

ADRIAN JORDAAN

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Degrees:

Ph.D. 2006. Marine Biology. University of Maine.

M.S. 2002. Marine Biology. University of Maine.

B.Sc. (honours). 1998. Biology. Memorial University of Newfoundland.

UMass Employment:

2012, Assistant Professor, 2018, Associate Professor

RESEARCH

Areas of specialization: Fisheries, modeling, historical ecology, human-nature interactions.

Research Description: I am interested in (1) understanding the influence of environmental variables on growth, survival and movement of individuals and populations, (2) elucidating the temporal and spatial structure and function of ecosystems, and how species connect them, and (3) determining the best management policies given the environmental constraints on growth, survival and geographic distributions of fish. Currently, I work on ecosystem change in the northwestern Atlantic, movements and management of river herring and a suite of Caribbean fish, phenological changes in marine mammals, seabirds, invertebrates and fishes, strategy to improve current restoration policies, and spatial aspects of marine ecosystems including how to best design protected areas in temperate and tropical ecosystems.

Current student research projects

Matthew Devine. Ph.D. Environmental Conservation, expected May 2022, co-advised with Dr. AH. Roy.

Exploration of patterns in river herring growth and mortality towards improved population assessment.

Benjamin Gahagan. Ph.D. Environmental Conservation, expected May 2022, co-advised with Dr. A

Whiteley. Exploring links between striped bass movements and genomics.

Lian Guo. Ph.D. Organismic and Evolutionary Biology, expected May 2021, co-advised with Dr. Steven

McCormick. Environmental factors controlling growth tradeoffs in river herring.

Beatriz Dos Santos Diaz. Ph.D. Environmental Conservation, expected graduation May 2019. Ecosystem modeling and management of fisheries.

Keenan Yakola. MS Environmental Conservation, expected December 2018, co-advised with Dr.

Michelle Staudinger). Long-term diet shifts in terns on Gulf of Maine nesting islands.

Michael Long. M.S. Environmental Conservation, expected 2019, co-advised with Dr. Theodore Castro-Santos). Acoustic telemetry of horseshoe crabs in Wellfleet Harbor.

Grants received (active):

National Science Foundation, Division of Biological Infrastructure. 2018-2019. \$ 24,986. Developing a Strategic Plan for Coastal Resilience and Sustainable Fisheries at the Gloucester Marine Station. (Co-PI)

United States Geological Survey. 2018-2019. \$62,067. Modification to “How and why is the timing and occurrence of seasonal migrants in the Gulf of Maine changing due to climate?”. Marine risk mapping for endangered North Atlantic right whales in Massachusetts waters. (PI)

The Nature Conservancy. 2018-2019. \$45,533. Linking Life Stages, Part 2: Inter-annual Variation in Juvenile River Herring Productivity. (Co-PI)

Massachusetts Division of Marine Fisheries. 2017-2020. \$60,000. Linking Life Stages, Part 2: Inter-annual Variation in Juvenile River Herring Productivity. (Co-PI)

United States Geological Survey. 2016-2019. \$175,737. How and why is the timing and occurrence of seasonal migrants in the Gulf of Maine changing due to climate? (PI)

The National Park Service. 2016-2020. \$37,000. Buck Island Reef National Monument Acoustic Array. (PI).

Books/Monographs

None

Book chapters (since 2012, from a total of 1):

Lopez et al. (32 authors) In Press. *Biology and ecology of Long Island Sound* In: Long Island Sound. Latimer, J.S., Stacey, P.E., Yarish, C., Swanson, R.L., Garza, C., Tedesco, M.A. (Eds.)

Refereed Journal Articles (last 5, from a total of 31),¹Graduate student advised, ²Committee:

Ryan¹, K., A.J. Danylchuk and A. Jordaan. Online First. Is marine spatial planning enough to overcome biological data deficiencies? *Journal of Environmental Assessment Policy and Management*.
<https://www.worldscientific.com/doi/pdf/10.1142/S1464333218500126>

Marjadi², M., A.H. Roy, A. Jordaan, B.I. Gahagan¹, M. Armstrong and A.R. Whiteley. In Press. Larger body size and earlier run timing increase alewife reproductive success in a whole lake experiment. *Canadian Journal of Fisheries and Aquatic Sciences*

Devine¹, M.D., A.H. Roy, A.R. Whiteley, B.I. Gahagan¹, M.P. Armstrong and A. Jordaan. 2018. Precision and relative effectiveness of a purse seine for sampling age-0 river herring in lakes. *North American Journal of Fisheries Management*. 38(3): 650-662.

Rosset¹, J., A.H. Roy, B. Gahagan¹, A. Whiteley, M. Armstrong, J. Sheppard and A. Jordaan. 2017. Temporal patterns of river herring migration and spawning in coastal Massachusetts. *Transactions of the American Fisheries Society*. 146(6): 1101-1114.

Mattocks¹, S., C.J. Hall and A. Jordaan. 2017. Damming, lost connectivity and the historical role of anadromous fish in freshwater ecosystem dynamics. *BioScience* 67(8): 713-728.*EDITOR'S CHOICE

TEACHING

UMass Teaching and Evaluations (2012/13-2018/19):

NRC 571 Fisheries Science and Management (alternate spring semesters)

ECO 757 Advanced Fisheries Science and Management (alternate spring semesters)

NRC 214 Fish Identification and Sampling (Fall semesters)

NRC 197B Blue Planet: Dynamic Oceans (Spring semester 2018)

ECO 697MP Coastal Marine Spatial Planning (alternate spring semesters),

1 week of OEB Core Ecology Course (Graduate level),

Provide a lecture for Marine Ecology, Ecology of Diadromous Fishes, Water Geographies (Geosciences Department) at the University of Massachusetts Amherst.

SERVICE

UMass highlights

Director, University of Massachusetts Amherst Marine Laboratory in Gloucester, MA. 2015-Present
Chair of Search Committees for 1 tenure track and 1 extension faculty hire in 2017.

Non-UMass highlights

Invited panelist for NOAA Habitat Enterprise Fish Passage Program Review, June 2018, Washington DC.
Chaired Organizing Committee for 2016 International Conference on River Connectivity. Amherst, MA.
Organized symposium: River Herring: Towards a Holistic Understanding. 2014 American Fisheries Society Annual Meeting. Quebec, Canada

Lenfest Ocean Program forage fish and historical ecology workshops 2012-2014. (3 in 2012, 2 in 2013, 1 in 2014). Workshop chair for all, working towards models needed in Lenfest Ocean Program funded project.