

Carolyn A. Weaver

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Research interests: I am interested in answering applied ecological questions concerning how disturbances (natural or anthropogenic) influence wetland community structure and ecosystem function.

Education

In progress Ph.D., Ecosystem Science
 Texas A&M University – College Station, TX
2003 B.S., Marine Biology
 Texas A&M University – Galveston, TX

Research positions

2015 Tom Slick Graduate Research Fellow, Texas A&M University, College Station, TX
2009 - present Graduate research assistant, Texas A&M University, Galveston, TX
2008 - 2009 Graduate research assistant, Texas A&M University, College Station, TX
2005 - 2008 Fisheries biologist, Mote Marine Laboratory, Sarasota, FL

Teaching positions

2015 Instructor – Sea Camp; Galveston, TX
2010 - 2011 Graduate teaching assistant – Marine Botany – Lab (writing intensive); Texas A&M University at Galveston, Galveston, TX
2010 - 2011 Graduate teaching assistant – Coastal Plant Ecology – Lab (writing intensive); Texas A&M University at Galveston, Galveston, TX

Publications

In review:

Weaver, C.A. and A.R. Armitage. Nutrient enrichment effects of *Avicennia germinans* and *Spartina alterniflora* stands: Implications for mangrove expansion. *Estuaries and Coasts*.

In preparation:

Weaver, C.A. and A.R. Armitage. Nutrient addition facilitates a temperature-driven foundation species shift within the Northern Gulf of Mexico mangrove-marsh ecotone. Target journal (planned submission): *PLOSOne* (July 2015)

Weaver, C.A. and A.R. Armitage. Nutrient enrichment influences herbaceous and woody biomass allocation differently: a coastal example. Target journal (planned submission): *Ecology* (September 2015)

Technical reports

Burns, K., J. Gannon, **C. Weaver**, E. Estevez, A. Boyes, and M. Gittler. 2007. SAV and faunal relationships with regard to salinity and seasonality. Mote Marine Laboratory Technical Report No. 1199 funded by District Agreement CP-050281.

Burns, K.M., B.D. Robbins, N. J. Brown-Peterson, D. Gregory, P.W. Simmons III, and **C.A. Weaver**. 2006. Combining a partnership among researchers, commercial, recreational, and recreational-for-hire fishers with a cooperative tagging program to elucidate the life history and habitat utilization of select reef fish and coastal pelagic species in the Florida Keys. Mote Marine

Laboratory Technical Report No. 1152 funded by NOAA under CRP Grant # NA04NMF4540208.

Burns, K.M., N.J. Brown-Peterson, R.M. Overstreet, J.G. Gannon, J.M. Sprinkel, B.D. Robbins, and C.A. Weaver. 2006. Geographic comparison of age, growth, reproduction, movement, and survival of red snapper off the state of Florida. Mote Marine Laboratory Technical Report No. 1147 funded by NOAA under MARFIN Grant # NA17FF288.

Grants (to date total received: \$61,168)

- 2015 Tom Slick Graduate Research Fellowship (\$30,437)
- 2014 Gulf Estuarine Research Society Graduate Student Travel Grant (\$200)
- 2013 Texas Institute of Oceanography – Summer Graduate Student Fellow (\$2000)
- 2013 Texas Sea Grant – Grants-In-Aid of Graduate Research (\$2000)
- 2012 Texas A&M University at Galveston Research Advisory Council Graduate Student Research Mini-Grant (\$500)
- 2010 - 2013 Erma Lee and Luke Mooney Graduate Student Travel Grant (\$2,463)
- 2008 - 2015 Texas A&M University at Galveston – Department of Marine Biology Graduate Student Research Mini-Grant (\$3500)
- 2009 Coastal and Estuarine Research Federation Graduate Student Travel Grant (\$235)
- 2008 - 2009 Texas A&M University – Department of Ecosystem Science and Management Graduate Student Travel Grant (\$1200)
- 2008 Texas A&M University – Ecology and Evolutionary Biology Graduate Student Travel Grant (\$860)
- 2008 Texas A&M University at Galveston – Galveston Graduate Student Council Graduate Student Mini-Grant (\$500)
- 2008 Texas A&M University at Galveston Research Advisory Council Graduate Research Fellowship (\$17,273)

Research projects

- 2014 - present Native mangrove invasion into northern Gulf of Mexico salt marshes: the influence of climate change. *Funded by:* Texas Sea Grant (PI: Pennings)
- 2013 - 2015 Ecosystem restoration: ecological restoration of emergent coastal marshes and aquatic habitats. *Funded by:* Texas General Land Office (PI: Armitage)
- 2012 - 2014 Mangroves invading Texas salt marshes: does it matter? *Funded by:* Texas Sea Grant (PI: Pennings)
- 2012 - 2014 The influences of soil source on the restoration of emergent coastal marshes and aquatic habitats. *Funded by:* Texas General Land Office (PI: Armitage)
- 2008 - 2010 Impacts of increased freshwater flow and nutrient input on benthic community structure and trophic interactions. *Funded by:* National Park Service (PI: Fourqurean)
- 2007 SAV and faunal relationships with regard to salinity and seasonality. *Funded by:* South Florida Water Management District (PI: Robbins)
- 2005 - 2007 Combining a partnership among researchers, commercial, recreational, and recreational-for-hire fishers with a cooperative tagging program to elucidate the life history and habitat utilization of select reef fish and coastal pelagic species in the Florida Keys. *Funded by:* NOAA Fisheries – Cooperate Research Project (PI: Burns)
- 2005 - 2007 Effects of entrainment and temperature on Tampa Bay, FL ichthyoplankton and zooplankton. *Contracted by:* Golder Associates, Inc. (PI: Cutler)
- 2005 - 2007 Evaluation of the efficacy of current minimum size regulations for selected reef fish based on release mortality and fish physiology. *Funded by:* NOAA Fisheries – Marine Fisheries Initiative (PI: Burns)

- 2005 - 2006 Cooperative long-line sampling of the west Florida shelf shallow water grouper complex: characterization of life history, undersized bycatch and targeted habitat. *Funded by:* NOAA Fisheries – Cooperative Research Project (PI: Burns)
- 2005 - 2006 Geographic Comparison of age, growth, reproduction, movement and survival of red snapper off the state of Florida. *Funded by:* NOAA Fisheries – Marine Fisheries Initiative Program (PI: Burns)

Presentations

As invited speaker:

- 2014 **C.A. Weaver.** Ecological implications of black mangrove expansion into Texas salt marshes. The Mission-Aransas National Estuarine Research Reserve Bay Talks, March 7, 2014; Rockport, TX.

As presenter:

- 2015 **Weaver, C.A.** and A.R. Armitage. Nutrient enrichment effects on co-occurring *Avicennia germinans* and *Spartina alterniflora*: Implications for mangrove expansion within the Northern Gulf of Mexico. Ecological Society of America Meeting, August 9-14, 2015; Baltimore, MD.
- 2014 **Weaver, C.A.,** A.R. Armitage, S.P. Charles, S. Dastidar, H. Guo, Z. Hughes, J.S. Kominoski, A. Whitt, S.C. Pennings. Implications of mangrove expansion in the northern Gulf of Mexico: Mangrove and marsh habitats support different nekton species. Gulf Estuarine Research Society Meeting, October 30-31, 2014; Port Aransas, TX.
- 2014 **Weaver, C.A.,** A.R. Armitage, S.P. Charles, S. Dastidar, H. Guo, Z. Hughes, J.S. Kominoski, A. Whitt, S.C. Pennings. Ecological implications of black mangrove expansion in the Gulf of Mexico. Texas Bays and Estuaries Meeting, April 23-24, 2014; Port Aransas, TX.
- 2013 **Weaver, C.A.** and A.R. Armitage. Nutrient effects on *Spartina alterniflora* and *Avicennia germinans*: Implications for competition in a marsh-mangrove ecosystem. Coastal and Estuarine Research Federation 22nd Biennial Conference, November 3-7, 2013; San Diego, CA.
- 2013 **Weaver, C.A.** and A.R. Armitage. Nutrient effects on *Spartina alterniflora* and *Avicennia germinans*: Implications for competition in a marsh-mangrove ecosystem. Texas A&M University at Galveston Research Symposium, April 25, 2013; Galveston, TX. (poster presentation) **Third place – overall graduate student presentation
- 2011 **Weaver, C.A.,** A.R. Armitage, and A. Parnell. Nutrient effects on *Spartina alterniflora* and *Avicennia germinans*: Implications for competition in a marsh-mangrove ecosystem. Coastal and Estuarine Research Federation 21st Biennial Conference, November 6-10, 2011; Daytona Beach, FL. (poster presentation)
- 2010 **Weaver, C.A.,** A.R. Armitage, and J.W. Fourqurean. Effects of nutrient addition on seagrass epifaunal abundance in nutrient limited conditions. Texas A&M University at Galveston Research Symposium, April 22, 2010; Galveston, TX. (poster presentation)
- 2009 **Weaver, C.A.,** A.R. Armitage, and J.W. Fourqurean. Effects of nutrient addition on seagrass epifaunal abundance in nutrient limited conditions. Coastal and Estuarine Research Federation 20th Biennial Conference, November 1-5, 2009; Portland, OR.
- 2009 **Weaver, C.A.,** A.R. Armitage, and J.W. Fourqurean. Nutrient addition reduces the influence of habitat complexity on seagrass epifaunal abundance. Texas A&M University at Galveston Research Symposium, April 21, 2009; Galveston, TX. (poster presentation)

- 2009 **Weaver, C.A.**, A.R. Armitage, and J.W. Fourqurean. Nutrient addition reduces the influence of habitat complexity on seagrass epifaunal abundance. 38th Benthic Ecology Meeting, March 4-7, 2009; Corpus Christi, TX. (poster presentation)
- 2008 **Weaver, C.A.**, A.R. Armitage, and J.W. Fourqurean. Effects of habitat complexity and nutrient enrichment on epifauna abundance and diversity in a Florida Bay seagrass system. Florida Bay and Adjacent Marine Systems Science Conference, December 8-11, 2008; Naples, FL. (poster presentation)
- 2007 Burns, K.M., N.J. Brown-Peterson, R.M. Overstreet, J.G. Gannon, J.M. Sprinkel, B.D. Robbins, and **C.A. Weaver**. December 2007. Geographic comparison of age, growth, reproduction, movement, and survival of red snapper off the state of Florida. 17th NOAA Fisheries – Marine Fisheries Initiative Southeast Regional Conference, December 11-12, 2007; St. Petersburg, FL.

As co-author:

- 2015 Armitage, A.R., **C.A. Weaver**, A. Whitt, S.P. Charles, S. Dastidar, H. Guo, Z. Hughes, J.S. Kominoski, and S.C. Pennings. Bottom-up effects of mangrove expansion on transient and resident salt marsh fauna. Ecological Society of America Meeting, August 9-14, 2015; Baltimore, MD.
- 2015 Charles, S.P., J.S. Kominoski, A.R. Armitage, H. Guo, S.C. Pennings, **C.A. Weaver**, and A. Whitt. Mangrove encroachment into salt marshes may enhance carbon storage but reduce surface accretion in coastal wetlands. Ecological Society of America Meeting, August 9-14, 2015; Baltimore, MD.
- 2015 Pennings, S.C., H. Guo, S. Dastidar, Z. Hughes, A.R. Armitage, C.A. Weaver, A. Whitt, S.P. Charles, and J.S. Kominoski. Vegetation regime shift in coastal wetlands affects trapping of wrack subsidies from subtidal habitats. Ecological Society of America Meeting, August 9-14, 2015; Baltimore, MD.
- 2013 Pennings, S.C., H. Guo, A.R. Armitage, S. Dastidar, **C.A. Weaver**, A. Whitt, and Z. Hughes. Ecological implications of black mangrove expansion in the Gulf of Mexico: insights from a large-scale removal experiment. Coastal and Estuarine Research Federation 22nd Biennial Conference, November 3-7, 2013; San Diego, CA.
- 2013 Pennings, S.C., H. Guo, A.R. Armitage, S. Dastidar, **C.A. Weaver**, and Z. Hughes. Mangroves Invading Texas Salt Marshes: Does It Matter? Texas Bays and Estuaries Meeting, April 25-26, 2013; Port Aransas, TX.
- 2013 Armitage, A.R., S.C. Pennings, **C.A. Weaver**, A. Whitt, H. Guo, Z. Hughes, and S. Dastidar. Ecological implications of black mangrove expansion into Texas salt marshes: Comparisons among marsh and mangrove habitats. Texas Mangrove Research Symposium, February 28, 2013; Port Aransas, TX.
- 2013 Pennings, S.C., H. Guo, A.R. Armitage, Z. Hughes, **C.A. Weaver**, and S. Dastidar. Ecological implications of black mangrove expansion into Texas salt marshes: Insights from a large-scale mangrove removal experiment. Texas Mangrove Research Symposium, February 28, 2013; Port Aransas, TX.
- 2012 Pennings, S.C., A.R. Armitage, H. Guo, Z. Hughes, and **C.A. Weaver**. Mangroves Invading Texas Salt Marshes: Does It Matter? Texas Bays and Estuaries Meeting, April 11-12, 2012; Port Aransas, TX.

- 2007 Burns, K.M., N.J. Brown-Peterson, R.M. Overstreet, J.M. Sprinkel, and **C.A. Weaver**. Evaluation of the efficacy of current minimum size regulations for selected reef fish based on release mortality and fish physiology. 17th NOAA Fisheries – Marine Fisheries Initiative Southeast Regional Conference, December 11-12, 2007; St. Petersburg, FL.

As mentor:

- 2014 Morrison, R.V., A.A. Whitt, **C.A. Weaver**, and A.R. Armitage. Bird Density and Family Composition in Restored Brackish Marshes. Texas A&M University at Galveston Research Symposium, April 24, 2014; Galveston, TX. (poster presentation)
- 2012 Miller, C. V., **C.A. Weaver**, and A.R. Armitage. Black mangroves vs. marsh vegetation: is it more than competition for light? Texas A&M University at Galveston NSF – Research Experiences for Undergraduates (REU) Research Symposium, August 1, 2012; Galveston, TX.
- 2011 Weisse, M., **C. Weaver**, and A. Armitage. Identifying limiting nutrients in Galveston Bay seagrass communities. Texas A&M University at Galveston NSF-Research Experiences for Undergraduates (REU) Research Symposium, July 27, 2011; Galveston, TX.

As guest lecturer:

- 2015 **C.A. Weaver**. Salt Marshes. April 21, 2015. Marine Botany, Texas A&M University at Galveston, Galveston, TX.
- 2015 **C.A. Weaver**. Seagrasses. April 16, 2015. Marine Botany, Texas A&M University at Galveston, Galveston, TX.
- 2014 **C.A. Weaver**. Coastal restoration. November 18, 2014. Coastal Plant Ecology, Texas A&M University at Galveston, Galveston, TX.
- 2013 **C.A. Weaver**. Ecosystem services: What have you done for me lately? October 24, 2013. Coastal Plant Ecology; Texas A&M University, Galveston, TX.

Professional committees

- 2014-present Settegast Coastal Heritage Preserve – Habitat Advisory Committee; Galveston, TX

Other activities

Mentoring/Education:

Undergraduate student research mentor

- 2014 Rebekkah Morrison (Texas A&M University at Galveston)
- 2012 Sarah Miller (NSF-REU, University of Miami)
- 2012 Jacob Sigren (University of Texas)
- 2011 Mikaela Weisse (NSF-REU, University of Wisconsin)
- 2011 Kelsey Droll (Texas A&M University at Galveston)
- 2011 Rachael Knigge (Texas A&M University at Galveston)

Undergraduate student intern supervisor

- 2005 11 undergraduate students (various academic institutions)
- 2006 5 undergraduate students

Graduate/undergraduate student research presentation judge

- 2013 Coastal and Estuarine Research Federation Conference; San Diego, CA.
- 2012 TAMUs Pathways Student Research Symposium; Galveston, TX

2011-2015 Texas A&M University at Galveston Student Research Symposium; Galveston, TX

Secondary school involvement

2013-2015 Scientific presentation development; Ball Preparatory Academy, Galveston, TX

2013-2014 Science fair judge; Ball High School, Galveston, TX

2013-2014 Ecological laboratory course development; Ball Preparatory Academy, Galveston TX

Peer Development:

2014-present Journal reviewer

- Wetlands
- Journal of Sea Research

2010-2012 Texas A&M University at Galveston Marine Sciences Journal Club coordinator; Texas A&M University at Galveston, Galveston, TX

2011-2013 Marine Sciences Brown Bag Student Seminar founder and organizer; Texas A&M University at Galveston, Galveston, TX

Community Service:

Beach/salt marsh cleanup

Marsh/dune plantings

Ronald McDonald house

Certifications:

Small boat operator

SCUBA certified (PADI open water, advanced, rescue; AAUS)

CPR/first-aid certified

Professional Society Memberships

Coastal and Estuarine Research Federation

Gulf Estuarine Research Society