 2020, 2023.

## PROFESSIONAL SERVICE, CONTINUED:

### Term

- Online Instruction Evaluation, EVR 4112 Hazards, Climate, and People, Fall 2022.
- Development of GEO 4022 Quantitative Methods, Fall 2021-Spring 2022.
- Environmental Sciences Program, Curriculum Committee, Fall 2022-Spring 2023.
- Member, College of Science Environmental Sciences Hiring Committee, Fall 2022-Spring 2023.
- Chair, Climate Science Search Committee, Fall 2022-Spring 2023.
- Member, Personnel Committee, Department of Geosciences, Spring 2013-2022.
- College of Science Faculty Research Mentoring Program Committee, Fall 2016-Spring 2022.
- Environmental Science Program Review Process, Fall 2021-Spring 2022.
- Department of Geosciences Program Review Process, Fall 2021-Spring 2022.
- Chair, Climate Science Position Advertisement Committee, Department of Geosciences, Fall 2021.
- Doctoral Program Committee, Department of Geosciences, Fall 2021-Spring 2022.
- Junior Faculty Mentor, Dr. Tiffany Briggs, Department of Geosciences, Fall 2014- Spring 2020.
- CESCOS Capital Campaign Proposal Development, Spring 2021.
- Past-President Member of Executive Committee, Florida Society of Geographers, Spring 2021-Spring 2022.
- Chair, Climate Change Focal Area for B.S. in Geosciences Development Committee, Fall 2020.
- Chair, Environmental Science Focal Area for B.S. in Geosciences Development Committee, Fall 2020.
- Chair, Planning and Organizing Committee Annual Meeting, Florida Society of Geographers, Spring 2020-Spring 2021.
- President, Florida Society of Geographers, Spring 2020-Spring 2021.
- Master's Program Committee, Department of Geosciences, Fall 2018-Spring 2020.
- Oversight Committee for BS in Environmental Science, Spring 2020.
- Chair, Strategic Planning Committee, Department of Geosciences, Fall 2019-Spring 2020.
- Search Committee, Marine and Environmental Geology, Department of Geosciences, Fall 2019-Spring 2020.
- Design of Electronic Annual Evaluation System, Fall 2019.
- College of Science Equity Committee, Fall 2016- Spring 2019.
- Spring Commencement Regalia, College of Science, Spring 2019.
- Fall Commencement Regalia, College of Science, Fall 2018.
- Colloquium Committee, Department of Geosciences, Fall 2018.
- Restoration Certificate Requirements Revision, Environmental Sciences Program, Fall 2018.
- Search Committee, Marine and Environmental Geology, Department of Geosciences, Fall 2018-Spring 2019.
- Session Chair, Session 4.1 – Ecosystem Responses to Climate Change. 2018 Association of Pacific Coast Geographers Annual Meeting, Reno, Nevada.
- College of Science Strategic Planning Committee, Spring 2017-Fall 2018.
- Graduate Admissions Committee, Department of Geosciences, Spring 2012-Summer 2018.
- Chair, Colloquium Committee, Department of Geosciences, Spring 2017-Fall 2017.
- Invited Guest Instructor, Pine Jog Environmental Center Fellowship Program, Summer 2017.
- Development of New Course, GEO 6938 Advanced Topics in Biogeography Seminar, Fall 2016.
- Lead on FAU's Everglades-Pantanal Research Initiative, Summer 2010 - August 2015.

## PROFESSIONAL SERVICE, CONTINUED:

### Term

- Graduate Curriculum Committee, Department of Geosciences, Spring 2015 – August 2015.
- Chair, Bachelor of Science Degree Development Committee, Environmental Science Program, Spring 2014 - August 2015.
- Assistant Chair for Graduate and Research Initiatives, Department of Geosciences, Florida Atlantic University, Boca Raton Florida, August 2013 – August 2015.
- Director, Doctoral Program in Geosciences, Department of Geosciences, Florida Atlantic University, Boca Raton Florida, August 2013 – August 2015.
- Geosciences Colloquium Scheduling Committee, Department of Geosciences, Spring 2014-August 2015.
- College of Science Commencement Ceremony, Spring 2015.
- Human-Environment Committee, Department of Geosciences, Fall 2007 – Spring 2015.
- Judge, Environmental Science Program Annual Retreat Student Poster Competition, Spring 2015.
- Conversion of GEO 4300/5305 Biogeography to eLearning course, Spring 2015 – Spring 2016.
- Development of Brazil Study Abroad program, Fall 2014.
- Session Chair for Hazards Paper Session at the Southeastern Division of the Association of American Geographers Annual Meeting in Athens, Georgia, Fall 2014.
- Academic Program Review Committee, Environmental Science Program, Fall 2014.
- Academic Program Review Committee, Department of Geosciences, Fall 2014.
- Graduate College Recruitment Grant and Fellowship Program Application, Department of Geosciences, Fall 2014, awarded \$1,000 and 1 Presidential Fellowship.
- Acting Chair, Department of Geosciences, February and May-June 2014.
- Chair, Undergraduate Geosciences Degree Committee, Department of Geosciences, Spring 2014.
- Substitute College of Science Representative, Graduate College Administrative Affairs Committee, Fall 2013-Spring 2014.
- Curriculum Grant Program Committee, Graduate College, Spring 2014.
- Session Chair and Co-Organizer for Biogeography Specialty Group Paper Session at the Association of American Geographers Annual Meeting in Tampa, Florida, Session Title: Biogeographies of Invasive and Exotic Species, Spring 2014.
- Session Chair for Florida Environments Paper Session at the Florida Society of Geographers Annual Meeting in Orlando, Florida, Spring 2014.
- Co-Organizer, NOVA modeling software training, software developer Dr. Richard Salter, Florida Atlantic University, March -April, 2014.
- Marshall, FAU Fall Commencement Ceremony, Fall 2013.
- Co-Host/Organizer, Consortium for Ocean Leadership Distinguished Lecturer Series, Guest Speaker Dr. Jennifer Biddle, Fall 2013.
- Search Committee, Director, Center for Environmental Studies, Fall 2013-Spring 2014.
- Graduate College Recruitment Grant and Fellowship Program Application, Department of Geosciences, Fall 2013, awarded \$2,000 and 1 Presidential and 1 Provost Fellowship.
- Healthy Campus 2020 Committee Member, Charles E. Schmidt College of Science Representative, Fall 2013-Spring 2014.
- Academic Job Search Workshop for Ph.D. Candidates, Department of Geosciences, Fall 2013.
- Search Committee, Coastal Geologist, Department of Geosciences, Fall 2013-Spring 2014.

## PROFESSIONAL SERVICE, CONTINUED:

### Term

- Assessment Committee, Department of Geosciences, Fall 2013-Spring 2014.
- Conversion of GEO 2200 Introduction to Physical Geography to eLearning course, Summer 2013.
- Adviser, Cycle Club at FAU, Fall 2012-Spring 2013.
- Honors Committee, Department of Geosciences, Spring 2013.
- Chair, Strategic Planning Committee, Department of Geosciences, Fall 2012-Spring 2013.
- James P. and Eloise M. Latham Scholarship in Geography Committee, Fall 2009 and 2012.
- FAU STEM Open House, Spring 2012.
- Undergraduate Curriculum Review Committee, Department of Geosciences, Spring-Fall 2012.
- Resolutions Committee Member, 2011 Southeastern Division of the Association of American Geographers Annual Meeting in Savannah, Georgia.
- Session Chair, 2011 Southeastern Division of the Association of American Geographers Annual Meeting in Savannah, Georgia.
- Session Organizer for 9<sup>th</sup> INTECOL International Wetlands Conference in Orlando, Florida, Session Title: Catalyzing New International Collaborations in Comparative Wetlands Research: Interrelationships Among Hydrological, Biodiversity, and Land Use Features of the Pantanal (Brazil) and Everglades, Summer 2011.
- Planning and Hosting Everglades-Pantanal Initiative Workshop, June 13-16, 2011, in Cooperation with Florida International University and Everglades National Park.
- Creation of the Department of Geosciences Recent Publications display, Spring 2011.
- Organization of the Spring 2011 1<sup>st</sup> International Forum for Environmental Issues for the Encontro Regional de Estudantes de Engenharia Ambiental - EREEAMB, Marabá, Pará, Brazil, involving FAU and Universidade do Estado do Pará.
- Development of New Graduate Course to Support Core Course Offerings of the Restoration Certificate Program, Restoration Implementation and Management, EVR 6351, Fall 2010, Approved Spring 2011.
- Session Organizer and Chair for Biogeography Specialty Group Paper Session at the Association of American Geographers Annual Meeting in Seattle, Washington, Session Title: Genetics and Biogeography, Spring 2011.
- Submission of New Split-Level Graduate Course to Faculty Senate, Biogeography, GEO 5305, Fall 2010, Approved Spring 2011.
- Environmental Sciences Program, Graduate Faculty Committee, Fall 2010-Spring 2011.
- Development of Restoration Certificate Program for the Environmental Sciences Program, Spring and Fall 2010, Approved Spring 2011.
- Florida Oil Spill Academic Task Force, Spring 2010 – Summer 2010.
- Geosciences Candidacy Rules Committee, Spring 2010.
- SEDAAG Audit Committee, 2010.
- Session Organizer and Chair 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 2009-Spring 2010.
- Search Committee, Geosciences Remote Sensing search, Fall 2009.
- Guest Lecturer, GEO 6920 Geosciences Colloquium, Fall 2009.

## **PROFESSIONAL SERVICE, CONTINUED:**

### **Term**

- 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.
- 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.
- University of Georgia, Geography Student Association Faculty Representative, 2005-2006.
- Judge for 6<sup>th</sup> and 7<sup>th</sup> 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, 2004/5.

## **JOURNAL AND GRANT REFEREE:**

### **Editorial Board Membership:**

- *Frontiers in Fire Ecology*, 2022-Present.
- *Southeastern Naturalist*, 2011-Present.
- *Freshwater Biology*, 2010-Present.

### **Reviews and Manuscript Editorships:**

- 2023: *Fire* (4), *Freshwater Biology* (3), *Southeastern Naturalist* (1 ed.), *Restoration Ecology*
- 2022: *Southeastern Naturalist* (1 ed.), *FAU Research Journal*, *Freshwater Biology*, *Restoration Ecology*

## JOURNAL AND GRANT REFEREE, CONTINUED:

### Reviews and Manuscript Editorships:

- 2021: Freshwater Biology (5), Wetland Ecology and Management (2)
- 2020: Freshwater Biology (4), Southeastern Naturalist (2 ed.), Graduate Women in Science (GWIS) National Fellowship, Journal of Environmental Management
- 2019: Freshwater Biology (5), Forest Ecology and Management, Southeastern Naturalist (1 ed.)
- 2018: Freshwater Biology (8), Forest Ecology and Management, Biological Conservation, Southeastern Naturalist (4 ed.), Wetland Ecology and Management
- 2017: Freshwater Biology (2), Southeastern Naturalist (2 ed.), Wetland Ecology and Management, Ecohydrology, Freshwater Science
- 2016: Southeastern Naturalist (4 ed.), Wetland Ecology and Management (3), Freshwater Biology
- 2015: Freshwater Biology (4), Southeastern Naturalist (1 ed.), River Research and Applications
- 2014: Freshwater Biology (5), Southeastern Naturalist (3 ed.), Wetland Ecology and Management
- 2013: Southeastern Naturalist (3 ed.), Freshwater Biology (5), National Science Foundation Geography and Spatial Sciences Program
- 2012: Freshwater Biology (7), Journal of Vegetation Science, Plant Ecology, Southeastern Naturalist (2 ed.), National Science Foundation Geography and Spatial Sciences Program
- 2011: Biochemical Systematics and Ecology, Freshwater Biology (5), Southeastern Naturalist (1 ed.)
- 2010: Plant Ecology, Restoration Ecology, Freshwater Biology (5)
- 2009: Freshwater Biology (4)
- 2008: National Science Foundation Geography and Regional Science Program, Natural Areas Journal, Freshwater Biology, Molecular Ecology Resources
- 2007: Aquatic Botany, Journal of Biogeography

### ADVISING:

#### Ph.D.:

- Jennie Paul, Fall 2023 – Present
- Mike McCallister, co-advisor Matt Ajemian, Summer 2023 – Present
- Heather Smith, Fall 2021 – Present
- Rabindra Parajuli, Fall 2019 – Present, Ascension to Candidacy Spring 2022
- Asha Paudel, Summer 2017 – Graduated Spring 2022, Dissertation: Vegetation dynamics at different spatio-temporal scales in frequently burned mixed conifer forests, northern Sierra Nevada Range, California.
- Mason Smith, Spring 2017 – Graduated Spring 2022, Dissertation: Spatio-Temporal Dynamics of the Florida Bay Ecosystem in Relation to Current and Future Restored Conditions
- Danielle Romais, Fall 2012 – Ascension to Candidacy Spring 2015 – Left Program Fall 2019
- Dean Monette, Fall 2009 – Graduated Fall 2014, Dissertation: Resource Use, Competition, Grazing Behavior, and Ecosystem Invasion Impacts of *Pomacea maculata*.

## ADVISING, CONTINUED:

### Master's:

- James Lange, MS Environmental Science, Fall 2023 – Present
- Kelly Spindler, MS Environmental Science, Spring 2023 – Present
- Lucas Schaffer, MS Environmental Science, Non-thesis, Fall 2022 – Present
- Amber Graham, MS Geosciences, Spring 2020 – Present
- Brittany Aguiar, MS Geosciences, Fall 2019 – Proposal defended Spring 2021 – Switched to non-thesis track Spring 2022.
- Adam Kobylski, MS Geosciences, Fall 2019 – Graduated Spring 2022
- Olena Leskova, MS Geosciences, Summer 2018 – Graduated Spring 2020
- Rachael Greller, MS Geosciences, Spring 2017 – Graduated Spring 2019
- Alana Edwards, MS Geosciences, Fall 2012 – Graduated Spring 2018
- Anthony Planas, MS Geosciences, Fall 2014 – Graduated Fall 2017
- Stevee Norman, MS Environmental Sciences, Spring 2011 – Graduated Spring 2013
- Garren Mezza, MS Environmental Sciences, Fall 2010 – Graduated Fall 2012

### Committee Membership:

- Kathryn Swick, M.S. Student, Department of Geosciences, Fall 2021 – Thesis defended Spring 2023, Graduated Spring 2023
- Taber Friedel, Ph.D. Student, Department of Geosciences, Fall 2020 – Present, Ascension to Candidacy Fall 2021
- Daniel Alempijevic, Ph.D. Student, Integrative Biology, Spring 2020 – Graduated Spring 2023
- Nick Brown, Ph.D. Student, Department of Geosciences, Spring 2020 – Graduated Summer 2022
- Rachel Brewton, Ph.D. Student, Department of Geosciences, Spring 2020 – Dissertation defended Summer 2023, Graduation Summer 2023
- Ryan Temple, M.S. Student, Department of Geosciences, Spring 2020 – Graduated Spring 2021
- Emma Larkin-Gero, M.S. Student, Department of Biology, Spring 2019 – Graduated Fall 2020
- Gino Garlaschi, M.S. Student, Department of Geosciences, Spring 2019 – Present
- Andrew Pressley, M.S. Student, Department of Geosciences, Fall 2018 – Graduated Spring 2020
- Misako Nagata, Ph.D. Student, Christine E. Lynn College of Nursing, Spring 2018 – Graduated Spring 2020
- Victoria Uribe, M.S. Student, Department of Geosciences, Fall 2017 – Left Program Summer 2019
- Julie Cisneros, Ph.D. Student, Department of Geosciences, Fall 2016 – Left Program Spring 2019
- Jordan Byrum, M.S. Student, Environmental Sciences Program, Fall 2016 – Present, Proposal defended Fall 2016
- Katelyn Lynch, M.S. Student, Department of Biology, Spring 2014 – Present
- James Lange, M.S. Student, Environmental Sciences Program, Fall 2012 – Fall 2013, Proposal defended Spring 2013
- Carrie Boudreau, M.S. Student, Environmental Sciences Program, Spring 2010 – Present, Proposal defended Summer 2012
- Theresa Strazisar, Ph.D. Student, Integrative Biology Program, Summer 2010 – Graduated Fall 2015
- Jacob Berninger, M.S. Student, Department of Biology, Summer 2013 – Graduated Fall 2015

## **ADVISING, CONTINUED:**

### **Committee Membership:**

- Michelle Budny, M.S. Student, Department of Biology, Summer 2014 – Graduated Spring 2015
- Tina Kuhn, M.S. Student, Department of Geosciences, On Thesis Committee Fall 2009 – Summer 2011 – Graduated Non-Thesis Fall 2011
- Sarah Franklin, M.S. Student, Department of Geosciences, Summer 2010 – Graduated Spring 2011
- Ericka Helmick, M.S. Student, Department of Biology, Fall 2008 – Graduated Spring 2011

### **Directed Independent Study:**

- Mackenzie Galdames, Summer 2019, Project: Himalaya Fire Severity
- Olena Leskova, Spring 2019, Project: Energy and Wildlife Habitat
- Asha Paudel, Spring 2018, Project: Shrub-Conifer Interactions
- Amanda Olson, Spring 2018, Project: Avian Richness in the Pantanal
- Andrea Hendricks, Summer 2016, Project: Red Imported Fire Ants
- Sehrish Noorali, Summer 2016, Project: Red Imported Fire Ants
- Anthony Planas, Summer 2015, Project: LWL Acoustic Telemetry
- Chelsea Rioux, Spring 2015, Project: Bartram's Scrub Hairstreak
- Jessica Rollings, Spring 2015, Project: Grassy Flats Restoration
- Jeff Romais, Summer 2014, Project: Apple Snail Research
- Danielle Romais, Summer 2014, Project: Restoration Internship
- Jeff Romais, Spring 2014, Project: Apple Snail Research
- Michael Cantaloube, Spring 2013, Project: Apple Snail Research
- Amber Graham, Spring 2013, Project: Kissimmee River Avian Habitat Use Analysis
- Garren Mezza, Fall 2012, Project: Kissimmee River Seed Dispersal
- Max Villanueva, Fall 2012, Project: Wetland Conservation
- Michele Welch, Fall 2012, Project: Apple Snail Research
- Adriana Olavarria, Fall 2012, Project: Apple Snail Research
- Kelli Grimm, Fall 2012, Project: Apple Snail Research
- Alexandra Samuel, Summer 2012, Project: Apple Snail Research
- Garren Mezza, Spring 2012, Project: Kissimmee River Seed Dispersal
- Dean Monette, Spring 2011, Project: Apple Snail Research
- Janie Forbes, Summer 2010, Project: Population Genetic Modeling
- Dean Monette, Spring 2010, Project: Hydrochory and Isotope Research
- John Zahina, Spring 2010, Project: Salinity and Flooding Effects
- Dylan Imlah, Fall 2009, Project: Everglades Hydrochory
- Alissa Arbuckle, Fall 2009, Project: Everglades Hydrochory
- Justin Dee, Spring 2009, Project: Kissimmee River Hydrochory

### **Honor's Compact:**

- Delanie Kirwan, Spring 2020, GEO 4300 Biogeography: Manta Ray Project

## **PROFESSIONAL DEVELOPMENT:**

- LANDIS Training, Madison, WI, June 27-28, 2018.
- Wilderness First Aid Certification, Sierra Rescue, Quincy, CA, June 9, 2015.
- CPR and First Aid Certification, American Red Cross, Ft. Lauderdale, FL, February 14, 2015.
- Coastal Restoration Project Design and Evaluation training, Pam Kylstra, NOAA Coastal Services Center, held at Florida Atlantic University, April, 2014.
- NOVA modeling software training, software developer Dr. Richard Salter, Florida Atlantic University, March -April, 2014.
- CEL 1001, eLearning Designer/Facilitator Certification Course, May 17-August 2, 2013.
- Structural Equation Modeling Workshop conducted by Dr. Jim Grace, USGS, Florida Atlantic University, May 13-14, 2010.
- 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.

## **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.
- 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 ASSOCIATIONS:**

- American Association of Geographers.
- Southeastern Division of the American Association of Geographers.
- Association of Pacific Coast Geographers.
- Florida Society of Geographers.
- Association for Fire Ecology.