

CURRICULUM VITAE

Matthew Edward Lee Altenritter

POSTDOCTORAL RESEARCH ASSOCIATE

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EDUCATION:

Ph.D.	2015	Biological Sciences	University of Maine
M.S.	2010	Biology	Grand Valley State University
B.S.	2008	Biology	Grand Valley State University

PROFESSIONAL POSITIONS:

2017- Postdoctoral Research Associate, Illinois Natural History Survey, Illinois River Biological Station, Havana, IL

2015-2017 Postdoctoral Research Associate, Texas A&M University-Corpus Christi, Department of Life Sciences, Corpus Christi TX

PEER REVIEWED PUBLICATIONS:

Altenritter, M.E., A. Cohuo, and B.D. Walther. 2018. Proportions of demersal fish exposed to sublethal hypoxia revealed by otolith chemistry. *Marine Ecology Progress Series* 589:193:208.

Altenritter, M.E., G.B., Zydlewski, M.T. Kinnison, J.D. Zydlewski, and G.S. Wippelhauser. 2018. Understanding the basis of shortnose sturgeon (*Acipenser brevirostrum*) partial migration in the Gulf of Maine. *Canadian Journal of Fisheries and Aquatic Sciences* 75:464-473.

Harris, B.S., C.R. Ruetz III, A.C. Wieten, and **M.E. Altenritter**. 2017. Age, growth, and status of a remnant population of lake sturgeon in the Muskegon River system, USA. *Journal of Applied Ichthyology* 33:338-346.

Altenritter, M.E., M. Kinnison, G. Zydlewski, D. Secor, J. Zydlewski. 2015. Assessing dorsal scute microchemistry for reconstruction of shortnose sturgeon life histories. *Environmental Biology of Fishes* 98:2321-2335.

Altenritter, M.E.L., A. C. Weiten, C.R. Ruetz III, and K.M. Smith. 2013. Seasonal spatial distribution of juvenile lake sturgeon in Muskegon Lake, MI. *Ecology of Freshwater Fish* 22:467-478.

MANUSCRIPTS IN REVIEW:

Altenritter, M.E., and B.D. Walther. In Review. The legacy of hypoxia: tracking the effects of low oxygen exposure over time in demersal fish with geochemical tracers. In Review at *Transactions of the American Fisheries Society*

Altenritter, M.E., S. Pescitelli, A. Whitten, and A.F. Casper. In Review. Implications of invasive species barriers for connectivity in rivers: potential trade-offs between limiting the spread of invasive carps and continuing the long-term recovery of native fish assemblages. In Review at *River Research and Applications*

MANUSCRIPTS IN PREPARATION:

Altenritter, M.E., G.B. Zydlewski, M.T. Kinnison, and J.D. Zydlewski. In Prep. Shortnose sturgeon population viability in the Gulf of Maine. Target Journal: *Transactions of the American Fisheries Society*

Altenritter, M.E., M.T. Kinnison, and G.B. Zydlewski. In Prep. Beyond otoliths: scutes. *Book chapter* to be published in "Otolith chemistry: a window in the lives of fishes." To be published by Springer-Nature, edited by Benjamin Walther, Karin Limburg, Francoise Daverat, Gilles Bareille, and Pedro Morais

ACADEMIC AWARDS:

- 2014 – Penobscot Valley Conservation Association Horace Bond Scholarship
- 2011 – GVSU Outstanding Graduate Student in Biology
- 2010 – GVSU Graduate Dean's Academic Excellence Award

GRANTSMANSHIP:

Funded

- 2016 -Texas A&M University-Corpus Christi Postdoctoral Travel Award (\$500)
 - “Investigating resiliency in a key fish species exposed to anthropogenic hypoxia inhabiting the northern Gulf of Mexico”, **Co-PI**, Texas A&M University-Corpus Christi Research Enhancement Grant (\$5,000)
- 2014 -Inez Boyd Environmental Research Award (\$1,000)
 - UMaine Graduate Student Government Travel to Present Award (\$636)

- UMaine School of Biology and Ecology Student Travel Award (\$500)
- 2012 -North American Sturgeon and Paddlefish Student Travel Award (\$200)
- American Fisheries Society Skinner Memorial Fund Award (\$800)
- 2011 -UMaine High End Instrumentation Research Grant (**Co-PI**) (\$2,765)
- 2010 -Great Lakes Fishery Commission Travel Award (\$1,172)
- 2008 -Student Travel Grant-In-Aid, Grand Valley State University (\$360)
- 2007 -GVSU Student Summer Scholar Research Grant (\$3,000)
- Bill and Diana Wipperfurth Student Research Scholarship (\$1,800)
- 2004 -American Fisheries Society Hutton Scholar (\$3,000)

Not-Funded

- 2016 -NOAA Restore Act Science Program, Altenritter Co-PI funded for 30 months (\$748,504)
- 2015 -Saltonstall-Kennedy Competitive Research Program (NMFS/NOAA), Altenritter Co-PI funded for 14 months (\$207,796)

TEACHING EXPERIENCE:

Texas A&M University-Corpus Christi

- Guest Lecturer: Fisheries Techniques (Graduate-Level, Spring 2017)
- Guest Lecturer: Principles of Ecology (Undergraduate-Level, Fall 2016)
- Guest Lecturer: Fisheries Biology and Management (Graduate-Level, Fall 2016)

University of Maine

- Teaching Assistant: Vertebrate Biology (Undergraduate, Fall 2014)
- Teaching Assistant: Ecological Statistics (Undergraduate, Spring 2014)
- Guest Lecturer: Biology of Marine Vertebrates (Undergraduate, Fall 2013)
- Guest Lecturer: Biology of Marine Vertebrates (Undergraduate, Fall 2012)
- Teaching Assistant: Introductory Biology (Undergraduate, Fall 2011)

INVITED PRESENTATIONS (6 as primary author):

- 2018 **Altenritter ME**, and Walther BD. Redox-sensitive chemical markers reveal evidence of exposure and tolerance to hypoxia in a demersal fish. Oral presentation, Annual meeting of the American Fisheries Society, Atlantic City, NJ, August 23.

Altenritter ME, Pescitelli S, Whitten A, and Casper A. Unintended consequences of invasive species management: invasive carp barriers may constrain the native fish assemblage. Oral presentation, Annual meeting of the American Fisheries Society, Atlantic City, NJ, August 22.

Altenritter, ME., and Casper A. Mitigating for barriers to Asian carp movement: implications for native aquatic taxa. Invited Oral Presentation, Annual meeting of the Upper Mississippi River Conservation Committee, Collinsville, IL, March 22.

- 2017 **Altenritter ME.** Hard-part microchemistry in fishes: conservation insight and environmental exposure. Invited seminar, Southern Illinois University, Carbondale, IL, November 2.

Altenritter ME. Hard-part microchemistry in fishes: conservation insight and environmental exposure. Invited seminar, Western Illinois University, Macomb, IL, October 18.

Altenritter ME, and Walther BD. Live fish and the dead zone: using otoliths to track hypoxia exposure in Atlantic croaker. Invited Seminar, Harte Research Institute Seminar, Texas A&M University-Corpus Christi, Corpus Christi, TX, March 1.

PLATFORM PRESENTATIONS (31 as primary author):

- 2018 **Altenritter ME**, and Casper A. Unintended consequences of invasive species management: Asian carp barriers may also constrain long-terms dynamics of the native fish assemblage. Oral presentation, Annual meeting of the Society for Freshwater Science, Detroit, MI, May 24.

Altenritter ME, and Casper A. Unintended consequences of invasive species management: Asian carp barriers may also constrain long-terms dynamics of the native fish assemblage. Oral presentation, Emiquon Science Symposium, Lewiston, IL, May 9.

Altenritter ME, and Casper A. Mitigating for barriers to Asian carp movement: implications for native aquatic taxa. Oral presentation, Annual meeting of the IL Chapter of the American Fisheries Society, Grafton, IL, February 23.

Altenritter ME, and Casper A. Mitigating for barriers to Asian carp movement: implications for native aquatic taxa. Oral presentation, Midwest Fish and Wildlife Conference, Milwaukee, WI, January 30.

- 2016 **Altenritter ME**, Walther BD, and Mohan JA. Effects of sublethal hypoxia exposure recorded in otoliths of the ubiquitous Atlantic croaker (*Micropogonias undulatus*) in the northern Gulf of Mexico. Oral presentation. Annual meeting of the American Fisheries Society, Kansas City, MO, August 21-26.

Altenritter ME, and Walther B. Migratory diversity in Atlantic croaker from the northern Gulf of Mexico: implications for understanding the sublethal consequences of hypoxia exposure. Oral presentation. International Congress on the Biology of Fish, San Marcos, TX, June 12-16.

Altenritter ME, Walther BD, and Mohan JA. Geochemical indicators of sublethal hypoxia exposure in otoliths of a ubiquitous demersal fish species in the northern Gulf of Mexico. Poster presentation. Annual Ocean Sciences meeting, New Orleans, LA, February 21-26.

- 2015 **Altenritter ME**, Kinnison MT, Zydlewski GB, Secor DH, and Zydlewski JD. Using dorsal scutes to infer origins and life histories of shortnose sturgeon. Oral presentation. Annual meeting of the American Fisheries Society, Portland, OR, August 16-22.

Altenritter ME, Zydlewski GB, and Kinnison MT. Shortnose sturgeon of the Gulf of Maine: a regional perspective. Oral presentation. Penobscot Valley Chapter of the Maine Audubon Society, May 21.

Altenritter ME, Zydlewski GB, Kinnison MT, Zydlewski JD, Secor DH, and Sigourney D. Shortnose sturgeon population dynamics in the Gulf of Maine. Oral presentation. Annual meeting of the Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono. March 25.

- 2014 **Altenritter ME**, Kinnison MT, Zydlewski GB, Zydlewski JD, and Yates M. Using dorsal scutes to infer origins and life histories of shortnose sturgeon. Oral presentation. Annual meeting of the American Fisheries Society, Quebec City, QC, August 17-21.

Altenritter ME, Zydlewski GB, Kinnison MT, Zydlewski JD, Secor DH, and Sigourney D. Population dynamics of shortnose sturgeon in the Gulf of Maine. Oral presentation. Annual meeting of the Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono. April 2.

Altenritter ME, Kinnison MT, Zydlewski GB, Zydlewski JD, and Yates M. Shortnose sturgeon life histories and origins: inferences from microchemistry. Poster presentation. Annual meeting of the Maine Cooperative Fish and Wildlife Research Unit, University of Maine, Orono. April 2.

Altenritter ME, Kinnison MT, Zydlewski GB, Zydlewski JD, and Yates M. Assessing the applicability of using dorsal scutes to infer origins and life histories of shortnose sturgeon. Oral presentation. Atlantic Salmon and Their Environment Meeting, University of Maine Orono, January 8-9.

- 2013 **Altenritter ME**, Dzaugis M, Zydlewski GB, Kinnison MT, Zydlewski JD, and Wippelhauser GS. Shortnose sturgeon of the Penobscot: local residency and regional connections. Poster presentation. Meeting of the Diadromous Species Restoration Research Network, University of Maine, Orono, ME, January 10-11.
- 2012 **Altenritter ME**, Zydlewski GB, Kinnison MT, Wippelhauser GS, and Sulikowski J. Demography of a potential shortnose sturgeon metapopulation in the Gulf of Maine: recovery implications. Oral presentation. Annual meeting of the American Fisheries Society, St. Paul, MN August 19-23.
- Altenritter ME**, Zydlewski GB, Lachepelle K, Wegener M, Kinnison MT, and Zydlewski JD. Evaluating restoration outcomes of the Penobscot River project: an assessment of pre-dam removal conditions. Oral presentation. Maine Water Conference, Augusta, ME March 14.
- Altenritter ME**, Zydlewski GB, Kinnison MT, and Zydlewski JD. Coastal river connectivity and shortnose sturgeon: a metapopulation perspective. Oral presentation. Atlantic Salmon Forum, Bangor, ME January 10-11.
- 2011 **Altenritter ME**, Zydlewski GB, Kinnison MT, Zydlewski JD, Wippelhauser GS, and Sulikowski JA. Coastal river connectivity and shortnose sturgeon: a metapopulation perspective. Poster presentation. Annual meeting of the American Fisheries Society, Seattle, WA September 4-8.
- 2010 **Altenritter ME**, Ruetz CR III, and Smith KM. Movement and habitat use of juvenile lake sturgeon (*Acipenser fulvescens*) in a Lake Michigan tributary. Oral presentation. Annual meeting of the American Fisheries Society, Pittsburgh, PA September 12-16.
- Altenritter ME**, Ruetz CR III, and Smith KM. Status of lake sturgeon reproduction in the Muskegon River. Poster presentation. 2nd annual Graduate Education Day held in the state capitol, Lansing, MI April 13th.
- Altenritter ME**, Ruetz CR III, and Smith KM. Reproductive status and juvenile ecology of lake sturgeon in the Muskegon River. Oral presentation. American Fisheries Society (Michigan chapter) annual meeting, Grayling, MI. February 24-25.
- 2009 **Altenritter ME**, Ruetz CR III, and Smith KM. Reproductive status and juvenile ecology of lake sturgeon in the Muskegon River. Oral presentation. Midwest Fish and Wildlife Conference, Springfield, IL. December 6-9.
- Altenritter ME**, Ruetz CR III, and Smith KM. Status of lake sturgeon reproduction in the Muskegon River. Poster presentation. Annual meeting of the North American Benthological Society, Grand Rapids, MI. May 16-23.

Altenritter ME, Ruetz CR III, and Smith KM. Reproductive status and early life history of lake sturgeon in the Muskegon River. Poster presentation. American Fisheries Society (Michigan chapter) annual meeting, Dundee, MI. March 17-19.

- 2008 **Altenritter ME**, Ruetz CR III, and Smith KM. Status of lake sturgeon reproduction in the Muskegon River. Poster presentation. Midwest Fish and Wildlife Conference, Columbus, OH, December 14-17.

Altenritter ME, Ruetz CR III, and Smith KM. Recruitment dynamics and movement patterns of lake sturgeon in the Muskegon River system. Poster presentation. Great Lakes Lake Sturgeon Coordination Meeting, Port Huron, MI. December 3-4.

Altenritter ME, and Ruetz CR III. Risk of predation across a gradient of habitat structure: are results scale dependent? Oral presentation. Annual meeting of the North American Benthological Society, Salt Lake City, UT. May 25-30.

Altenritter ME, and Ruetz CR III. Risk of predation across a gradient of habitat structure: are results scale dependent? Oral presentation. American Fisheries Society (Michigan chapter) annual meeting, Lake Superior State University, Sault Ste. Marie, MI. March 3-5.

- 2007 **Altenritter ME**, and Ruetz CR III. Risk of predation to stream invertebrates by fish across a gradient of habitat complexity. Poster presentation. 1st Annual West Michigan Regional Undergraduate Science Research Conference, Van Andel Institute, Grand Rapids, MI. October 20.

Altenritter ME, and Ruetz CR III. Risk of predation to stream invertebrates by fish across a gradient of habitat complexity. Poster presentation. Student Summer Scholars Showcase, Grand Valley State University, Allendale, MI. July 30.

PROFESSIONAL MEMBERSHIPS:

American Fisheries Society (Education, Estuaries, & Marine Fisheries Sections)
The Society for Freshwater Science

PROFESSIONAL SERVICE AND ACTIVITIES:

Mentoring

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| 2016-2017 | Alfonso Cohuo (McNair Scholar Co-Advisor) – Fish condition and hypoxia exposure |
| 2012-2013 | Matthew Dzaugis (UMiane Honors Committee) – Sturgeon diet and prey availability |

New Faculty Development

2012-2017 Faculty Research Development Program, TAMU-CC

Symposia and Workshops Organized

- 2017 Workshop: "Otolith Microchemistry 101: An Introduction for Fisheries Scientists" at the annual meeting of the Texas Chapter of the AFS
2016 Symposium: "Effects of Drought on Aquatic Resources, Fisheries Management, and Mitigation Strategies" 2016 AFS meeting Kansas City, MO

Workshops Attended

- 2018 -Conflict Resolution Skills in Fish and Wildlife Management, Midwest Fish and Wildlife Conference, January
2017 -Broader Impacts in Research. TAMU-CC, February
-Hands-On Minds-On Teaching: Active Strategies for Improving Student Learning Outcomes. TAMU-CC, January
2016 Grant Writing Workshop." TAMU-CC, September 2016

Committee Member

- 2012-2015 UMaine Graduate Student Health Insurance Committee
2013-2015 UMaine Graduate Student Government Senator
2013-2014 UMaine Mentor Awards Committee
2013 UMaine Biology and Ecology Seminar Coordination Committee
2012 UMaine Fish Club Secretary
2008-2010 Michigan AFS Student Concerns Committee
2007 GVSU Teaching Awards Committee Member

Peer Reviewer

Canadian Journal of Fisheries and Aquatic Sciences, Environmental Biology of Fishes, Estuaries and Coasts, Fishery Bulletin, Fisheries Research, Journal of Fish Biology, Journal of Applied Ichthyology, Journal of Visualized Experiments, Marine Ecology Progress Series, New York Sea Grant, Transactions of the American Fisheries Society

OUTREACH ACTIVITIES:

Public Events

- 2017 Illinois Natural History Survey, Asian carp control, Scheels Hunting Expo

K-12 Education

- 2014 Water World week, Maine Audubon Society Children's Camp (ages 8-10)

2012 Weatherbee Elementary School, Hampden, ME, Atlantic sturgeon of Maine

Media

2013 CBS News Crew, "Maine's Penobscot River restored after 200 years." Link: <http://www.cbsnews.com/videos/maines-penobscot-river-restored-after-200-years/>
AquaKids TV Host, Penobscot River Sturgeon, Link: www.aquakids.tv

PROFESSIONAL REFERENCES:

Dr. Andrew Casper, Director of Freshwater Research, John G. Shedd Aquarium
The John G. Shedd Aquarium Office: (312) 692-2724
1200 S. Lake Shore Drive Email: acasper@sheddaquarium.org
Chicago, IL, 60605

Dr. Benjamin Walther, Assistant Professor, Texas A&M University Corpus Christi
Department of Life Sciences Office: (361) 825-4168
6300 Ocean Drive, Unit 5858 Fax: (361) 825-2742
Corpus Christi, TX 78412 Email: benjamin.walther@tamucc.edu

Dr. Gayle Zydlewski, Associate Professor, University of Maine
School of Marine Sciences Office: (207) 581-4365
5741 Libby Hall RM 202 Fax: (207) 581-4388
Orono, ME 04469 E-mail: gayle.zydlewski@maine.edu