



B1 Lynch Nomination GOA PT
JUNE 2016

UNITED STATES DEPARTMENT OF COMMERCE
National Oceanic and Atmospheric Administration
NATIONAL MARINE FISHERIES SERVICE
Silver Spring, MD 20910

MAY 04 2016

Chris Oliver
Executive Director
North Pacific Fishery Management Council
605 W 4th Ave, Suite 306
Anchorage, Alaska 99501

Dear Chris:

The Office of Science and Technology recommends Dr. Patrick Lynch for an appointment to the Gulf of Alaska Groundfish Plan Team for one year starting fall 2016. As National Stock Assessment Coordinator, Dr. Lynch provides national administration, coordination, representation, and advancement of NOAA Fisheries' stock assessment enterprise. Dr. Lynch established the National Stock Assessment Program and leads its Administration Team and National Stock Assessment Modeling Team. The modeling team focuses on the quantitative tools used to conduct stock assessments and provides a professional software development service for NOAA. He also leads the Stock Assessment Improvement Plan; chairs the National Stock Assessment Workshop Steering Committee; leads the Assessment Methods Working Group which oversees funding for the AD Model Builder Project and NOAA Fisheries Toolbox; and conducts national research projects.

Dr. Lynch also is a key contributor for defining the process to deem Best Scientific Information Available for stock assessments, serves on several national working groups: National Standard 1 (NS1) Technical Guidance, NS1 Implementation, Otolith Sample Size, Assessment Communication Forum, Species Information System Point of Contacts, and Developers. He also serves on the Technical Advisory Board for the Living Marine Resources Cooperative Science Centers.

Dr. Lynch also facilitates professional development of assessment scientists through staff rotations and training courses. His appointment to the Gulf Plan Team would be among the first staff rotations accomplished under that initiative. Dr. Lynch previously participated in the stock assessment for Gulf of Mexico red grouper and its review by the Gulf Council's Scientific and Statistical Committee. And he attended reviews by the Center for Independent Experts for Alaska sablefish and Alaska Pacific cod earlier this year in preparation for your consideration of this appointment.

We appreciate the opportunity to forge a direct link between our staff and the North Pacific Council's Groundfish Plan Teams and we encourage the fishery science centers to use Dr. Lynch's temporary appointment to the Gulf Plan Team as a model for enhancing professional development of their own stock assessment scientists in the future.



Some of the North Pacific Council members and staff may recall Dr. Lynch from the stock assessment module he conducts during annual Council member trainings. His CV is attached for your consideration.

Sincerely,

A handwritten signature in black ink, appearing to read 'N. Cyr', with a long horizontal flourish extending to the right.

Ned Cyr, Ph.D.
Director,
Office of Science and Technology

cc: Dr. Richard Merrick, Chief Scientist
Dr. Doug DeMaster, Alaska Fishery Center Director
Dr. James Balsiger, Alaska Regional Administrator

PATRICK D. LYNCH

NOAA Fisheries
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Silver Spring, MD 20910

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Fax: (301) 713-1875
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EDUCATION

- 2008 – 2012 **Ph.D.**, Marine Science, College of William & Mary
Virginia Institute of Marine Science, Department of Fisheries Science
Advisor: Dr. Robert J. Latour
- 2005 – 2007 **M.S.**, Marine Science, College of William & Mary
Virginia Institute of Marine Science, Department of Fisheries Science
Advisor: Dr. Robert J. Latour
- 1994 – 1998 **B.S.**, Bioengineering, Syracuse University
L.C. Smith College of Engineering and Computer Science

PROFESSIONAL EXPERIENCE

- May 2013 – present *National Stock Assessment Coordinator*, NOAA National Marine Fisheries Service (NMFS), Office of Science and Technology, Silver Spring, MD
- I serve as the Lead of NMFS' National Stock Assessment Program, providing national-scale coordination, strategic planning, and oversight of two teams that comprise the program. I manage projects and programs that intend to improve fish stock assessments to facilitate the provision of high quality scientific information to federal fishery managers. I am a lead editor supporting development of the next generation Stock Assessment Improvement Plan. I serve as program manager for two stock assessment funding opportunities and for NMFS' Assessment Methods Working Group. I am Chair of the National Stock Assessment Workshop Steering Committee, where I lead the organization of national workshops and symposia that focus on stock assessment-related topics. I support budget and planning decisions for the national stock assessment program. I supervise junior scientists, oversee their projects, and evaluate their performance; and I communicate broadly on stock assessment issues, including presentations to NMFS leadership, briefings of high-ranking government officials, and responses to Congressional inquiry. I also assist with NMFS stock assessments and conduct and contribute to fisheries research projects and publications.
- April 2012 – May 2013 *Postdoctoral Researcher*, National Marine Fisheries Service
Northeast Fisheries Science Center, Narragansett, RI
Advisors: Drs. Janet A. Nye and Jon A. Hare
- Researched the effects of climate change on river herring population dynamics in marine habitats along the east coast of North America. I used quantitative mathematical models to develop empirical relationships between river herring populations and environmental conditions, projected future environmental conditions using global climate models, and coupled empirical and climate

models to project future river herring populations. This work directly supported an Endangered Species Act listing decision for river herring.

2003 – 2005

Laboratory & Research Specialist II, College of William & Mary
Virginia Institute of Marine Science, Gloucester Point, VA

Participated in the Chesapeake Bay Multispecies Monitoring and Assessment Program (ChesMMAP) and the Northeast Area Monitoring and Assessment Program (NEAMAP). I assisted in the management, planning, and conduct of these large-scale fish research programs. I partook in multiple extended research cruises each year, and fulfilled duties of chief scientist as needed. I used standard age-determination techniques and stomach content analysis to obtain age-specific trophic interaction data. I assisted in data analysis, and report and manuscript publication. I maintained the bioacoustic sonar system and processed data files, and maintained all aspects of the water quality monitoring system.

2002 –2003

Research Technician, College of William & Mary
Virginia Institute of Marine Science, Gloucester Point, VA

Performed research for the Submerged Aquatic Vegetation Program on a seagrass restoration project in Chesapeake Bay and nearby coastal lagoons. I collected and analyzed samples to identify various species of marine flora and fauna, and constructed and maintained research instruments and equipment necessary for seed harvesting and dispersal.

RESEARCH INTERESTS

Broadly, I am interested in sustainable fishing practices and holistic ecosystem approaches to aquatic resource management. To support these objectives, my research focuses on the general topics of fish population dynamics, stock assessment, fish distributions, ecological relationships, and the influences of climate change and environmental variability on these processes.

For my Ph.D. dissertation, I studied the population dynamics of highly migratory species and the incorporation of environmental information into the stock assessment process. I evaluated approaches to estimating relative abundance from fishery-dependent data and proposed a novel method that demonstrated superior performance. I conducted an age-structured stock assessment of Atlantic blue marlin and showed that this novel method improved assessment accuracy, and I used the method to estimate historical abundance trends for 35 highly migratory species in the Atlantic Ocean.

For my M.S. thesis, I studied the feeding ecology and nutrient dynamics associated with a filter-feeding fish, Atlantic menhaden (*Brevoortia tyrannus*), to evaluate the ecological role of this commercially exploited species in Chesapeake Bay, USA.

PUBLICATIONS

Peer-Reviewed

Gorospe, K.D., W. Michaels, R. Pomeroy, C. Elvidge, **P.D. Lynch**, S. Wongbusarakum, and R.E. Brainard. *In review*. The mobilization of science and technology fisheries innovations towards an ecosystem approach to fisheries management in the Coral Triangle and Southeast Asia. *Journal of Marine Policy*.

- Dolan, T.E., **P.D. Lynch**, J.L. Karazsia, and J.E. Serafy. 2016. Statistical power to detect change in a mangrove shoreline fish community adjacent to a nuclear power plant. *Environmental Monitoring and Assessment* 188:184, doi: 10.1007/s10661-016-5177-7.
- Bell, R.J., D. Richardson, J. Hare, and **P. Lynch**. 2015. Disentangling the effects of climate, abundance and size on the distribution of marine fish: an example based on four stocks from the Northeast U.S. Shelf. *ICES Journal of Marine Science*. doi:10.1093/icesjms/fsu217
- Lynch, P.D.**, J.A. Nye, J.A. Hare, C.A. Stock, M.A. Alexander, J.D. Scott, K.L. Curti, and K. Drew. 2014. Projected ocean warming creates a conservation challenge for river herring populations. *ICES Journal of Marine Science*, doi:10.1093/icesjms/fsul134.
- Lynch, P.D.**, K.W. Shertzer, E. Cortés, and R.J. Latour. *In revision*. Abundance trends of highly migratory species in the Atlantic Ocean.
- Lynch, P.D.**, K.W. Shertzer, and R.J. Latour. 2012. Performance of methods used to estimate indices of abundance for highly migratory species. *Fisheries Research* 125-126: 27-39.
- Latour, R.J., E.J. Hilton, **P.D. Lynch**, T.D. Tuckey, B.E. Watkins, and J.E. Olney. 2012. Evaluating the current status of American shad stocks in three Virginia rivers. *Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science*. 4(1): 302-311.
- Friedland, K.D., **P.D. Lynch**, and C.J. Gobler. 2011. Time series mesoscale response of Atlantic menhaden *Brevoortia tyrannus* to variation in plankton abundances. *Journal of Coastal Research* 27(6): 1148-1158.
- Cotton, C.F., R.D. Grubbs, T.S. Daly-Engel, **P.D. Lynch**, and J.A. Musick. 2011. Age, growth and reproduction of a common deep-water shark, shortspine spurdog (*Squalus cf. mitsukurii*), from Hawaiian waters. *Marine and Freshwater Research* 62: 811-822.
- Lynch, P.D.**, J.E. Graves, and R.J. Latour. 2011. Challenges in the assessment and management of highly migratory bycatch species: a case study of the Atlantic marlins. Pages 197-225 *in* W. W. Taylor, A. J. Lynch, and M. G. Schechter, editors. *Sustainable fisheries: multilevel approaches to a global problem*. American Fisheries Society, Bethesda, MD.
- Lynch, P.D.**, M.J. Brush, and R.J. Latour. 2011. Simulated short-term impacts of the Atlantic menhaden reduction fishery on Chesapeake Bay water quality. *North American Journal of Fisheries Management* 31(1): 70-78.
- Lynch, P.D.**, M.J. Brush, E.D. Condon, and R.J. Latour. 2010. Net removal of nitrogen through ingestion of phytoplankton by Atlantic menhaden (*Brevoortia tyrannus*) in Chesapeake Bay. *Marine Ecology Progress Series* 401:195-209.

Non-Peer-Reviewed

- Methot, Jr., Richard D. (editor). 2015. Prioritizing fish stock assessments. U.S. Dep. Commer., NOAA Tech. Memo. NMFS-F/SPO-XXX, 31 p.

- PIFSC. 2015. Science and technology to promote sustainable fisheries in Southeast Asia and the Coral Triangle. NOAA Fisheries Pacific Science Center, PIFSC Special Publication, SP-15-002, 66p.
- Nye, J.A., **P.D. Lynch**, M. Alexander, C. Stock, and J. Hare. 2012. Results of preliminary analyses of the effect of climate change on river herring. Fisheries and the Environment (FATE) Annual Report 2012.
- NMFS. 2012. River herring climate change workshop report. Report to the National Marine Fisheries Service, Northeast Regional Office. December 27, 2012, 60pp.
- Lynch, P.D.** 2012. Habitat and fish population dynamics: advancing stock assessments of highly migratory species. Ph.D. Dissertation. Virginia Institute of Marine Science, College of William & Mary.
- Lynch, P.D.**, K.W. Shertzer, and R.J. Latour. 2011. An evaluation of methods for standardizing catch rates of highly migratory bycatch species. Collective Volume of Scientific Papers ICCAT. 68(4):1498-1509.
- Lynch, P.D. (Rapporteur).** 2011. Report of the 2011 Blue Marlin Stock Assessment Meeting and White Marlin Data Preparatory Meeting. International Commission for the Conservation of Atlantic Tunas. Madrid, Spain, 25 – 29 April, 2011.
- Lynch, P.D. (Rapporteur).** 2010. Report of the 2010 Blue Marlin Data Preparatory Meeting. International Commission for the Conservation of Atlantic Tunas. Madrid, Spain, 17 – 21 May, 2010.
- Brush, M.J., R.J. Latour, E.A. Canuel, **P.D. Lynch**, and E.D. Condon. 2010. Modeling Atlantic menhaden in support of nutrient and multispecies management. Final report for the Environmental Protection Agency's Chesapeake Bay Program.
- Lynch, P.D.**, R.J. Latour, and M.J. Brush. 2008. Impacts of the Atlantic menhaden reduction fishery on Chesapeake Bay water quality: simulating the potential loss of filtration and nitrogen removal. Final report for Chesapeake Bay Foundation and The Nature Conservancy.
- Lynch, P.D. (Rapporteur).** 2008. Report of the 2008 Spring Species Working Groups Meeting of the Advisory Committee to the U.S. Section to the International Commission for the Conservation of Atlantic Tunas, Silver Spring, MD, 27 March, 2008.
- Lynch, P.D.** 2007. Feeding ecology of Atlantic menhaden (*Brevoortia tyrannus*) in Chesapeake Bay. Master's Thesis. Virginia Institute of Marine Science, College of William & Mary.
- Lynch, P.D. (Rapporteur).** 2006. Report of the Chesapeake Research Consortium – NOAA Chesapeake Bay Office Fish Stock Monitoring Workshop, Annapolis, MD, 7 – 9 March, 2006.

GRANTS, FELLOWSHIPS, AND AWARDS

2015 *Young Professional Highlight*, American Institute of Fishery Research Biologists.

- 2015 *Employee of the Quarter*, NOAA Fisheries Office of Science & Technology.
- 2014 *W.F. Thompson Best Paper Award*, American Institute of Fishery Research Biologists.
- 2013 *Best Student Paper, Ph.D.*, College of William & Mary, Virginia Institute of Marine Science.
- 2009 – 2012 *Population Dynamics Graduate Fellowship*, National Marine Fisheries Service and National Sea Grant Office (\$96,249).
- 2011 *Beazley Fellowship*, Virginia Institute of Marine Science Foundation, College of William & Mary (\$2100).
- 2011 *Invited Representative*, Virginia Council of Graduate Schools' Sixth Annual Graduate Research Forum, Richmond, VA.
- 2009 *Best Student Paper, M.S.*, College of William & Mary, Virginia Institute of Marine Science.
- 2008 – 2009 *Graduate Assistantship*, College of William & Mary, Virginia Institute of Marine Science.
- 2008 *Chesapeake Bay Foundation and The Nature Conservancy*, Impacts of the Atlantic Menhaden Reduction Fishery on Chesapeake Bay Water Quality: Simulating the Potential Loss of Filtration and Nitrogen Removal. (\$3,500).
- 2005 – 2007 *Graduate Assistantship*, College of William & Mary, Virginia Institute of Marine Science.
- 2007 *Student Travel Award*, College of William & Mary, Virginia Institute of Marine Science (\$100).
- 1996 – 1998 *Dean's List*, Syracuse University.
- 1996 – 1997 *Athletic Director's Academic Honor Roll*, Syracuse University.

PRESENTATIONS

Professional Society Meetings

- Methot, R.D., and **P.D. Lynch**. Performance of a fish stock assessment model that incorporates a coefficient for catch calibration. ICES Annual Science Conference, Copenhagen, Denmark, 21-25 September, 2015.
- Goethel, D.R., A. Berger, **P.D. Lynch**, and T. Quinn. Space Oddity: Recent Advances Incorporating Spatial Processes in the Fishery Stock Assessment and Management Interface. ICES Annual Science Conference, Copenhagen, Denmark, 21-25 September, 2015.
- Lynch, P.D.**, K.W. Shertzer, and R.J. Latour. Abundance trends of highly migratory species in the Atlantic Ocean. 144th Annual Meeting of the American Fisheries Quebec, CA, 17 – 21 August, 2014.
- Nye, J, **Lynch, P.**, Hare, J., Stock, C., Alexander, M., Scott, J., Curti, K., and Drew, K. Projected ocean warming poses a challenge to anadromous river herring populations. 144th Annual Meeting of the American Fisheries Quebec, CA, 17 – 21 August, 2014.
- Lynch, P.D.**, J. Nye, J. Hare, K. Curti, K. Drew, M. Alexander, J. Scott, C. Stock. Projected ocean warming poses a challenge to anadromous river herring populations. International Council for the Exploration of the Seas Annual Science Conference, Reykjavik, Iceland, 23 – 27 September, 2013.

Lynch, P.D., J. Nye, J. Hare, K. Curti, K. Drew, M. Alexander, J. Scott, C. Stock. Projected ocean warming poses a challenge to anadromous river herring populations. 26th International Congress for Conservation Biology, Baltimore, MD, 21 – 25 July, 2013.

Lynch, P.D., K.W. Shertzer, and R.J. Latour. Estimating the relative abundance of highly migratory bycatch species. 141st Annual Meeting of the American Fisheries Society, Seattle, WA, 4 – 8 September, 2011.

Lynch, P.D., K.W. Shertzer, and R.J. Latour. Estimating the relative abundance of highly migratory bycatch species. 25th Annual Meeting of the American Fisheries Society's Tidewater Chapter, Gloucester Point, VA, 10 – 12 March, 2011.

Latour, R.J., E.J. Hilton, B.E. Watkins, T.D. Tuckey, **P.D. Lynch**, and J.E. Olney. Evaluating restoration efforts of American shad in Virginia. 140th Annual Meeting of the American Fisheries Society, Pittsburgh, PA, 12 – 16 September, 2010.

Lynch, P.D., J.E. Graves, and R.J. Latour. Quantitative challenges in the assessment of highly migratory bycatch species: a case study of the Atlantic marlins. 139th Annual Meeting of the American Fisheries Society, Nashville, TN, 30 August – 3 September 2009.

Lynch, P.D., M.J. Brush, E.D. Condon, and R.J. Latour. Modeling the feeding ecology of Atlantic menhaden to address water quality concerns in Chesapeake Bay. 138th Annual Meeting of the American Fisheries Society, Ottawa, Canada, 17-21 August 2008.

Lynch, P.D., E.D. Condon, M.J. Brush, and R.J. Latour. Ingestion rates of phytoplankton by Atlantic menhaden (*Brevoortia tyrannus*) in Chesapeake Bay. 137th Annual Meeting of the American Fisheries Society, San Francisco, CA, 2-6 September 2007.

Policy/Management

Methot, R.D., and **Lynch, P.D.** Stock assessments in support of U.S. Fisheries. Fishery Management Council Member Training. Silver Spring, MD, 28 – 30 October, 2014.

Lynch, P.D. Stock assessments in support of U.S. Fisheries. Fishery Management Council Member Training. Silver Spring, MD, 22 – 24 October, 2013.

Lynch, P.D., J.A. Nye, J.A. Hare, K.L. Curti, K. Drew, M.A. Alexander, J. Scott, C.A. Stock. Projecting the effects of climate change on river herring in both freshwater and marine habitat. River Herring Climate Change Workshop. NOAA Fisheries Northeast Regional Office, Gloucester, MA, 18 – 19 July, 2012.

Lynch, P.D., K.W. Shertzer, and R.J. Latour. Estimating the relative abundance of highly migratory bycatch species. 2011 Blue Marlin Stock Assessment Meeting. International Commission for the Conservation of Atlantic Tunas, Madrid, Spain, 25 – 29 April, 2011.

Lynch, P.D., M.J. Brush, and R.J. Latour. Net removal of nitrogen through ingestion of phytoplankton by Atlantic menhaden *Brevoortia tyrannus* in Chesapeake Bay. 2010 Summer Meeting of the Atlantic States Marine Fisheries Commission, Alexandria, VA, 3 August, 2010.

Scientific Posters

Lynch, P.D., K.W. Shertzer, E. Cortés, and R.J. Latour. Abundance trends of highly migratory species in the Atlantic Ocean. ICES Annual Science Conference, Copenhagen, Denmark, 21-25 September, 2015.

Bynes, K., and **P.D. Lynch**. Models for U.S. stock assessments. 12th National Stock Assessment Workshop, Portland, OR, 13-15 August, 2015.

Wynter, K.S., Methot, R.D., Dolan, T., and **Lynch, P.**, NOAA Fisheries approach to next generation stock assessments. 144th Annual Meeting of the American Fisheries Society, San Francisco, CA, 17 – 21 August, 2014.

Lynch, P.D., R.J. Latour. Stock assessments of highly migratory species: Coping with the lack of independent scientific monitoring. World Conference on Stock Assessment Methods, Boston, MA, 17 – 19 July, 2013.

Dolan, T., K. Blackhart, R. Methot, J. Link, and **P. Lynch**. Improving NOAA Fisheries stock assessments. World Conference on Stock Assessment Methods, Boston, MA, 17 – 19 July, 2013.

Lynch, P.D., M.J. Brush, and R.J. Latour. Simulated short-term impacts of the Atlantic menhaden reduction fishery on Chesapeake Bay water quality. 25th Annual Meeting of the American Fisheries Society's Tidewater Chapter, Gloucester Point, VA, 10 – 12 March, 2011.

Lynch, P.D., M.J. Brush, and R.J. Latour. Simulated short-term impacts of the Atlantic menhaden reduction fishery on Chesapeake Bay water quality. Sixth Annual Graduate Student Research Forum. Virginia Council of Graduate Schools, Richmond, VA, 3 February, 2011.

Lynch, P.D., E.D. Condon, M.J. Brush, and R.J. Latour. Filtration rates of phytoplankton by juvenile Atlantic menhaden, *Brevoortia tyrannus*, in Chesapeake Bay. 136th Annual Meeting of the American Fisheries Society, Lake Placid, NY, 11-14 September 2006.

Lynch, P.D., J. Gartland, R.A. Johnson, E.A. Brasseur, K.A. McNamee, C.F. Bonzek, and R.J. Latour. Age-specific diet composition of summer flounder (*Paralichthys dentatus*) in Chesapeake Bay. Seventh Annual Chesapeake Bay Integrated Research Symposium, Laurel, Maryland, 27-28 April 2005.

Gartland, J., E.A. Brasseur, R.A. Johnson, and **P.D. Lynch**. Age-specific diet composition of Weakfish (*Cynoscion regalis*) in the Chesapeake Bay. Sixth Annual Chesapeake Bay Integrated Research Symposium, Laurel, Maryland, 25-26 February 2004.

PROFESSIONAL AND ACADEMIC SERVICE

Professional Society Memberships

2013 – present American Institute of Fisheries Research Biologists (AIFRB)

2006 – present American Fisheries Society (AFS)

2008 – 2013 American Association for the Advancement of Science (AAAS)

Technical Service

- 2016 *Guest Editor and organizing special issue.* Space Oddity: Recent Advances Incorporating Spatial Processes in the Fishery Stock Assessment and Management Interface. Canadian Journal of Fisheries and Aquatic Sciences.
- August 2015 *Symposium Organizer,* Incorporating Ecosystem Dynamics in Fishery Stock Assessment and Management: Progress and Challenges, 145th Annual Meeting of the American Fisheries Society, Portland, OR.
- August 2015 *Symposium Organizer,* Space Oddity: Recent Advances Incorporating Spatial Processes in the Fishery Stock Assessment and Management Interface, 145th Annual Meeting of the American Fisheries Society, Portland, OR.
- August 2015 *Organizer,* Monsters of Stock Assessment Workshop, 145th Annual Meeting of the American Fisheries Society, Portland, OR.
- August 2014 *Symposium Organizer,* The Next Generation of Fish Stock Assessments, 144th Annual Meeting of the American Fisheries Society, Québec, QC.
- August 2014 *Symposium Organizer,* Population Dynamics and Sustainable Fisheries for Highly-Migratory Large Pelagic Species, 144th Annual Meeting of the American Fisheries Society, Québec, QC.
- April 2011 *Member,* U.S. Delegation, International Commission for the Conservation of Atlantic Tunas, 2011 Blue Marlin Stock Assessment Meeting and White Marlin Data Preparatory Meeting, Madrid, SP.
- May 2010 *Member,* U.S. Delegation, International Commission for the Conservation of Atlantic Tunas, 2010 Blue Marlin Data Preparatory Meeting, Madrid, SP.
- October 2009 *Participant,* Atlantic States Marine Fisheries Commission, Stock Assessment Workshop for Atlantic Menhaden, Beaufort, NC.
- May 2009 *Participant,* Atlantic States Marine Fisheries Commission, Data Workshop for Atlantic Menhaden, Richmond, VA.

Journal Manuscript Reviews

- 2015 ICES Journal of Marine Science (1 review)
- 2014 Scientific Reports (1 review)
- 2013 Marine Ecology Progress Series (1 review)
- 2011 African Journal of Marine Science (1 review)
- 2010 Fisheries Research (1 review)
- 2007 Estuaries and Coasts (1 review)

Academic Instruction

- 2009 – 2012 (Spring) *Graduate Teaching Assistant,* MSCI 504: Fundamentals of Statistical Methods and Data Analysis, Virginia Institute of Marine Science, College of William & Mary.
- Spring 2010 *Graduate Teaching Assistant,* MSCI 528: Marine Fisheries Science, Virginia Institute of Marine Science, College of William & Mary.

Spring 2008 *Guest Lecturer*, Introduction to R, MSCI 667: Experimental and Quantitative Ecology, Virginia Institute of Marine Science, College of William & Mary.

2007 – 2008
(Fall) *Graduate Teaching Assistant*, MSCI 671: Fisheries Population Dynamics, Virginia Institute of Marine Science, College of William & Mary.

Academic Service

2012 *Student Representative*, Equipment Trust Fund Committee, Virginia Institute of Marine Science, College of William & Mary.

2006 – 2012 *Student Representative*, Academic Catalog Committee, Virginia Institute of Marine Science, College of William & Mary.

2007 – 2011 *Student Representative*, Academic Council, Virginia Institute of Marine Science, College of William & Mary.

Fall 2010 Organized remote access to Numerical Computing for the Natural Resources, by Dr. Andre Punt, University of Washington, offered at the Virginia Institute of Marine Science.

Fall 2008 *Student Representative*, 2008 Fall Seminar Committee, Department of Fisheries Science, Virginia Institute of Marine Science, College of William & Mary.

CONTINUING EDUCATION

February 2013 *AD Model Builder and Stock Assessment*, by Dr. Anders Nielsen and Dr. Arni Magnusson; ICES Training Program, Copenhagen, Denmark.

Fall 2010 *Numerical Computing for the Natural Resources*, by Dr. Andre Punt, University of Washington, Seattle, WA.

April 2008 *An Introduction to Linear Models in R*, by Dr. Gary Nelson and Mr. Steve Correia; Atlantic States Marine Fisheries Commission Advanced Stock Assessment Training Workshop, Providence, RI.

July 2007 *Maximum Likelihood Estimation*, by Dr. Michael Wilberg; Atlantic States Marine Fisheries Commission Advanced Stock Assessment Training Workshop, Baltimore, MD.

June 2007 *Model Selection and Multimodel Inference in the Life Sciences*, by Dr. David Anderson, College of William & Mary, Williamsburg, VA.

March 2007 *AD Model Builder Programming Course*, by Dr. Steven Martell and Ms. Line Bang Christensen, Annapolis, MD.

Spring 2007 *Fish Physiology*, by Dr. Richard Brill, College of William & Mary, Virginia Institute of Marine Science, Gloucester Point, VA.

June 2003 *U.S. Coast Guard Auxillary Boating Skills and Seamanship Course*, College of William & Mary, Virginia Institute of Marine Science, Gloucester Point, VA.

COMPUTER SOFTWARE

R, AD Model Builder, Stock Synthesis 3, SAGA, WinBUGS, SAS, ArcGIS, SigmaPlot, Minitab, MS Office, Macromedia Dreamweaver, Biosonics Visual Analyzer, Eureka Water Quality software, Adobe Photoshop, Cap'n Voyager

CERTIFICATIONS

2006 – 2009 *Adult CPR and First aid Certified, American Heart Association.*

2005 – 2012 *Certified Research Vessel Operator, Virginia Institute of Marine Science, Gloucester Point, VA.*

2004 – present *Cold Water Survival Training, Virginia Institute of Marine Science, Gloucester Point, VA.*