

JOHN AUSTIN MOHAN

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EDUCATION

2010-2015 **Ph.D.** Marine Science, University of Texas Marine Science Institute
 2007-2009 **M.S.** Biology, East Carolina University
 2002-2006 **B.S.** Biology – Ecology, Fisheries Science Minor, Pennsylvania State University

RESEARCH APPOINTMENTS

2015-current Postdoctoral Research Associate, Texas A&M University at Galveston, Texas
 2012-2015 Research Fellow, Environmental Protection Agency Science to Achieve Results, Texas
 2009-2010 Contract Marine Biologist, National Ocean Service, NOAA, Center for Coastal Fisheries and Habitat Research, North Carolina

RESEARCH GRANTS AND FELLOWSHIPS

2017 US Fish and Wildlife Service State Wildlife Grant Program. PI: R.J.D. Wells; CoPIs, J. Rooker, **J. Mohan**, M. Dance, P. Matich, G. Sutton. *Evaluating predictive capabilities of modeling fish 'hotspots' along the Texas coast*. Funding: USD\$99,964
 2017 NOAA Saltonstall-Kennedy Grant Program. PI: R.J.D. Wells; CoPIs, J. Rooker, **J. Mohan**. *Ocean basin connectivity of Pacific Bluefin Tuna (*Thunnus orientalis*), linking natal origin and trans-Pacific movements into population dynamics*. Funding: USD\$291,298
 2016 Texas A&M University CONACYT Collaborative Research Grant Program. PI: R.J.D. Wells; CoPIs: S. Herzka, **J. Mohan**, O. Sosa-Nishizaki. *Connectivity of large apex predators in the California Current Large Marine Ecosystem (CCLME) using natural geochemical tracers*. Funding: USD\$23,750
 2012 EPA Science to Achieve Results (STAR) Fellowship. *Assessing the effects of hypoxia on fish population ecology using elements and isotopes*. Funding: USD\$126,000
 2008 North Carolina Sea Grant Fishery Resource Grant. PI: R. Rulifson; CoPIs: W. Phillips, **J. Mohan**. *Movement of striped bass between nursery habitats in Albemarle Sound inferred from otolith microchemistry*. Funding: USD\$43,914

PUBLICATIONS

- (13) **Mohan, J.A.**, T. TinHan, N.R. Miller, R.J.D. Wells (*In Press*) Effects of sample cleaning and storage on the elemental composition of shark vertebrae. *Rapid Communications in Mass Spectrometry*. DOI: [10.1002/rcm.7998](https://doi.org/10.1002/rcm.7998)
- (12) Chagaris, D., S. Binion, A. Bodanoff, K. Dahl, J. Granneman, H. Harris, **J. Mohan**, M. Rudd, M. Swenarton, R. Ahrens, M. Allen, J. Morris, W. Patterson. 2017. An ecosystem-based approach to evaluating impacts and management of invasive lionfish. *Fisheries* 42:421-431. DOI: [10.1080/03632415.2017.1340273](https://doi.org/10.1080/03632415.2017.1340273)
- (11) Matich, P., **J.A. Mohan**, J.D. Plumlee, T. Tinhan, R.J.D. Wells, M. Fisher. 2017. Factors shaping the co-occurrence of two juvenile shark species along the Texas Gulf Coast. *Marine Biology* 164:141. DOI: [10.1007/s00227-017-3173-2](https://doi.org/10.1007/s00227-017-3173-2)

- (10) **Mohan, J.A.**, T.T. Sutton, A.B. Cook, K. Boswell, R.J.D. Wells. 2017. Influence of oceanographic conditions on abundance and distribution of post-larval and juvenile carangid fishes in the northern Gulf of Mexico. *Fisheries Oceanography* 26: 526-541. DOI: [10.1111/fog.12214](https://doi.org/10.1111/fog.12214)
- (9) **Mohan, J.A.**, and B.D. Walther. 2016. Out of breath and hungry: natural tags reveal trophic resilience of Atlantic croaker to hypoxia exposure. *Marine Ecology Progress Series* 560:207-221. DOI: [10.3354/meps11934](https://doi.org/10.3354/meps11934)
- (8) Mohan, S.D., **J.A. Mohan**, T.L. Connelly, B.D. Walther, J.W. McClelland. 2016. Fatty acid biomarkers and tissue-specific turnover: validation from a controlled feeding study in juvenile Atlantic croaker *Micropogonias undulatus*. *Journal of Fish Biology* 84:2004-2023. DOI: [10.1111/jfb.13099](https://doi.org/10.1111/jfb.13099)
- (7) **Mohan, J.A.**, S.D. Smith, T.L. Connelly, E.T. Attwood, J. McClelland, S.Z. Herzka, B.D. Walther. 2016. Tissue-specific isotope turnover and discrimination factors are affected by diet quality and lipid content in an omnivorous consumer. *Journal of Experimental Marine Biology and Ecology* 479:35-45. DOI: [10.1016/j.jembe.2016.03.002](https://doi.org/10.1016/j.jembe.2016.03.002)
- (6) Díaz-Gil, C., M. Palmer, I.A. Catalán, J. Alós, L. Fuiman, E. García, M. del Mar Gil, A. Grau, A. Kang, R.H. Maneja, **J. Mohan**, B. Morro, J.J. Schaffler, L. Buttay, B. Tolosa, B. Morales-Nin. 2015. Otolith fluctuating asymmetry: A misconception of its biological relevance? *ICES Journal of Marine Science* 72:2079-2089. DOI: [10.1093/icesjms/fsv067](https://doi.org/10.1093/icesjms/fsv067)
- (5) **Mohan, J.A.**, and B.D. Walther. 2015. Spatiotemporal variation of trace elements and stable isotopes in subtropical estuaries: II. Regional, local, and seasonal salinity-element relationships. *Estuaries and Coasts* 38:769-781. DOI: [10.1007/s12237-014-9876-4](https://doi.org/10.1007/s12237-014-9876-4)
- (4) **Mohan, J.A.**, N.M. Halden, and R.A. Rulifson. 2015. Habitat use of juvenile striped bass *Morone saxatilis* (Actinopterygii: Moronidae) in rivers spanning a salinity gradient across a shallow wind-driven estuary. *Environmental Biology of Fishes* 98:1105-1116. DOI: [10.1007/s10641-014-0344-6](https://doi.org/10.1007/s10641-014-0344-6).
- (3) Limburg, K.E., B.D. Walther, Z. Lu, G. Jackman, **J. Mohan**, Y. Walther, A. Nissling, P.K. Weber, and A.K. Schmitt. 2015. In search of the dead zone: use of otoliths for tracking fish exposure to hypoxia. *Journal of Marine Systems* 141:167-178. DOI: [10.1016/j.jmarsys.2014.02.014](https://doi.org/10.1016/j.jmarsys.2014.02.014)
- (2) **Mohan, J.A.**, M.S. Rahman, P. Thomas, B.D. Walther. 2014. Influence of constant and periodic experimental hypoxic stress on Atlantic croaker otolith chemistry. *Aquatic Biology* 20:1-11. DOI: [10.3354/ab00542](https://doi.org/10.3354/ab00542) (**FEATURE ARTICLE**)
- (1) **Mohan, J.A.**, R.A. Rulifson, D.R. Corbett, and N.M. Halden. 2012. Validation of oligohaline elemental otolith signatures of striped bass by use of in situ caging experiments and water chemistry. *Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science* 4:57-70. DOI: [10.1080/19425120.2012.656533](https://doi.org/10.1080/19425120.2012.656533)

PUBLICATIONS IN PROGRESS

Mohan, J.A. and B.D. Walther. (*In Revision*) Integrating multiple natural tags to examine migration timing and intraspecific resource partitioning across a subtropical estuarine continuum. *Estuaries and Coasts*

Plumlee, J.D. K.M. Dance, P. Matich, **J.A. Mohan**, T.M. Richards, T.C. TinHan, R.J.D. Wells (*In Review*) Community structure of elasmobranchs in estuaries along the northwest Gulf of Mexico. *Estuarine, Coastal and Shelf Science*

TEACHING AND MENTORING

2017 Co-Instructor, Marine Biology Study Abroad, Research and Conservation in Greece
 2017 Co-Instructor, *Otolith Microchemistry 101: an introduction for fisheries scientists*, Continuing Education Workshop, Texas Chapter of the American Fisheries Society

2015-2017	Guest Lecturer, Ichthyology, Texas A&M University at Galveston
2016	Co-Instructor, Advanced Concepts in Marine Population Biology and Ecology, Graduate course at Texas A&M Galveston
2013-2015	Semester by the Sea for UTMSI undergraduates – mentored 4 students over 3 semesters
2011-2013	NSF Research Experiences for Undergraduates (REU) – mentored 3 students
2013	Teaching Assistant, Physiology of Fishes, University of Texas Marine Science Institute
2010	Teaching Assistant, Ecology, University of Texas at Austin
2007-2008	Teaching Assistant, General Biology Lab, East Carolina University

ACADEMIC AWARDS

2015	Estuaries Section AFS Student Travel Award, American Fisheries Society
2015	Skinner Memorial Student Travel Award, American Fisheries Society
2015	Marine Population Dynamics Summer Program, Lionfish Workshop, University of Florida and Keys Marine Lab
2013	Graduate Deans Prestigious Fellowship Supplement (\$1000)
2014	Best Student Poster 3 rd Place, Texas Bays and Estuaries Meeting, UTMSI, Port Aransas
2014	Professional Development Student Travel Award, UT Graduate School
2014	E.J. Lund Scholarship Founders Fellowship for Graduate Students of Exceptional Merit
2012	Coastal Conservation Association (CCA) Allen Jacoby Scholarship (\$5000)
2012	Best Student Talk, Gulf Estuarine Research Society, Dauphin Island Sea Lab, Alabama
2011	Harry Tenison Student Scholarship by the Sportman's Club of Fort Worth (\$1500)
2011	Dean's Excellence Scholarship
2005	AmeriCorps Education Award (\$1000)

INVITED SEMINARS

- Mohan, J.A.** 2017. Reconstructing life histories of sharks using chemical and electronic tags. *Biology Research Seminar*, Sam Houston State University, Huntsville, Texas
- Mohan, J.A.** 2017. Reconstructing life histories of fishes and sharks using chemical and electronic tags. *Biology Research Seminar*, Loyola University, New Orleans, Louisiana
- Mohan, J.A.** 2013. Earbones and deadzones: fish otoliths as natural geochemical proxies of hypoxia exposure. Department of Biology, *Research In Progress Seminar Series*. East Carolina University, North Carolina

ORAL PRESENTATIONS

- Tinhan, T.C., **J.A. Mohan**, J. Sullivan, J. Dumesnil, C.F. Ruiz, R.J.D. Wells. 2017. Residency and movement of Spotted Seatrout *Cynoscion nebulosus* on a restored oyster reef. *Texas Chapter of the American Fisheries Society*, Corpus Christi, Texas
- Mohan, J.**, J. Hendon, E. Jones, B. Falterman, K. Boswell, and R.J.D. Wells. 2017. Capture stress and post-release survival of Blacktip Sharks (*Carcharhinus limbatus*) in the Gulf of Mexico recreational fishery. *Texas Chapter of the American Fisheries Society*, Corpus Christi, Texas
- Walther, B. **J. Mohan**, and M. Seeley. 2015. Emerging research in fish ecology facilitated by laser ablation analysis of biogenic structures. *North American Laser Ablation Workshop*, Austin, Texas
- Mohan, J.A.**, and B.D. Walther. 2014. A multi-proxy approach for estimating estuarine immigration using otolith elements and tissue-specific stable isotopes. *5th International Otolith Symposium*, Mallorca, Balearic Islands, Spain
- Mohan, J.A.**, S.D. Smith, B.D. Walther. 2014. Turnover and fractionation of $\delta^{13}\text{C}$ and $\delta^{15}\text{N}$ in muscle and liver tissues of Atlantic croaker after a diet switch. *Joint Aquatic Science Meeting*, Portland, Oregon

- Smith, S.D., **J.A. Mohan**, T.L. Connelly, J.W. McClelland, B.D. Walther. 2014. Dietary shifts in fatty acid composition of a marine fish in a controlled feeding experiment. *Joint Aquatic Science Meeting*, Portland, Oregon
- Mohan, J.A.**, and B.D. Walther. 2013. Fish otoliths as intrinsic geochemical proxies of hypoxia exposure in the northern Gulf of Mexico. *22nd Biennial Conference of the Coastal, Estuarine, Research, Federation*, San Diego, California
- Mohan, J.A.**, and B. Walther. 2013. Spatiotemporal variability of dissolved elements in south Texas bays: implications for using fish otoliths as natural geochemical environmental proxies. *Texas Bays and Estuaries Meeting*, Port Aransas, Texas
- Staton, B, **J.A. Mohan**, B.D. Walther. 2013. Spatiotemporal patterns in the coupling of otolith and somatic growth in Atlantic croaker. *Association for the Sciences of Limnology and Oceanography*, New Orleans, Louisiana
- Mohan, J.A.** 2012. Trace element dynamics in the northern Gulf of Mexico: implications for using fish otoliths as geochemical proxies. *Gulf Estuarine Research Society*, Dauphin Island Sea Lab, Alabama (**BEST STUDENT TALK**)
- Mohan, J.A.** 2012. Using otolith chemistry as a novel proxy of hypoxia exposure in a marine fish. *Texas Bays and Estuaries Meeting*, Port Aransas, Texas
- Mohan, J.A.** 2010. Earbones and ecology: using otolith chemistry to study life histories of fish. "Ecolunch" *Ecology Seminar*. University of Texas, Austin, Texas
- Mohan, J.A.** 2009. Habitat utilization of juvenile striped bass *Morone saxatilis* in Albemarle Sound inferred from otolith and water chemistries. *Biology Seminar*, East Carolina University, Greenville, North Carolina
- Mohan, J.A.** and R.A. Rulifson. 2009. Validation of habitat-specific elemental otolith signatures in juvenile striped bass using in situ caging experiments. *2nd Annual Fisheries and Aquatic Sciences Symposium*, Sarbanes Coastal Ecology Center, Assateague Island, Maryland
- Mohan, J.A.** and R.A. Rulifson. 2009. Movements of juvenile striped bass *Morone saxatilis* between habitats in Albemarle Sound NC inferred from otolith and water chemistry. *Southern Division of the American Fisheries Society Spring Meeting*, New Orleans, Louisiana

POSTER PRESENTATIONS

- Mohan, J.A.**, N.R. Miller, S.S. Herzka, O. Sosa-Nishizaki, S. Kohin, H. Dewar, M. Kinney, R.J.D. Wells. 2017. Exploring natural chemical tracers in shark vertebrae to assess migration patterns. *Tuna Conference*, Lake Arrowhead, California & *North American Workshop on Laser Ablation*, Austin, Texas
- R.J.D. Wells, J.M. Drymon, B. Falterman, G.W. Stunz, M.J. Ajemian, T. TinHan, **J.A. Mohan**, E.R. Hoffmayer, W.B. Driggers III, J.A. McKinney. 2016. Movement and oceanographic preferences of scalloped hammerhead sharks (*Sphyrna lewini*) in the Gulf of Mexico. *Gulf and Caribbean Fisheries Institute*, Grand Cayman, Cayman Islands
- Mohan, J.A.** T.T. Sutton, A.B. Cook, K. Boswell, R.J.D. Wells. 2016. Influence of physical oceanographic features on post-larval and juvenile carangid fishes in the Gulf of Mexico. *Gulf and Caribbean Fisheries Institute*, Grand Cayman, Cayman Islands
- Mohan, J.A.**, and B.D. Walther. 2016. Natural chemical tags reveal trophic resilience of demersal fish to hypoxia exposure. *Ocean Sciences Meeting*, New Orleans, Louisiana
- Attwood, E., S. Smith, T. Connelly, **J. Mohan**, B. Walther, J. McClelland. 2014. Using lipid stable isotopes to understand diet assimilation in experimental Atlantic croaker. *Gulf Estuarine Research Society*, Port Aransas, Texas
- Mohan, J.A.**, and B.D. Walther. 2014. Estimating immigration of juvenile Atlantic croaker into Texas estuaries using tissue stable isotope analysis. *Texas Bays and Estuaries Meeting*, Port Aransas,

Texas (**BEST STUDENT POSTER 3rd PLACE**)

- Mohan, J.A.**, B. Walther, P. Thomas, M.S. Rahman. 2012. Using otolith chemistry as a novel proxy of hypoxia exposure in a marine fish. *Association for the Sciences of Limnology and Oceanography Ocean Sciences Meeting*, Salt Lake City, Utah
- Mohan, J.A.**, B. Walther, P. Thomas, M.S. Rahman. 2011. Investigating relationships between hypoxia exposure and otolith chemistry in experimental and natural conditions. *21st Biennial Conference of the Coastal, Estuarine, Research, Federation*, Daytona Beach, Florida
- Mohan, J.A.**, R.A. Rulifson, D.R. Corbett, and N.M. Halden. 2010. Validation of oligohaline elemental otolith signatures of striped bass *Morone saxatilis* using in situ caging experiments and water chemistry. *11th Annual Banquet of the East Carolina University Student Subunit of the American Fisheries Society*, Greenville, North Carolina
- Mohan, J.A.**, R.A. Rulifson, and D.R. Corbett. 2009. Variability of water chemistry in Albemarle Sound: a basis for inferring habitat residence of juvenile striped bass using otolith microchemistry. *10th Annual Banquet of the East Carolina University Student Subunit of the American Fisheries Society*, Greenville, North Carolina

PUBLIC OUTREACH

- Mohan, J.A.** 2016. Out of breath and hungry: the effects of hypoxia on feeding dynamics of Atlantic croaker using natural chemical tags. American Fisheries Society Estuaries Section Spring Newsletter: <http://estuaries.fisheries.org>
- Binion-Rock, S., A. Bogdanoff, K. Dahl, J. Granneman, H. Harris, **J. Mohan**, M. Rudd, M.K. Swenarton, M. Allen, D. Chagaris, R. Ahrens, W. Patterson and J. Morris. 2015. Modeling lionfish management strategies on the west Florida Shelf. REEF Open House, Key Largo, Florida
- Mohan, J.A.** 2015. What can fish ear-bones tell us about low-oxygen zones? University of Texas Marine Science Institute Public Lecture Series, Port Aransas, Texas
- Mohan, J.A.** 2012. Using water chemistry and fish otoliths to investigate nursery habitats in the Mission-Aransas National Estuarine Research Reserve "Bay Talks" Public Lecture Series, Rockport, Texas
- Weinke, R. 2009. Otolith IDs: Tracing elements of prime habitat. *Coastwatch Magazine*, Winter Issue 2009: pp 18-22. [Profile article about my Master's research] Online: <http://ncseagrant.ncsu.edu/coastwatch/previous-issues/2009-2/winter-2009/>

PROFESSIONAL SOCIETIES & CERTIFICATIONS

Associate Fisheries Professional Certification, American Fisheries Society
 American Fisheries Society (AFS) member
 Coastal and Estuarine Research Federation (CERF) member
 Association for the Sciences of Limnology and Oceanography (ASLO)
 Gulf Estuarine Research Society (GERS) member
 Texas Chapter, American Fisheries Society member

PROFESSIONAL SERVICE

2012-current Manuscript referee (14 journals): *Hydrobiologia*, *North American Journal of Fisheries Management*, *Journal of Fish Biology*, *PLOS One*, *Marine and Freshwater Research*, *Marine Ecology Progress Series*, *Environmental Biology of Fishes*, *Fisheries Research*, *ICES Journal of Marine Science*, *Journal of Applied Ichthyology*, *Boreal Environment Research*, *Aquaculture Environment Interactions*, *Science of the Total Environment*, *CalCOFL Reports*

2008-2009 Vice President, East Carolina University Student Subunit, American Fisheries Society

PARTICIPATION IN SCIENTIFIC EXPEDITIONS

24-29 July 2016, Gulf of Mexico, *R/V Blazing Seven*, Summer Ichthyoplankton Survey
3-8 November 2015, Gulf of Mexico, *M/V OCEARCH*, Expedition Gulf of Mexico
9-23 October 2012, Gulf of Mexico, *R/V Oregon II*, NOAA SEAMAP Fall Groundfish Survey
30 July – 4 August 2012, Gulf of Mexico, *R/V Pelican*, Effects of hypoxia on Atlantic croaker
8-12 October 2011, Gulf of Mexico, *R/V Pelican*, Effects of hypoxia on Atlantic croaker
3-8 October 2010, Gulf of Mexico, *R/V Pelican*, Effects of hypoxia on Atlantic croaker

VOULNTEER ACTIVITIES AND SERVICE

2016-2017 Science Olympiad K-12 Competition, Texas A&M University Galveston
2010-2014 Deep Sea Roundup and Outboard Motor fishing tournament volunteer judge, Port Aransas, Texas
2012-2014 UTMSI Graduate Student Association Social Chair
2012-current UTMSI Green Team (environmental awareness club)
2013-2014 UTMSI Summer Science program for 1st-8th graders
2013-2014 Port Aransas Science Fair poster judge
2005 Volunteer Student Conservation Association Intern, National Park Service, Great Smoky Mountains National Park, Gatlinburg, NC
2002-2006 Penn State Fly-Fishing Club Officer