MICHAEL J. McCANN

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Summary

Ph.D. ecologist. Research and conservation action in urban and rural coastal systems. Areas of expertise include shellfish, salt marshes, eelgrass, fisheries, aquaculture, invasive species, oil spills, water quality, and sea level rise. Ability to collaborate with and lead diverse teams, facilitate meetings with internal team members and external partners, and manage complex projects. Passion for communicating science in written, verbal, and visual forms. Committed to an evidence-based approach to the conservation and restoration of natural resources and the resiliency and well-being of coastal communities in a changing climate.

Skills

- Coastal ecology & climate adaptation
- Data analysis & visualization (Excel, R)
- Leading & collaborating with teams
- Facilitating meetings & partnerships
- Spatial analysis (ArcGIS, QGIS)
- Project management
- Scientific writing & literature review
- Public speaking
- Design of experiments & field surveys
- Formal & informal education & outreach

Education

Doctor of Philosophy: Ecology and Evolution 2015
Stony Brook University

Bachelor of Science: Environmental Science 2008
University of Notre Dame

Experience

Urban Marine Ecologist June 2016 – Present
The Nature Conservancy, New York, NY
- Leads oyster restoration science in NY Harbor and manages The Conservancy's partnership with Billion Oyster Project. Produced three scientific reports on the status and ecosystem services of oysters.
- Coordinating The Conservancy's engagement (across three Divisions) with the US Army Corps of Engineers on flood mitigation projects in NY/NJ Harbor and the lower Hudson River.
- Developing The Conservancy's climate adaptation strategy for floodplains in NY as a core member of the New York State Climate Adaptation team.
- Maintains relationships with academic, non-governmental, and government partners regarding New York City coastal issues (restoration, water quality, sea level rise).

Postdoctoral Research Associate June 2015 – June 2016
Rutgers University, Department of Marine and Coastal Sciences
- Used ecosystem modeling to study marsh food webs after the 2010 Deepwater Horizon oil spill.
- Conducted field and lab experiments to determine predator-prey interactions in marshes.
- Responsible for study design, implementation, analysis, and publication.
- Supervised and mentored a research team of technicians, undergraduates, and high school students.

Research Assistant   Jan. 2011 – Aug. 2013
Stony Brook University, Dept. of Ecology & Evolution, Marine Ecology Laboratory
- National Science Foundation funded research on larval & juvenile stages of marine molluscs.
- Responsible for experimental design and data collection, management, & analysis.
- Communicated with and prepared reports for principal investigators.
- Conducted literature review and wrote manuscripts for peer-reviewed journal publication.
- Supervised and mentored research team of graduate, undergraduates, and high school students.

Instructor and Teaching Assistant   Aug. 2008 – June 2015
Stony Brook University, Undergraduate Biology Department
- Head instructor of two courses: Invertebrate Zoology and Introductory Biology
- Teaching assistant for seven courses including: Ecology, Applied Population Ecology and Conservation
- Designed curriculum including lectures, exams, quizzes, in-class activities, online discussion boards, and lab activities.

Publications & Reports

Reports & Book Chapters

Burmester EM, **McCann MJ.** 2019. New York City Oyster Monitoring Report: 2018. Billion Oyster Project & The Nature Conservancy, New York, NY.

McCann MJ. 2019. Restoring Oysters to Urban Waters: Lessons Learned and Future Opportunities in NY/NJ Harbor. The Nature Conservancy, New York, NY.

McCann MJ. 2018. New York City Oyster Monitoring Report: 2016-2017. The Nature Conservancy, New York, NY.

Vasslides J, **McCann MJ**, Jensen O. 2015. Ecosystem Modeling of Barnegat Bay Year 3: Final Report. Report to the New Jersey Departmental of Environmental Protection.

McCann MJ. 2013. Book review of Small Impoundment Management in North America. Edited by J. Wesley Neal and David W. Willis. The Quarterly Review of Biology 88: 240.

Padilla DK, **McCann MJ**, Shumway SE. 2011. Marine invaders and bivalve aquaculture: Sources, impacts and consequences IN: *Shellfish Aquaculture and the Environment* Wiley-Blackwell.

Peer-Reviewed Publications

McCann MJ, et al. 2017. Key taxa in food web responses to stressors: The Deepwater Horizon Oil Spill. Frontiers in Ecology and the Environment 15: 142-149.

McCann MJ, et al. 2016. Evidence of alternative states in freshwater lakes: A spatially-explicit model of submerged and floating plants. Ecological Modelling 337: 298-308

McCann MJ. 2016. Response diversity of free-floating plants to nutrient stoichiometry and temperature: Growth and resting body formation. PeerJ.

McCann MJ, Padilla DK. 2015. Effects of a patchy food environment across life history stages. Journal of Experimental Marine Biology and Ecology 472: 135-141.

McCann MJ. 2015. Local and regional determinants of an uncommon functional group in freshwater lakes and ponds. PLoS ONE 10: e0131980.

Padilla DK, **McCann MJ**, McCarty-Glenn M, Hooks A, Shumway S. 2014. Effect of food on metamorphic competence in the model system, *Crepidula fornicata*. Biological Bulletin 227: 242-251.

McCann MJ. 2014. Population dynamics of the non-native freshwater gastropod, *Cipangopaludina chinensis* (Viviparidae): A capture-mark-recapture study. Hydrobiologia 730: 17-27.