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## MATTHEW WISE JOHNSON

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Post Doctoral Research Associate  
Harte Research Institute for Gulf of Mexico Studies  
Texas A&M University – Corpus Christi  
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### EDUCATION

- 2006 Ph.D. Marine Science, University of South Alabama, Mobile, AL  
2000 M.S. Wildlife and Fisheries Sciences, Texas A&M University, College Station  
1996 B.S. Marine Biology, Texas A&M University, Galveston, TX
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### PROFESSIONAL ACTIVITIES

- 2009-Present Post-Doctoral Research Associate, Harte Research Institute/Texas A&M University- Corpus Christi, Corpus Christi, TX. Mentors- Dr. Greg W. Stunz (TAMUCC) and Dr. Sandra Diamond (Texas Tech)  
Current Research:  
(1) “Habitat preferences of sow red snapper: Is the spawning stock hiding in plain sight?”; (2) “Development of new techniques to minimize the impacts of barotrauma on Lutjanids.”; (3) “Stock identification of Lutjanid larvae recruiting to the southern Texas coast using otolith microchemistry”.
- 2006-2009 Post-Doctoral Research Associate, Fisheries Ecology Laboratory, University of South Alabama/Dauphin Island Sea Laboratory, Dauphin Island, AL. Mentor- Sean P. Powers.  
Current Research:  
(1) “Community interactions between red snapper (*Lutjanus campechanus*) and vermilion snapper (*Rhomboplites aurorubens*) on offshore reefs.”; (2) “Age, growth, and diet of recreationally harvested vermilion snapper off Alabama”; (3) “Ecology and abundance estimates of adult red drum (*Sciaenops ocellatus*) in offshore waters of the north-central Gulf of Mexico.”; (4) “Patterns of use for juvenile fishes on restored oyster reefs in Mobile Bay.”; (5) “Long term oyster settlement patterns on restored oyster reefs in Mobile Bay: Does reef design matter?”; (6) “Assessing *in situ* biological tolerances of Eastern oysters (*Crassostrea virginica*) under moderate hypoxic regimes: Implications for restoration.”
- 2006 Research Associate, Fisheries Ecology Lab, Dauphin Island Sea Lab, Dauphin Island, AL.
- 2000-2006 Principal Investigator/ EPA Quality Assurance Officer Benthic Ecology Laboratory, Dauphin Island Sea Lab, Dauphin Island, AL.

- Project: Examine the role of habitat fragmentation on the structure and function of seagrass ecosystems in the Northern Gulf of Mexico.
- 2003-2005 Independent Consultant, Environmental Monitoring of Perdido Bay, AL., Law Firm of Levin and Papantonio.
- 1999-2000 Research Assistant. Aquacultural Research and Teaching Facility, Texas A&M University, College Station, TX. Projects included nutrition, diet design and evaluation in red drum (*Sciaenops ocellatus*).
- 1998 Head Counselor. Texas A&M at Galveston Sea Camp, Texas A&M at Galveston, Galveston, TX.
- 1997-1998 Tournament Weighmaster. International Marine Sportsman's Lone Star Trout Tournament.
- 1997 Project Leader, Reef Ball 1997. Texas Parks and Wildlife Department, Artificial Reef Program, Seabrook, TX.
- 1997 Biologist. ENSR Houston Environmental Toxicology Lab, Houston, TX.
- 1995-1997 Marine Biologist. Texas A&M University Marine Fisheries Research Offshore Fishing Tournament.
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## RESEARCH GRANTS AND AWARDS

- Pending Incorporating satellite-based technologies in research and student training: Using remote sensing to identify critical fish habitats and migration patterns. G.W. Stunz, J. C. Gibeaut, **M.W. Johnson**, L. Su, NASA - MUREP Program (\$558,361).
- Pending Source Identification and Prevention of *Vibrio vulnificus* infections in the commercial and For-Hire fishing industries. J. Mott, G.W. Stunz, **M.W. Johnson**, K. Gordon, Centers for Disease Control - National Institute of Occupational Safety and Health (NIOSH) (\$393,943).
- Pending Home range, site fidelity, and habitat connectivity of estuarine-dependent fishes in Texas. J. Rooker, G.W. Stunz, and **M.W. Johnson**, Texas Sea Grant. (\$228,000).
- Pending A comprehensive plan for restoring beach habitats after excessive Sargassum landfall events: Civic action informed by basic science. NOAA Coastal and Marine Habitat Restoration Project Grants. S. Galvik, J.M. Fox, J.C. Gilbeaut, K. Gordon, **M.W. Johnson**, I.R. MacDonald, A.M. Mestat-Nunez, J.B. Mott, R.D. Overath, P.W. Rhodes, T.C. Shirley, K.B. Strycher, G.W. Stunz, K. Withers (\$3,941,392).
- 2009 Responsible stewardship in recreational fisheries: Can rapid recompression of red snapper (*Lutjanus campechanus*) effectively reduce discard mortality? G.W. Stunz and **M.W. Johnson**, Texas Research Development Fund (\$25,000).
- 2009 Using acoustic tracking to identify habitat use and movement patterns of red snapper in the Gulf of Mexico. TAMU-CC Research Enhancement Grants, G.W. Stunz and **M.W. Johnson** (\$13,358).

- 2008 Testing hypotheses on red snapper survival and stock and recruitment patterns. Environmental Defense Fund, S.L. Diamond, G.W. Stunz, and **M.W. Johnson** (\$66,582).
- 2008 Age distribution and abundance estimates of adult red drum (*Sciaenops ocellatus*) in offshore waters of the north-central Gulf of Mexico. NOAA/NMFS Marine Fisheries Initiative (MARFIN), S.P. Powers and **M.W. Johnson** (\$192,119).
- 2007 Addressing challenges to oyster reef restoration in Mobile Bay. National Marine Fisheries Service, Restoration Center. S.P. Powers, K. Park, **M.W. Johnson** (\$335,000).
- 2006 Evaluating species interactions in reef fish communities: the potential impact of red snapper (*Lutjanus campechanus*) on recruitment of vermilion snapper (*Rhomboplites aurorubens*). NOAA/NMFS Marine Fisheries Initiative (MARFIN), K.L. Heck and **M.W. Johnson** (\$192,338).
- 2005 Bullard Fellowship, Marine Sciences Department, University of South Alabama (\$28,020).
- 2004 Effects of habitat fragmentation on the structure and function of seagrass ecosystems in the Northern Gulf of Mexico. Environmental Protection Agency/Alabama Center for Estuarine Studies. K.L Heck and **M.W. Johnson** (Continuation, \$22,272).
- 2003 Mississippi-Alabama Sea Grant Consortium Fellowship Award (\$10,000)
- 2002 Effects of habitat fragmentation on the structure and function of seagrass ecosystems in the Northern Gulf of Mexico. Environmental Protection Agency/ Alabama Center for Estuarine Studies. K.L Heck and **M.W. Johnson** (\$30,317).
- 2002 Alabama's Water Environment Graduate Student Scholarship (\$1,000)
- 2000 Mooney Graduate Student Grant, Texas A&M University at Galveston. (\$500).
- 2000 Graduate Program Enhancement Funds, Texas A&M University at Galveston. (\$700).
- 1999 Coastal Conservation Association (CCA) Research Fellowship for Graduate Students in Fisheries. (\$5000).
- 1999 Galveston Graduate Students Association Research Grant, Texas A&M University at Galveston. (\$500).

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## PUBLICATIONS

- 2009 **Johnson, M.W.** and S.P. Powers. Assessing *in situ* tolerances of Eastern oysters (*Crassostrea virginica*) under moderate hypoxic regimes: Implications for restoration. *Journal Shellfish Research* 28(2):185-192.
- 2009 Gregalis, K.C., **M.W. Johnson\***, and S.P. Powers. Interactions between location and reef design affect responses of resident and transient species on restored oyster reefs in Mobile, AL. *Transactions of the American Fisheries Society*. 138: 314-327. \*Corresponding Author

- 2008 **Johnson, M.W.** and K.L. Heck Jr. Colonization and predation in isolated seagrass beds: An experimental assessment from the Northern Gulf of Mexico. *Gulf of Mexico Science* 26(1):1-13.
- 2007 **Johnson, M.W.** and K.L. Heck Jr. (2007) Habitat fragmentation influences survival and growth of transplanted northern quahog (*Mercenaria mercenaria* Linné) in Big Lagoon, FL. *Journal of Shellfish Research* 26(4):1011-1020.
- 2006 **Johnson, M.W.**, K.L. Heck Jr. and J.W. Fourqurean. (2006) Nutrient content of seagrasses and epiphytes in the northern Gulf of Mexico: evidence of phosphorus and nitrogen limitation. *Aquatic Botany* 85:103-111.
- 2006 **Johnson, M.W.** and K.L. Heck Jr. (2006) Seagrass patch characteristics alter direct and indirect interactions in a tri-trophic estuarine food web. *Estuaries and Coasts* 29(3): 504-515.
- 2006 **Johnson, M.W.** and K.L. Heck Jr. (2006) The effects of habitat fragmentation *per se* on decapods and fishes inhabiting seagrass meadows in the northern Gulf of Mexico. *Marine Ecology Progress Series* 306: 233-246.
- 2002 **Johnson, M.W.**, J.R. Rooker, D. Gatlin III, and G.J. Holt. (2002) The effect of variable ration levels on the direct and indirect measures of growth for juvenile red drum, *Sciaenops ocellatus*. *Journal of Experimental Marine Biology and Ecology* 274: 141-157.
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#### MANUSCRIPTS IN REVIEW

- Submitted **Johnson, M.W.**, S.A. Bortone, B. Klement, R.L. Shipp. Back-calculated age and growth of seatrout (*Cynoscion nebulosus*) in Alabama waters collected during 2007. *Fisheries Management and Ecology*.
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#### MANUSCRIPTS IN PREP/COMPLETE DATA SETS

- In Prep **Johnson, M.W.** and S.P. Powers. Utilization of restored oyster reefs by juvenile fishes: How do community profile, species richness, and abundances compare to seagrass and unstructured habitats? *Journal of Experimental Marine Biology and Ecology*.
- In Prep **Johnson, M.W.** and S.P. Powers (2007) Age, growth, mortality, and diet composition of vermilion snapper (*Rhomboplites aurorubens*) from the Mississippi Bight fishery. *Canadian Journal of Fisheries and Aquatic Sciences*.
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#### TECHNICAL REPORTS

- 2008 **Johnson, M.W.**, S.A. Bortone, B. Klement, R.L. Shipp. Effects of the 2005 hurricane season on back-calculated growth estimates of seatrout (*Cynoscion*

- nebulosus*) in the Mobile Bay estuarine system. University of South Alabama's Oyster Reef Restoration Program.
- 2005 **Johnson, M.W.** and K.L. Heck Jr. (2005) Water flow, circulation, and discharge for Perdido Bay, FL and heavy metal standards for sediments and shellfish of Florida's coastal waters. Prepared for the Law Firm of Levin and Papantonio, Pensacola, FL.
- 2005 Heck, K.L., **M.W. Johnson**, and P.M. Spitzer. (2005) Environmental studies of Perdido Bay, FL (2003-2004). Prepared for the Law Firm of Levin and Papantonio, Pensacola, FL.
- 2004 **Johnson, M.W.** (2004) The role of habitat fragmentation on the structure and function of seagrass ecosystems in the Northern Gulf of Mexico. Final report for the 2003-2004 Mississippi-Alabama Sea Grant Consortium Fellowship Award.
- 2003 **Johnson, M.W.** and K. L. Heck Jr. (2003) The role of habitat fragmentation in seagrass ecosystems in the Northern Gulf of Mexico. Final Report for EPA Grant No. GR 828779-01-0.
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#### DISSERTATION AND THESIS

- 2006 The role of habitat fragmentation *per se* on the structure and function of seagrass ecosystems in the Northern Gulf of Mexico. Department of Marine Sciences, University of South Alabama. 226 pgs.  
*Graduate Committee: Dr. Kenneth L. Heck (Chair), Dr. John Valentine, Dr. Robert L. Shipp (University of South Alabama), Dr. Michael P. Weinstein (New Jersey Marine Science Consortium), Dr. Peter Sheridan (National Marine Fisheries Service)*
- 2000 The effect of variable ration levels on the direct and indirect measures of growth for juvenile red drum, *Sciaenops ocellatus*. Department of Wildlife and Fisheries Science, Texas A&M University. 76 pgs.  
*Graduate Committee: Dr. Jay R. Rooker (Chair), Dr. William E. Evans (Texas A&M University at Galveston), Dr. Thomas Linton, Dr. Delbert M. Gatlin (Texas A&M University).*
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#### CONFERENCE PRESENTATIONS

- 2009 **Johnson, M.W.**, S.P. Powers, J. Senne, K. Park. 2009. Integration of hypoxia into reef restoration: Impacts on oyster growth and settlement. 2009 Texas Bays and Estuaries Meeting. Port Aransas, TX.
- Johnson, M.W.** and S.P. Powers. 2009. What is driving community ecology on artificial reefs in the Gulf of Mexico? 2009 Benthic Ecology Meeting. Corpus Christi, TX.

- 2008 **Johnson, M.W.**, S.P. Powers, J. Senne, K. Park. 2008. Evaluation of the impact that moderate hypoxia can have on oyster growth at potential reef restoration sites in Mobile Bay, AL. 2008 International Conference on Shellfish Restoration, Charleston, SC.
- Johnson, M.W.**, S. P. Powers, J. Senne, K. Park. 2008. How long can an oyster hold its breath? Using biological and physical data to estimate reef restoration requirements in hypoxia prone areas of Mobile Bay, AL. MASGC Bays and Bayous, Biloxi, MS. **\*\*Session Chair**
- Johnson, M.W.** and S. P. Powers. 2008. Utilization of restored reefs by juvenile fishes: How do community profile, species richness, and abundances compare to seagrass and unstructured habitats. 2008 Benthic Ecology Meeting, Providence, RI.
- 2007 **Johnson, M.W.** and K.L. Heck Jr. 2007. Habitat fragmentation and hard clams: Do seagrass patch characteristics influence transplanted Northern Quahogs (*Mercenaria mercenaria*) in Big Lagoon, FL? Benthic Ecology Meeting, Atlanta, GA.
- Johnson, M.W.** and S.P. Powers. 2007. Evaluating potential impacts of red snapper (*Lutjanus campechanus*) on recruitment of vermilion snapper (*Rhomboplites aurorubens*): project overview and summary Alabama Fisheries Association Meeting, Perdido Beach, AL. **\*\*Invited Speaker**
- 2006 **Johnson, M.W.** and K.L. Heck Jr. 2006. Habitat fragmentation influences survival and growth of transplanted northern quahog (*Mercenaria mercenaria*) in Big Lagoon, FL. Gulf Estuarine Research Society Meeting, Corpus Christi, TX.
- 2005 **Johnson, M.W.** and K.L. Heck Jr. 2005. Can habitat fragmentation and trophic structure influence habitat preference? A mesocosm experiment using a common Gulf of Mexico food chain. American Fisheries Society Meeting, Anchorage, AK. American Fisheries Society Meeting, Anchorage, A.K.
- Johnson, M.W.** and K.L. Heck Jr. 2005. Do fragmentation and trophic complexity influence habitat choice? A mesocosm approach using artificial seagrass units (ASUs). Benthic Ecology Meeting, Williamsburg, V.A.
- 2004 **Johnson, M.W.** and K.L. Heck Jr. 2004. Habitat fragmentation and its effect on survival of three common macrofaunal species from the Northern Gulf of Mexico. Benthic Ecology Meeting, Mobile, AL.
- 2003 **Johnson, M.W.** and K.L. Heck Jr. 2003. Habitat fragmentation in seagrass ecosystems of the Gulf of Mexico. Estuarine Research Federation Meeting, Seattle, WA.
- Johnson, M.W.** and K.L. Heck Jr. 2003. C:N:P ratios and a shifting paradigm in nutrient limitation in seagrasses of the northern Gulf of Mexico. Gulf Estuarine Research Society, St. Petersburg, TX.
- 2002 **Johnson, M.W.** and K.L. Heck Jr. 2002. Habitat fragmentation in seagrass ecosystems: A preliminary investigation. Benthic Ecology Meeting, Orlando, FL.

- 2001 **Johnson, M.W.**, J.R. Rooker, and G.J. Holt. 2001 The effect of variable ration levels on the direct and indirect measure of growth for red drum, *Sciaenops ocellatus*. Gulf Coast Graduate Student Symposium, Dauphin Island, AL.
- Johnson, M.W.**, J.R. Rooker, and G.J. Holt. 2001 The effect of variable environmental conditions on the somatic growth and otolith growth of juvenile red drum, *Sciaenops ocellatus*. World Aquaculture Society Meeting, Orlando, FL
- 2000 **Johnson, M.W.**, J.R. Rooker, and G.J. Holt. 2001 The effect of variable environmental conditions on the somatic growth and otolith growth of juvenile red drum, *Sciaenops ocellatus*. American Society of Ichthyologists and Herpetologists Meeting, La Paz, Mexico.
- 1999 Gatlin, D.M. and **M.W. Johnson**. 1999 Studies on the amino acid requirements of red drum, *Sciaenops ocellatus*. World Aquaculture Society's Nutrition and Feeding Workshop, Portland, OR.
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#### TECHNICAL EXPERIENCE

SEABOTIX, Model LBV 200 Remotely Operated Vehicle  
EdgeTech 4200-HF Side Scan Sonar  
Biosonics Single-Beam Sonar  
Chesapeake Mosaic Software  
Surfer Software Package V.8  
ArcGIS

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#### TEACHING EXPERIENCE

- 2009 Guest lecturer- Graduate Marine Ecology, TAMU-CC
- 2007 Guest lecturer- Marine Vertebrates, Dauphin Island Sea Lab
- 2005 Teaching Assistant, Dauphin Island Sea Lab, Dauphin Island, AL. Courses: Marine Aquaculture, Coastal Geomorphology, and Marine Mammals.
- 1998-2000 Teaching Assistant. Department of Wildlife and Fisheries Sciences and Department of Biology, Texas A&M University, TX. Courses: Aquaculture, Introductory Biology.
- 1997-1998 Teaching Assistant, Texas A&M University at Galveston, Galveston, TX. Courses: Mariculture, Cell Biology, and Comparative Physiology.
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#### PEER REVIEW SERVICES

*Marine Ecology Progress Series*  
*Acta Oecologica*  
*Aquatic Ecology*  
*Marine Biology*

*Journal of Experimental Marine Biology and Ecology*  
*Gulf of Mexico Science*  
*American Midland Naturalist*

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## **COLLABORATORS**

Dr. Greg W. Stunz, Texas A&M – Corpus Christi, Corpus Christi, TX  
Dr. Jim C. Gibeaut, Texas A&M – Corpus Christi, Corpus Christi, TX  
Dr. Sandra Diamond, Texas Tech University, Lubbock, TX  
Dr. Joanna Mott, Texas A&M – Corpus Christi, Corpus Christi, TX  
Dr. Sean P. Powers, University of South Alabama, Mobile, AL  
Dr. Kenneth L. Heck, Dauphin Island Sea Lab, Dauphin Island, AL  
Dr. La Don Swann, Auburn Marine Extension and Research Center, Mobile, AL  
Dr. Jay R. Rooker, Texas A&M University, Galveston, TX  
Dr. Steve Otwell, University of Florida, Gainesville, FL  
Dr. Keyong Park, University of South Alabama, Mobile, AL  
Dr. Jim Fourqurean, Florida International University, Miami, FL  
Dr. Steve Bortone, Minnesota Sea Grant, Duluth, MN  
Dr. Robert L. Shipp, University of South Alabama, Mobile, AL  
Dr. Joan G. Holt, University of Texas, Marine Science Inst., Port Aransas, TX

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## **UNIVERSITY SERVICE**

2004-2005 President, Marine Sciences Graduate Student Organization, University of South Alabama.  
2002,2005 Steering Committee- DISL Graduate Student Symposium.  
2002 President of Fundraising, MSGSO Graduate Student Symposium.

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## **SYNERGESTIC ACTIVITIES**

2006 Mobile Bay educational field trips aboard the “Duke”, Dauphin Island Marina.  
2003,2004 NOAA volunteer for Earth Day, New Orleans  
1997-2000 Galveston Bay field trips for high school and elementary school students. TAMUG  
1997-2000 Elderhostile seminars on sea turtle behavior and marsh ecology. TAMUG

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## **PROFESSIONAL MEMBERSHIPS**

National Shellfish Association  
Estuarine Research Federation.  
Alabama Fisheries Association

American Fisheries Society.

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**CERTIFICATIONS**

U.S.C.G. Merchant Marine Officer- OUPV License

SSI Open Water SCUBA Certification

American Red Cross CPR, First Aid, and AED

NASBLA Small Boat Certification