

RICHARD A. WAHLE
CURRICULUM VITAE

Updated April 7, 2016

PERSONAL: Address: University of Maine
Darling Marine Center
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Citizenship: United States

EDUCATION: Ph.D., Zoology, University of Maine, 1990
M.S., Biology, San Francisco State University, 1982
B.A., Zoology, University of New Hampshire, 1977

PROFESSIONAL EXPERIENCE:

Research Professor, Univ. Maine, School of Marine Sciences, 2013 to present
Associate Research Professor, Univ. Maine, School of Marine Sciences, 2010 - 2013
Senior Research Scientist, Bigelow Laboratory for Ocean Sciences, 1997 - 2009
Research Scientist, Bigelow Laboratory for Ocean Sciences, 1995 - 1997
Postdoctoral Research Associate/Lecturer, University of Rhode Island, 1992 - 1994
Postdoctoral Research Associate, Brown University, 1990 - 1992

HONORS:

American Society of Zoologists, Best Paper in Ecology Awards, 1988
National Sea Grant Student Research Award, 1989
Alumni Association Leadership Award, Suffield Academy, 2013

PROFESSIONAL SOCIETIES:

American Association for the Advancement of Science, Ecological Society of America,
American Society of Limnology & Oceanography, The Crustacean Society, Sigma Xi

SYNERGISTIC ACTIVITIES (last 10 years)

J. Andaman Science Assoc., Editorial board Andaman-Nicobar Islands, India (since 2016)

The Lobster Institute, Advisory Board (since 2014)

Co-chair, Steering Committee - 11th International Conference & Workshop on Lobsters
planned for June 2017, Portland, ME

Integrated Sentinel Monitoring Network member (since 2013)

Northeast Coastal Acidification Network (NECAN), member (since 2014)

Maine DMR Scallop Advisory Committee member (since 2012 - 2015)

Hurricane Island, Science Advisory Committee member (since 2011)

Institute for Broadening Participation, Ocean Sciences Advisory Board (since 2010)

Co-director, Bigelow Laboratory's NSF-REU Program (2008-2011)

Shoals Marine Lab, Faculty: Biology of the Lobster - Summer '08, '09

Adjunct Graduate Faculty: Université Laval, 2002 – 2011, UMass, Dartmouth, 2007 – present,
Memorial University 2008 -2012

Editor, *The Lobster Newsletter* (since 2008).

Manuscript Reviewer for *Ecology*, *Biol. Bull.*, *Mar. Ecol. Prog. Ser.*, *Mar. Freshw. Research*,
J. Crust. Biol., *J. Exp. Mar. Biol. Ecol.*, *Fish. Bull.*, *Bull. Mar. Sci.*, *Fish. Oceanogr.*, *ICES*
J. Mar. Sci., *PLOS One*, *GEC*

Proposal Reviewer for NSF, NOAA, Sea Grant, NFWF

COLLABORATORS OTHER THAN CO-AUTHORS (last 5 years)

Dr. Andrew Thomas, University of Maine
Dr. Andrew Pershing, GMRI
Dr. Kathy Mills, GMRI
Dr. Peter Lawton, DFO Canada
Dr. Huijie Xue, University of Maine
Dr. Jenny Sun, GMRI
Dr. Dan Holland, NMFS-NW Fisheries Science Center
Dr. Janet Nye, Stony Brook University
Dr. John Tremblay, DFO Canada
Dr. Jonathan Grabowski, Northeastern University
Dr. Graham Sherwood, GMRI
Dr. David Fields, Bigelow Laboratory for Ocean Sciences
Dr. Kevin Stokesbury, University of Massachusetts, Dartmouth
Dr. Remy Rochette, University of New Brunswick, St. John, NB
Dr. Will Ambrose, Bates College
Dr. Raouf Kilada, University of New Brunswick, St. John, NB

GRADUATE & POST-GRADUATE ADVISORS

Dr. Robert Steneck, School of Marine Science, University of Maine (Ph.D. Advisor)
Dr. Mark Bertness, Dept. Ecology and Evolutionary Biology, Brown Univ. (Postdoc mentor)
Dr. Steve Gaines, Life Sciences Dept., University of California Santa Barbara (Postdoc mentor)

GRADUATE ADVISEES & COMMITTEE ASSIGNMENTS

Jesica Waller, MS, in progress, UMaine (chair)
Amalia Harrington, PhD., in progress, UMaine (chair)
Noah Oppenheim, MS Dual Degree, in progress, UMaine (co-chair)
Skylar Bayer, PhD, in progress. UMaine (chair)
Bai Li, MS Marine Biology, in progress, UMaine (committee member)
Kevin duClos, PhD, in progress, UMaine (committee member)
Kisei Tanaka, PhD, in progress, UMaine (committee member)
Pamelia Fraungruber, MSc., 2016, UMaine (co-chair)
Katherine Thompson, MSc. 2015, UMass Dartmouth (committee member)
Morgan Brunbauer, MSc. 2013, UMaine (chair)
Stephanie Boudreau, PhD, 2012. Dalhousie University (external examiner)
Jon Carey, MS, 2011, UMass Dartmouth (committee member)
Mahima Jaini, MS, 2011, University of Maine (chair)
Darren Scopel, PhD, in progress, University of New Hampshire (committee member)
Charlene Bergeron, MS, 2011, University of Maine (chair)
Victoria Burdett-Coutts, MS, 2011, Memorial University (co-supervisor)
Peter Milligan, MS, 2009, University of Massachusetts, Dartmouth (committee member)
Curtis Brown, MS, 2007, University of Maine (chair)
Julien Gaudette, MS, 2004, Université Laval, Quebec (chair)
Nate Gerald, Fellowship advisor 2001, 2002, Island Institute, Maine
Carin Poeschel, MS, 2001, University of Maine (committee member)
Carl Wilson, MS, 1999, University of Maine (committee member)
Steven Jury, PhD, 1999, University of New Hampshire (committee member)
Alvaro Palma, PhD, 1998, University of Maine (committee member)

CURRENT RESEARCH SUPPORT (most recent first)

Dearborn Fellowship

Title: Summer student support (2016; \$3,300, Student: Jake Silver)

NSF EPSCoR/ SEANET

Title: SEAFellows summer student support (2016; \$8,500, Student: Meg Towle)

NOAA/ Maine Sea Grant

Title: Revealing Deepwater Lobster Settlement Across Thermal Gradients in the Gulf of Maine (2016-2018; \$150,000 with K. Reardon)

UMaine Office of the Vice President for Research

Title: Equipment grant: PowerLab Data Acquisition System for the Darling Marine Center (2015, \$9574)

National Science Foundation

Title: Coastal SEES (Track 2), Collaborative Research: Resilience and Adaptation of a Coastal Ecological-Economic System in Response to Increasing Temperature (2013-2017; \$1.1M with A. Pershing, Y. Chen, J. Nye and others)

NOAA Fisheries and the Environment Program

Title: Using the American Lobster Settlement Index to predict trends in fishery recruitment. (2014-2016; \$136,930 with L. Jacobson, A. Pershing)

Maine Department of Marine Resources

Title: A new era in stock assessment of the American lobster: Estimating age and modeling age-at-length relationships using a new direct aging technique. (2013-2018; \$250,000 with W. Ambrose, R. Kilada)

NOAA/ Maine Sea Grant

Title: Supplement to DMR Lobster growth and aging project (above) (2014-2016; \$93,100)

Maine Department of Marine Resources

Title: American Lobster Settlement Index data management & research (\$5000 renewed annually)

Rhode Island Division of Fish & Wildlife

Title: American Lobster Settlement Index data management & research (\$2500 renewed annually)

University of New Brunswick

Title: American Lobster Settlement Index data management & research (\$3000 renewed annually)

Maine Agriculture and Forestry Experiment Stations Award

Title: American Lobster Settlement Index data management & research (\$3000 renewed annually)

Prince Edward Island Fishermen's Association

Title: American Lobster Settlement Index data management & research (\$1500 renewed annually)

PREVIOUS EXTERNAL SUPPORT (Funding amounts shown for projects started after 1999)

Dearborn Scholarship

Title: Summer student support (2016; \$3,000 – student: Colby Johns)

Atlantic Lobster Sustainability Foundation

Title: Evaluating the American Lobster Settlement Index in Fishery Forecasting (2013-2014; yr-1: \$12,000; yr2 \$12,270 contingent on yr-1 success)

UMaine CUGR Student research support

Title: Summer student support (2016; \$3,000 – student: Jacqueline Rosa)

NOAA/ Maine Sea Grant

Title: A Maximizing the utility and impact of the American Lobster Settlement Index (2012-2014; \$126,416)

NOAA Scallop Research Set-aside Program

Title: Developing tools to evaluate spawning and fertilization dynamic of the ocean scallop. Phase II. (2011-2013; science: \$192,455; harvester: \$520,000 with P. Jumars)

Commercial Fisheries Research Foundation

Title: A Fisherman-Scientist Collaboration to Re-Assess Narragansett Bay Lobster Nurseries after two decades of environmental change. (2011-2013; \$152, 838)

National Science Foundation

Title: Assessing Tsunami Impacts on the Benthic Community of Robinson Crusoe Island (2010-2012; \$126,138)

NOAA/Sea Grant

Title: Developing genetic fingerprinting methods for lobster enhancement trials (2008-2010; \$167,907 with G. Gerlach, Univ. Oldenburg, Germany; D. Towle, MDIBL; T. Ames, PERC)

NOAA/Scallop Research Set-aside

Title: Developing tools evaluate spawning and fertilization dynamics of the giant sea scallop, *Placopecten magellanicus*. (2008-2010; science: \$183,270; harvester: \$494,448 with M. Sieracki, J. Gaudette, Bigelow; K. Stokesbury, SMAST)

NASA/ROSES

Title: Lobster settlement forecasting in the Gulf of Maine (2008-2010; Bigelow share \$66,535 with A. Thomas (lead), H. Xue, Y. Chen, A. Pershing, all UMaine).

NSF/Research Experience for Undergraduates (REU) Site

Title: The Gulf of Maine to the World Ocean: An NSF/ REU site at Bigelow Laboratory (2009-2012; \$258,685 with D. Fields, BLOS).

NOAA/Northeast Consortium

Title: Deep water settlement of the American lobster (2007-2010; \$264,735 with C. Wilson, DMR; M. Parkhurst, J. O’Leary, N. Lemieux, harvesters).

Maine Department of Marine Resources

Title: Development of Growth Models for the American lobster (2007-2009; \$70,000 with Y. Chen, UMaine; P. Lawton, DFO)

Southern New England Cooperative Research Foundation

Title: Maine Lobster Settlement Surveys (2009-2010; BLOS share: \$7807 with R. Glenn, MADMF; J. Manning, NMFS-NEFSC)

Maine Department of Marine Resources & Penobscot East Resource Center

Title: Efficacy of Lobster Hatcheries (2006-2008; approx. \$126,000 with R. Alden, T. Ames, Penobscot Bay Resource Center)

NSF (Biological Oceanography)

Title: Collaborative Research: Cobble Landscape Structure, Spatial Gradients in Predation, and Variable Demographic Bottlenecks in the American lobster. (2003-2007; (\$397,400 with K. Hovel, SDSU & A. deCharon, BLOS).

NOAA/National Undersea Research Program

Title: Cobble Nursery Landscapes and the Regional Abundance of the American lobster (2003-2005; \$50,000 with K. Hovel, SDSU; D. Belknap, UMaine).

Rhode Island Division Environmental Management

- Title: Rhode Island Lobster Settlement Surveys (\$3000 renewed annually through 2006)
- NOAA/ Northeast Consortium (Project Development support)**
 Title: Developing a method to evaluate deep water settlement of the American lobster (2005-2006; \$25,000 with C. Wilson, DMR; M. Parkhurst, Harvester).
- NOAA/ Northeast Consortium**
 Title: Developing Stock Assessment Methods for the New England Deep Sea Red Crab Fishery (2002-2005; \$274,783 with J. Williams, Harvester; Y. Chen, UMaine).
- NOAA/ Saltonstall-Kennedy Program**
 Title: Developing Stock Assessment Methods for the New England Deep Sea Red Crab Fishery (Part 2- 2002-2004; \$114,494 with J. Williams, Harvester, & Y. Chen, UMaine).
- US Army Corps of Engineers**
 Title: Impact of Dredge Disposal on Movements of Lobsters in Penobscot Bay, Maine (2002-2003; (2002-2003; \$94,337)
- Boston Harbor LNG Pipeline Contract**
 Title: Suction sampling (2003; approx. \$40,000)
- NOAA/ Sea Grant**
 Title: Developing Predictive Tools for the American Lobster Fishery: Validating Trap-Based Mark-Recapture Methods to Estimate Abundance, Survival and Movements in Open Populations (2001-2003; \$142,500 with D. Belknap, UMaine)
- Maine Department of Marine Resources**
 Title: Recovery of Sea Urchin Conservation Areas in Maine (1999 – 2003; with R. Steneck, UMaine)
- MARPAT Foundation**
 Title: Educational Grants for Lobster Population Dynamics (1999-2001 with A. deCharon and L. Incze, BLOS)
- NASA Seed Grant – Maine Space Consortium**
 Title: Shallow Water Environmental Assessment I: A Case Study in Habitat Complexity and Diversity (1999 with C. Roesler and A. deCharon, BLOS)
- NOAA/ NESDIS**
 Title: Application of Satellite Sea Surface Temperature Data to the New England Lobster Fishery (1997-2000 with A. Thomas, UM; L. Incze, BLOS; and R. Steneck, UM)
- NOAA/Sea Grant**
 Title: Developing predictive tools for the American lobster: Distinguishing mortality and emigration in open populations (1999 – 2001)
- NOAA/NMFS Habitat Restoration Program**
 Title: Artificial Reef Mitigation for *World Prodigy* Oil Spill in Narragansett Bay (1997 - 1999 with S. Cobb, URI & J. Catena, NMFS)
- NOAA/National Undersea Research Program**
 Title: Coarse gravel in the Gulf of Maine: an under-explored essential fish habitat (1998 - 1999 with D. Belknap, UM)
- European Community-Specific Programme: Research in Agriculture & Fisheries**
 Title: The influence of competitive interactions on juvenile European lobsters (1997 – 1999 with C. Bannister, MAFF; J. Mercer, UC Galway)
- NOAA/Sea Grant Enhancement Funds**
 Title: Developing indices necessary for predicting commercial catches of the American lobster (1995-1998 with Cobb, URI; Fogarty, NMFS; Steneck, UMaine; Howell, Watson, UNH)

Maine Department of Marine Resources

Title: Environmental effects on age-pigment accumulation in lobsters (1997 - 1998)

NOAA/National Undersea Research Program

Title: Developing a submersible-based suction sampler for coarse gravel habitats (1997-1998 with R. Tusting, HBOI)

Maine Department of Marine Resources

Title: Impact of sea urchin dragging on the benthos (1998)

European Community Specific Programme: Research in Agriculture & Fisheries

Title: Application and validation of the lipofuscin method in the assessment of crustacean age (1996 - 1997 with O. Tully, Tinity College, Ire.)

Maine Department of Marine Resources

Title: Field experiments on fertilization success of the green sea urchin: managing densities to maximize gamete and larval production (1996 - 1997)

Maine Department of Marine Resources

Title: Community and inter-cohort effects on lobster post-settlement survivorship (1996 - 1997)

NASA/Maine Space Grant Consortium

Title: Remote sensing and lobster larval dispersal in the Gulf of Maine (1996 with Erickson, Incze, BLOS; Zeeman, UNE)

Maine Department of Marine Resources

Title: Regional differences in lobster recruitment in Maine (1995)

NOAA/Sea Grant (jointly supported by Maine and Rhode Island programs)

Title: Time series of larval supply & benthic recruitment of American lobster (1993 - 1995)

NOAA/Sea Grant (Maine)

Title: Technical Liaison for the Gulf of Maine Fishing Effort Management Team (1995)

NOAA/Sea Grant Irish-American Program

Title: Age determination in crustaceans (1994-1995)

Maine Department of Marine Resources

Title: Assessing post-release losses of hatchery-reared lobsters (1993 - 1994)

Maine Department of Marine Resources

Title: Assessing micro-wire tagging of lobster post-larvae (1994)

National Science Foundation

Title: Pelagic to benthic coupling in the recruitment of the American lobster (1992-1994, with L.S. Incze)

National Park Service

Title: A plan for inventory and monitoring of submerged aquatic resources at Cape Cod National Seashore (1992-1993, with Beatty, Nowicki, Keller, Labash, August)

NOAA/Sea Grant (Maine and Rhode Island) and The Lobster Institute

Title: Preliminary studies on pelagic to benthic coupling in American lobster (1990-1992)

Narragansett Bay Project

Title: Lobster recruitment along an estuarine gradient (Narragansett Bay) (1990)

NOAA/Sea Grant (Maine)

Title: *In situ* studies of the American lobster: ecology & the impact of dragging (1989-1991, with R.S. Steneck, UMaine)

NOAA/National Undersea Research Program

Title: Predation and kelp bed community structure (1989 - 1991, with R.S. Steneck, R. Vadas, I. Davison, UMaine; I. Babb, UConn)

PEER REVIEWED PUBLICATIONS (most recent first)

* Student authors

† Selected as Editors' Choice in *Science* 323:1406b (3/13/09)

- Bayer, S.R.* , R.A. Wahle, P.A. Jumars, D.C. Brady. 2016. Design and testing chambers to measure scallop fertilization success in the field. *Marine Ecology Progress Series*. In press.
- Wahle, R.A., L. Dellinger, S. Olszewski, P. Jekielek. 2015. Lobster nurseries of southern New England recede in the face of climate change. *ICES Journal of Marine Science* 72 (Suppl. 1): i69-i78, doi: 10.1093/icesjms/fsv093.
- Wahle, R.A. 2015. American Lobster Settlement Index Fact Sheet. Published by Maine Sea Grant. <http://umaine.edu/wahlelab/files/2015/09/ALSI-Factsheet.pdf>
- Gledhill, D.K., M.M. White, J. Salisbury, H. Thomas, I. Mlsna, M. Liebman, B. Mook, J. Grear, A.C. Candelmo, R.C. Chambers, C.J. Gobler, C.W. Hunt, A.L. King, N.N. Price, S. Signorini, E. Stancioff, C. Stymiest, R.A. Wahle, J.D. Waller, N.D. Rebeck, Z.A. Wang, T.L. Capson, J. R. Morrison, S. Cooley, S. Doney. 2015. Ocean acidification off New England and Nova Scotia. *Oceanography*. 28(2):182–197, <http://dx.doi.org/10.5670/oceanog.2015.41>.
- Petit, I.J., C.F. Gaymer, Á.T. Palma, R.A. Wahle. 2015. Predation of juvenile *Jasus frontalis*: An endemic spiny lobster of the Juan Fernández Archipelago, Chile. *Journal of Shellfish Research* 34:1085-1089. <http://dx.doi.org/10.2983/035.034.0335>
- Burdett-Coutts, V.* , R.A. Wahle, R. Rochette, P. Snelgrove. 2014. Spatial linkages between settling young-of-year and older juvenile lobsters. *Mar. Ecol. Prog. Ser.* 499: 143–155. doi: 10.3354/meps10625
- Carey, J.D.* R.A. Wahle, K.D.E. Stokesbury. 2013. Spatial scaling of juvenile-adult associations in Northwest Atlantic sea scallop *Placopecten magellanicus* populations. *Mar. Ecol. Prog. Ser.* 493: 185–194. doi: 10.3354/meps10543
- Mills, K.E., A.J. Pershing, C.J. Brown, Y. Chen, F.-S. Chiang, D.S. Holland, S. Lehuta, J.A. Nye, J.C. Sun, A.C. Thomas, and R.A. Wahle. 2013. Fisheries management in a changing climate: Lessons from the 2012 ocean heat wave in the Northwest Atlantic. *Oceanography* 26:191–195, <http://dx.doi.org/10.5670/oceanog.2013.27>.
- Wahle, R.A., A. Battison, L. Bernatchez, S. Boudreau, K. Castro, J.H. Grabowski, S.J. Greenwood, C. Guenther, R. Rochette, J. Wilson. 2013. The American lobster in a changing ecosystem: A US-Canada science symposium, 27-30 November, Portland, Maine. Introduction. *Can. J. Fish. Aquat. Sci.* 70: 1571-1575.
- Steneck, R.S. and R.A. Wahle. 2013. The American lobster dynamics in a brave new ocean. *Can. J. Fish. Aquat. Sci.* 70: 1612-1624, 10.1139/cjfas-2013-0094
- Oppenheim, N.G., R.A. Wahle. 2013. Cannibals by night? In situ video monitoring reveals diel shifts in inter- and intra-specific predation on the American lobster. *Can. J. Fish. Aquat. Sci.* 70: 1635–1640 (2013) dx.doi.org/10.1139/cjfas-2013-0099
- Caputi, N., S. Frusher, R. Wahle. 2013. Chapter 9: Impacts of climate change. In: B. Phillips (ed.) *Lobsters: Biology, Management, Fisheries and Aquaculture, 2nd edition*. Pp. 84-112. Wiley-Blackwell, Oxford, UK.
- Phillips, B., R. Wahle, R. Ward. 2013. Chapter 1: Lobsters as part of marine ecosystems. In: B. Phillips (ed.) *Lobsters: Biology, Management, Fisheries and Aquaculture, 2nd edition*. Pp. 1-35. Wiley-Blackwell, Oxford, UK.

- Wahle, R.A., K. Castro, O. Tully, S. Cobb. 2013. Chapter 4: *Homarus*. In: B. Phillips (ed.) *Lobsters: Biology, Management, Fisheries and Aquaculture, 2nd edition*. Pp. 221-258. Wiley-Blackwell, Oxford, UK.
- Wahle, R.A., C. Bergeron, J. Tremblay, C. Wilson, V. Burdett-Coutts, M. Comeau, R. Rochette, P. Lawton, R. Glenn, M. Gibson. 2013. The geography and bathymetry of American lobster benthic recruitment as measured by diver-based suction sampling and passive collectors. *Marine Biology Research* 9: 42-58
- Wahle, R.A., C. Brown, K. Hovel. 2013. The geography and body size dependence of top-down forcing in New England's lobster-groundfish interaction. *Bulletin of Marine Science*. 89: 189–212.
- Pershing, A.J., R.A. Wahle, P.C. Meyers, P. Lawton. 2012. Large-scale coherence in New England lobster settlement associated with regional weather. *Fisheries Oceanography* 21: 348-362. doi:10.1111/j.1365-2419.2012.00629.x
- Wahle, R., D. Tshudy, J.S. Cobb, J. Factor, M. Jaini*. 2012. Astacidea (Marine Lobsters). In, F. R. Schram & J. C. von Vaupel Klein (eds.), *Treatise on Zoology: Crustacea Decapoda, Vol. 9B (66)* pp 3-108. Brill, Leiden
- Wahle, R. A., J. S. Cobb, L. S. Incze, P. Lawton, M. Gibson, R. Glenn, C. Wilson, J. Tremblay. 2011. The American lobster settlement index at 20 years: Looking back – looking ahead. *J. Mar. Biol. Assn. India*. 52:180-188.
- Hovel, K. and R.A. Wahle. 2010. Consistent effects of habitat fragmentation on American lobster movement across a gradient of predation risk and shelter competition. *Ecology* 91:1993–2002.
- Pardo, L. M., C. S. Cardyn, P. Mora, R. A. Wahle. 2010. A new passive collector to assess settlement rates, substrate selection and predation pressure in decapod crustacean larvae. *J. Expt. Mar. Biol. Ecol.* 393: 100–105
- Incze, L., H. Xue, N. Wolff, D. Xu, C. Wilson, R. Steneck, R. Wahle, P. Lawton, N. Pettigrew, and Y. Chen. 2010. Connectivity of lobster (*Homarus americanus*) populations in the coastal Gulf of Maine: part II. Coupled biophysical dynamics. *Fisheries Oceanogr.* 19: 1-20
- Geraldi, N.R.*, Wahle, R.A. Dunnington, M.J. 2009. Habitat effects on American lobster catch and movement: Insights from geo-referenced trap arrays, seabed mapping, and tagging. *Can. J. Fish. Aquat. Sci.* 66: 460-470.
- † Wahle, R.A., M. Gibson, M.J. Fogarty. 2009. Distinguishing disease impacts from larval supply effects in a lobster fishery collapse. *Mar. Ecol. Prog. Ser.* 376: 185–192. doi: 10.3354/meps07803
- Wahle, R.A., C. Bergeron*, C. Wilson, M. Parkhurst. 2009. A vessel-deployed passive post-larval collector for the American lobster. *New Zealand J. Mar. Freshw. Res.* 43: 465 -474.
- Wahle, R.A., C.E. Bergeron*, A. Chute, Y. Chen, L. Jacobson. 2008. Northwest Atlantic deep-sea red crab before and after the onset of harvesting. *ICES J. Mar. Sci.* 65: doi:10.1093/icesjms/fsn058
- Frumhoff, P.C., J.J. McCarthy, J.M. Melillo, S.C. Moser, and D.J. Wuebbles. 2007. *Confronting Climate Change in the U.S. Northeast: Science, Impacts, and Solutions*. Synthesis report of the Northeast Climate Impacts Assessment (NECIA). Cambridge, MA: Union of Concerned Scientists (UCS). (Member of contributing team of white paper authors)
- Selgrath, J., K*. Hovel, R. Wahle. 2007. Effects of habitat edges on American lobster abundance & survival. *J. Exp. Mar. Biol. Ecol.* 353: 253–264

- O'Donnell, K.P.*, Wahle, R.A., Dunnington, M.J., M. Bell. 2007. Spatially referenced trap arrays detect sediment disposal impacts in a New England estuary. *Mar. Ecol. Prog. Ser.* 348: 249–260.
- Wahle, R.A. (Guest Editor) 2006. Proceedings of Sea Grant Science Symposium 2005: Lobsters as model organisms at the interface of ecology, behavior and fisheries. *Journal of Crustacean Biology* 26 (4).
- Incze, L. S, R. A. Wahle, N. Wolff, C. Wilson, R. Steneck, E. Annis*, P. Lawton, H. Xue, and Y. Chen. 2006. Early life history and a modeling framework for lobster (*Homarus americanus*) populations in the Gulf of Maine. *Journal of Crustacean Biology*: 26: 555-564.
- Wahle, R.A. and Fogarty, M.J. 2006. Chapter 1 - Growth. In: B. Phillips (ed.), Lobsters: Biology, management, aquaculture and fisheries. Sinauer & Assoc. Pp. 1-44.
- Gaudette, J.* , R. A. Wahle, R.A., and J. Himmelman. 2006. Spawning events in small and large populations of the sea urchin, *Strongylocentrotus droebachiensis*. as recorded using fertilization assays. *Limnol. & Oceanogr.* 51:1485-1496.
- Gibson, M. & Wahle, R.A. 2005. Disease impacts on recruitment to coastal Rhode Island lobster populations. *Proceedings of Workshop on Shell Disease*, March 2005. New England Aquarium Publication .
- Dunnington, M.J., R.A. Wahle, M.C. Bell, N.R. Geraldi*. 2005. Evaluating local population dynamics of the American lobster, *Homarus americanus*, with trap-based mark-recapture methods and seabed mapping. *N. Z. J. Mar. Freshw. Res.* 39: 1253-1276.
- Wahle, R.A., L.S.Incze, M. Fogarty. 2004. First projections of American lobster *Homarus americanus* recruitment from a settlement index. *Bull. Mar. Sci.* 74: 101-114.
- Incze, L.S., Wolff, N., Wahle, R.A. 2003. Can scientific observations of early life stages be scaled up to the level of a fished population? A case study using *Homarus americanus*. *Fish. Res.* 65: 33-46.
- Wahle, R.A. 2003. Revealing the stock-recruitment relationship in lobsters and crabs: Is experimental ecology the key? *Fish. Res.* 65: 3-32.
- Wahle, R.A. and A. Gilbert* 2002. Detecting spawning by the green sea urchin (*Strongylocentrotus droebachiensis*) with time-integrated fertilization assays. *Mar. Biol.* 140: 375-382.
- Wahle, R.A., O. Tully, and V. O'Donovan*. 2001. Environmentally mediated crowding effects on growth, survival and metabolic rate of juvenile American lobster (*Homarus americanus*). *Mar. Freshw. Res.* 52: 1157-1166.
- Castro, K., Cobb, J.S., Wahle, R.A., Catena, J. 2001. Habitat addition and stock enhancement for American lobsters, *Homarus americanus*. *Mar. Freshw. Res.* 52: 1253-1261.
- Wahle, R.A. 2000. Fisheries in a sea of change: Ecology and oceanography of New England's fishing grounds. Proceeding of the Sea Grant symposium on the history and future of New England's offshore fishing grounds. Connecticut College, April, 1999. *Northeast Naturalist*. 7: 317-328.
- Incze, L.S., R.A. Wahle, A. Palma*. 2000. Advection and settlement rates in a benthic invertebrate: recruitment to first benthic stage in *Homarus americanus*. *ICES J. Mar. Sci.* 57: 430-437.
- Cobb, J.S., M. Clancy*, R.A. Wahle. 1999. In: L.R. Benaka (ed.) Fish habitat: Essential Fish habitat and rehabilitation. Habitat-based assessment of lobster abundance: a case study of an oil spill. Proceedings of the Sea Grant symposium on fish habitat, Hartford, CT 26-27 Aug. 1998. *Am. Fish. Soc. Symp.* 22: 285-298.
- Wahle, R.A. and H. Peckham. 1999. Density-related reproductive trade-offs in the green sea urchin, *Strongylocentrotus droebachiensis*. *Mar. Biol.* 134:127-137.

- Wahle, R.A. 1998. A cradle-to-grave approach to lobster stock assessment and enhancement. In : Gendron, L. (ed) Proceedings of a workshop on lobster stock enhancement, Magdalen Islands, Quebec. Oct. 29-31, 1997. *Can. Industry Rept Fish. Aquat. Sci.* 244: 85-92.
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MANUSCRIPTS IN REVIEW & IN PREPARATION

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- Hunt, H., R.A. Wahle, R. Rochette, M. Comeau, J. Tremblay. In prep. Spatial patterns of richness and abundance of benthic decapod crustaceans and fishes in the northwest Atlantic as measured by vessel-deployed cobble-filled collectors. To be submitted to *Can. J. Fish. Aquat. Sci.*
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TECHNICAL REPORTS (most recent first)

- Wahle, R.A. 2002-15. American Lobster Settlement Index Annual Updates. Reports to Maine Department of Marine Resources, Rhode Is. Dept. Environmental Management, and Maine Lobstermens Association. Back issues available at <http://umaine.edu/wahlelab/american-lobster-settlement-index-alsi/american-lobster-settlement-index/>
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- Bergeron, C., R.A. Wahle, Y. Chen, P. Lawton. 2011. Research on lobster age-size relationships: Developing regionally specified growth models from meta-analysis of existing data. Final Project Report. Maine Department of Marine Resources Lobster Research Education and Marketing Board.
- Wahle, R.A. 2006. Implications of climate change for American lobster distributions in the northeast United States over the next century. White paper submitted to Union of Concerned Scientists, Northeast Climate Impacts Assessment Team.
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- Wahle, R.A. and Gaudette, J. 2004. Sea urchin conservation areas in Maine: winter survey results 2000-2003. Final Project Report submitted to Maine Department of Marine Resources
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- Wahle, R.A. 2000. A larval settlement index for forecasting trends in the American lobster fishery. Final Report to Maine Department of Marine Resources, Lobster Advisory Council.
- Wahle, R.A. & R. Langton. 1999. Acoustic tagging of reared Atlantic cod. Final Project Report to the Island Institute.
- Wahle, R.A. 1999. Impact of sea urchin dragging on the sea bed. Final Project Report to Maine Department of Marine Resources Sea Urchin Advisory Committee.
- Wahle, R.A. 1998. Density-related reproductive trade-offs in the Green Sea Urchin, *Strongylocentrotus droebachiensis* and implications to the Gulf of Maine fishery. Final Project Report to Maine Department of Marine Resources Sea Urchin Advisory Committee.
- Beatty, L., B. Nowicki, A. Keller, R. Wahle, C. Labash, & P. August. 1993. A plan for inventory and monitoring of submerged aquatic resources at Cape Cod National Seashore. Final Report to the National Park Service
- Wahle, R.A. 1991. The American lobster in Narragansett Bay: patterns of benthic recruitment, adult populations, and fishing effort. Final Report submitted to the Narragansett Bay Project.
- Steneck, R.S., R.L. Vadas, I.R. Davison, I. Babb, R.A. Wahle, 1990. Changes in coastal food webs and benthic community structure in the Gulf of Maine due to fisheries induced declines in large predatory fishes. NURC, Annual Report.

**PRESENTATIONS FOR PROFESSIONAL MEETINGS & INVITED TALKS:
(most recent first)**

* Student authors

- Bayer, S.R* and R.A. Wahle. 2016. Building a tool kit to assess reproductive performance of commercially exploited broadcast spawners inside and outside no-take zones. International Marine Conservation Congress. May 15-20, 2016. St. Johns, NL
- Harrington, A.*, R.A. Wahle. 2016. Impacts of abrupt climate change on the American lobster: exploring local adaptations in physiology across the Gulf of Maine. Benthic Ecology Meetings. Mar. 16-19, 2016. Portland, ME
- Bayer, S.R.*, R.A. Wahle, D. Brooks, D. Brady. 2016. A marriage of larval modeling and empirical data: Linking adult, larval and juvenile scallops in an estuary. Benthic Ecology Meetings. Mar. 16-19, 2016. Portland, ME
- Cleaver, C., S. Arnold, S. Asci, S. Bayer; N.D. Bethoney, T. Cheney; C. Guenther, P. Jekielek, I. Miller, K. Stokesbury, R.A. Wahle, E. Waterman, C. Wilson, J. Wotton. 2016. The effect of

- small-scale closed areas on *Placopecten magellanicus* populations in Maine. Benthic Ecology Meetings. Mar. 16-19, 2016. Portland, ME
- Hoffman, M.* , R.A. Wahle. 2016. Ecological effects of detrital algae on intertidal cobble habitat communities in Maine. Benthic Ecology Meetings. Mar. 16-19, 2016. Portland, ME
- Waller, J.D.* , Wahle, R.A., D.M. Fields, S. Greenwood. 2016. Linking ocean acidification and warming to the larval development of the American lobster (*Homarus americanus*). Benthic Ecology Meetings. Mar. 16-19, 2016. Portland, ME
- Oppenheim, N*., R.A. Wahle, A. Pershing, D. Brady, L. Jacobson. 2016. Using the American Lobster Settlement Index and environmental indicators to forecast lobster fishery recruitment. Benthic Ecology Meetings. Mar. 16-19, 2016. Portland, ME
- Wahle, R.A., N. Oppenheim, A. Pershing, D. Brady, L. Jacobson. 2016. Using the American Lobster Settlement Index and environmental indicators to forecast lobster fishery recruitment. Maine Fishermen's Forum. Mar. 3, 2016. Rockland, ME.
- Oppenheim, N.* , R. Wahle, A. Pershing, D. Brady, A. Dayton & J. Sun. 2016. Coupling recruitment forecasts with economics in the Gulf of Maine's American Lobster Fishery. ASLO-Ocean Sciences Meeting. Feb. 20-25, 2016. New Orleans, LA
- Waller, J.D.* , R.A. Wahle, D. Fields, S. Greenwood. 2016. Linking ocean acidification and warming to the larval development of the American lobster (*Homarus americanus*). ASLO-Ocean Sciences Meeting. Feb. 20-25, 2016. New Orleans, LA
- R.A. Wahle, H. Hunt, J. Tremblay, M. Comeau, A. Silva, R. Rochette. 2016. US-Canada monitoring network reveals biodiversity patterns in data-poor marine cobble-boulder habitats of the coastal Northwest Atlantic. ASLO-Ocean Sciences Meeting. Feb. 20-25, 2016. New Orleans, LA
- Wahle, R.A., N. Oppenheim*, A. Pershing, D. Brady, L. Jacobson. 2016. Using the American Lobster Settlement Index and environmental indicators to forecast lobster fishery recruitment. NOAA-Fisheries and the Environment (FATE) Annual Science Meeting. Jan. 14-15, 2016. NOAA Southwest Fisheries Science Center, La Jolla, CA
- Bayer, S.R.* , R.A. Wahle, D. Brady, and P. Jumars. 2016. First *in situ* measurements of fertilization success and the influence of population density in the giant sea scallop. SICB Meeting, Jan. 3-7, 2016. Portland, OR
- Wahle, R.A. 2015. The American lobster in a changing ecosystem. Invited speaker. Maine Maritime Museum. Nov. 19, 2015. Bath, ME
- Wahle, R.A., S. Allen. 2015. First-year post-settlement survival of the American lobster. US-Canada Science Symposium: The American Lobster in a Changing Ecosystem II. Nov. 3-5, 2015. Charlottetown, Prince Edward Is., Canada.
- Waller, J.* , R.A. Wahle, D. Fields, S. Greenwood. 2015. Effects of ocean acidification and warming on larval development of the American lobster. US-Canada Science Symposium: The American Lobster in a Changing Ecosystem II. Nov. 3-5, 2015. Charlottetown, Prince Edward Is., Canada.
- Oppenheim, N.G.* , R.A. Wahle, D.C. Brady, P. Lawton. 2015. Forecasting the American lobster fishery in the Gulf of Maine and Southern New England: trouble ahead? US-Canada Science Symposium II: The American Lobster in a Changing Ecosystem. Nov. 3-5, 2015. Charlottetown, Prince Edward Is., Canada.
- Wahle, R.A. 2015. The American lobster in a changing ecosystem. Invited speaker. Skidompha Library. Jul. 28, 2015. Damariscotta, ME
- Wahle, R.A. 2015. The American lobster in a changing ecosystem. Invited speaker. Science Café in Bar Harbor. Sponsor: Mt. Desert Island Biological Laboratory. June 22, 2015. Bar Harbor, ME

- Bayer, S.R.* , R.A. Wahle, D.C. Brady, P.A. Jumars. 2015. First field evidence of fertilization success in the giant sea scallop. Oral presentation. International Pectinid Conference. Mar. 22-27, 2015. Monterey, CA.
- Bayer, S.R.* , R.A. Wahle, D.C. Brady, P.A. Jumars. 2015. First field evidence of fertilization success in the giant sea scallop. Oral presentation. National Shellfish Association Meetings. Mar. 22-27, 2015. Monterey, CA.
- Wahle, R.A. 2015. The American lobster in a changing climate. Invited panel presentation. Lobstermen's Town Meeting. Lobster Institute & Atlantic Lobster Sustainability Foundation. Mar 19, 2015. St. John, NB, Canada
- Sherwood, G.D., J.H. Grabowski, P. Jekielek, R.A. Wahle. 2015. The influence of diet on the stable carbon ($\delta^{13}\text{C}$) and nitrogen ($\delta^{15}\text{N}$) isotope compositions of muscle tissue in American lobster (*Homarus americanus*). Oral presentation. Benthic Ecology Meetings. Mar. 4-7, 2015. Quebec City, Canada.
- Bayer, S.R.* , R.A. Wahle, D.C. Brady, P.A. Jumars. 2015. First field evidence of fertilization success in the giant sea scallop. Oral presentation. Benthic Ecology Meetings. Mar. 4-7, 2015. Quebec City, Canada.
- Oppenheim, N.* and R.A. Wahle. 2015. Forecasting lobster fishery recruitment from a larval settlement index. Invited presentation. Maine Fishermen's Forum. Mar 5, 2015. Rockland, ME
- Wahle, R.A. 2015. The American Lobster: Developing Forecasting Tools in a Changing Ecosystem. Invited presentation. Maine Fishermen's Forum. Mar 5, 2015. Rockland, ME
- Wahle, R.A. 2015. Sparse spawners & crowded cannibals: pushing the limits of density-dependence in a heavily exploited marine food web. Invited presentation. India Institute of Science. Center for Ecological Sciences. Feb 26, 2015. Bangalore, India.
- White, M.M., A.C. Candelmo, R. C. Chambers, C.J. Gobler, A.L. King, N.N. Price, R.A. Wahle, J.D. Waller* 2015. The biological response of multiple northeast taxa to ocean acidification. Oral presentation by first author. Northeast Aquaculture Conference and Exposition. Jan 14-16, 2015. Portland, ME.
- Wahle, R.A. 2015. The American lobster in a changing ecosystem. Invited presentation. Maine Legislators Bus Tour. Jan 14, 2015. Orono, ME
- Incze, L. S., R.A. Wahle, H. Xue, and C. Wilson. 2014. Understanding a complex regional fishery in the context of changing global-scale drivers and the need for sustainability. Xiamen Marine Science Conference. Jan. 3, 2015. Xiamen University, China.
- Wahle, R.A. and N. Oppenheim*. 2014. Developing forecasting tools from a larval settlement index. Invited panel presentation. Workshop on Fishery Forecasting and Prediction. Dec. 18, 2014. Univ. Southern Maine, Portland, ME
- Wahle, R.A., W. Ambrose, R. Kilada. 2014. The American lobster: Developing forecasting tools in a changing ecosystem. Invited presentation. Workshop on Crustacean age determination. Nov. 11, 2014. Institute for Marine Research, Tromsø, Norway.
- Wahle, R.A. and N. Oppenheim.* 2014. Applied research in focus: Long-term investment in the American lobster settlement index. Invited presentation. Sea Grant Site visit, UMaine President's Residence. Oct 7, 2014. Orono, ME
- Wahle, R.A. 2014. Ocean acidification and the challenges facing the American lobster fishery in a changing ecosystem. Invited presentation. Maine Ocean Acidification Commission Meeting. Aug. 5, 2014. Darling Marine Center, Walpole, ME.
- Wahle, R.A. 2014. The American lobster in a changing ecosystem. Invited presentation. The Lobster Institute, board of advisors meeting. June 11, 2014. Orono, ME
- Wahle, R.A. 2014. The American lobster in a changing ecosystem. Invited presentation. Maine Legislators visit to the Darling Marine Center. June 5, 2014. Orono, ME
- Wahle, R.A. 2014. The American lobster: Poster child of a changing ecosystem. Keynote Address. 10th International Conference and Workshop on Lobsters. May 18 -23, 2014. Cancún, Mexico.
- Wahle, R.A., L. Delinger, S. Olszewski, P. Jekielek, C. Bergeron. 2014. Lobster nurseries of southern New England recede in the face of climate change. Oral presentation. 10th International Conference and Workshop on Lobsters. May 18 -23, 2014. Cancún, Mexico.

- Oppenheim, N., R.A. Wahle. 2014. A new forecasting model for the American lobster fishery using the American Lobster Settlement Index. Oral presentation. 10th International Conference and Workshop on Lobsters. May 18 -23, 2014. Cancún, Mexico.
- Pershing, A.J., K.E. Mills, Y. Chen, A.C. Thomas, and R.A. Wahle. 2014. Impact of the 2012 Ocean Heat Wave on Fish and Fisheries. Poster presentation. ASLO Ocean Sciences Meeting. February 23-28, 2014. Honolulu, HI
- Oppenheim, N.G., R.A. Wahle, D.C. Brady. 2014. Can we forecast the future of the American lobster fishery from a larval settlement index? Poster presentation. ASLO Ocean Sciences Meeting. February 23-28, 2014. Honolulu, HI
- Wahle, R.A. and P. Jekielek. 2014. The American Lobster Settlement Index: a US-Canada collaborative for ecological and fishery monitoring. Poster presentation. ASLO Ocean Sciences Meeting. February 23-28, 2014. Honolulu, HI
- Bayer, S.R., Wahle, R.A., Brady, D.C., Brooks, D.A., Jumars, P.A. 2014. Scale of fertilization success in an exploited broadcast spawner: from an individual to an estuary. Poster presentation. ASLO Ocean Sciences Meeting. February 23-28, 2014. Honolulu, HI
- Pershing, A. J., Mills, K. E., Chen, Y., Thomas, A. C., Wahle, R. A. 2014 Impact of the 2012 Ocean Heat Wave on Fish and Fisheries, Poster presentation at the AGU/ASLO Ocean Sciences Meeting, February 23-28, Honolulu, HI
- Wahle, R. 2014. The American lobster in a changing climate. Invited Webinar presentation. Northeast Coastal Acidification Network (NECAN). Hosted by NERACOOS. January 21, 2014. <http://www.neracoos.org/necan>
- Wahle, R., L. Delinger, S. Olszewski. 2013. A Fisherman-Scientist Collaboration: Re-assessing Narragansett Bay lobster nurseries after two decades of environmental change. Commercial Fisheries Research Foundation. Invited talk. November 11, 2013. University of Rhode Island, Kingston, RI.
- Pershing, A., K.E. Mills, A.C. Thomas, R.A. Wahle 2013. Impact of the 2012 ocean heat wave on fish and fisheries. ICES Annual Science meeting. 23-27 September 2013, Reykjavik, Iceland.
- Wahle, R.A. 2013. The 2012 ocean heat wave and other recent climate impacts to New England lobsters: A contrast of economic and biological crises. Gulf of Maine Council Climate Network Symposium. September 10-11, 2012. Orono, ME
- Wahle, R.A. 2013. The American lobster in a changing ecosystem. Invited talk. Fisheries in a Climate of Change. Island Institute. 1-2 Aug, 2013. Portland, ME.
- Wahle, R.A. 2013. The American lobster in a changing ecosystem. Invited talk. Atlantic Lobster Sustainability Foundation. Annual Meeting. 23-24 July, 2013. Moncton, NB, Canada.
- Bayer, S.R.*, R.A. Wahle, D. C. Brady, C. E. Bergeron, and P.A. Jumars. 2013. Exploring fertilization success of *Placopecten magellanicus* aggregations in an empirically-informed model. International Pectinid Workshop. Poster presentation. 10-16 April, 2013. Florianopolis, Brazil.
- Hunt, H., R. Wahle, M. Comeau, A. Silva, J. Tremblay, V. Burdett-Coutts, R. Rochette. 2013. Cobble-filled collectors as a biodiversity monitoring tool: spatial variation in fish and decapod communities in New England and Atlantic Canada. Benthic Ecology Meetings. 22-24 Mar. 2013. Charleston, SC
- Wahle, R.A., M. Gibson, M. Fogarty. 2012. Closing the Circle: Southern New England's Lobster Collapse Reveals Strong Environmental Signature in the Spawner-to-Recruit Linkage. US-Canada Science Symposium: the American Lobster in a Changing Ecosystem. 27-30 Nov 2012, Portland, ME

- Steneck, R.S. and R.A. Wahle. 2012. The American lobster dynamics in a brave new ocean. US-Canada Science Symposium: the American Lobster in a Changing Ecosystem. 27-30 Nov 2012, Portland, ME
- Oppenheim, N.G.*, R.A. Wahle. 2012. Cannibals by night? In situ video monitoring reveals diel shifts in inter- and intra-specific predation on the American lobster. US-Canada Science Symposium: the American Lobster in a Changing Ecosystem. 27-30 Nov 2012, Portland, ME
- Wahle, RA, M. Gibson, M. Fogarty, L. Incze, H. Xue. 2012. Fishery in a death spiral: Disease, oceanography and the demise of lobsters in southern New England. Invited Departmental seminar. Dalhousie University 27 Mar 2012.
- Bayer, S*, RA Wahle, C. Bergeron. 2012. Exploring reproductive success of ocean scallop aggregations through coupled laboratory and field experiments. Benthic Ecology Meeting, Norfolk, VA 22-25 Mar 2012.
- Bergeron, C.*, RA Wahle, A. Palma, Freytes-Ortiz, IM*, Petraitis, P. 2012. Do it all in one dive! Rapid assessment of foodweb dynamics in shallow subtidal cobble communities. Benthic Ecology Meeting, Norfolk, VA 22-25 Mar 2012.
- Palma, AT, RS Bennett*, RA Wahle, C. Bergeron*, B. 2012. San Martín. Dwarfism in the coastal decapod assemblage of Robinson Crusoe Island, Chile: a predator-driven pattern? Benthic Ecology Meeting, Norfolk, VA 22-25 Mar 2012.
- Wahle, RA, C. Brown*, K. Hovel. 2012. Geography & body size dependence of top-down forcing in New England's lobster-groundfish interaction. Benthic Ecology Meeting, Norfolk, VA 22-25 Mar 2012.
- Wahle, RA. 2012. Update 2011: American Lobster Settlement Index - A Fisherman-Scientist Collaboration. FSRs Annual Meeting. Truro, NS 24 Feb 2012.
- Messerman, N.*, RA Wahle, C. Bergeron. 2012. Ocean acidification effects on fertilization & sperm motility in the giant sea scallop, *Placopecten magellanicus*. ASLO Annual Ocean Sciences meeting. Salt Lake City, UT 20-24 Feb 2012.
- Wahle, RA. 2012. Developing Tools to Evaluate Spawning and Fertilization Dynamics of the Giant Sea Scallop Phase I & II. NMFS Scallop PDT meeting. Warwick, RI 25 Jan 2012.
- Wahle, RA, C. Brown*, K. Hovel. 2012. Fishermen, Groundfish & Lobsters in the Northwest Atlantic: Revealing the Geography of Top-down Forcing. Invited talk. Mote Symposium. Sarasota, FL. 8-10 Nov 2011.
- Wahle, RA, L. Dellinger, S. Olzewski. 2011. A Fisherman-Scientist Collaboration: Re-assessing Narragansett Bay Lobster Nurseries After Two Decades of Environmental Change. CFRF Annual Meeting. Kingston RI 25 Oct 2011.
- Wahle, RA. 2011. The American Lobster Settlement Index: Fishermen & scientists collaborate to monitor lobster nurseries in New England & Atlantic Canada. Atlantic Lobster Sustainability Foundation Annual Meeting. 26 July 2011.
- Chang, J-H* , Y. Chen, R. Wahle, and C. Wilson. 2011. Spatial and temporal coherence of settlement, juvenile, and adult American lobster, *Homarus americanus*, in the coastal Gulf of Maine. 9th International Conference & Workshop on Lobsters. Hosted by Institute of Marine Research. Bergen, Norway. June 20-24, 2011.
- Oppenheim, N.G.* and R.A. Wahle. 2011. A cannibal by night? In situ infra-red video monitoring reveals diel shifts in inter- and intra-specific predation on tethered American lobster. 9th International Conference & Workshop on Lobsters. Hosted by Institute of Marine Research. Bergen, Norway. June 20-24, 2011.
- Bergeron, C.*, R. Wahle, Y. Chen, P. Lawton. 2011. Temperature matters: moving toward a degree-day model for the growth of the American lobster. 9th International Conference &

- Workshop on Lobsters. Hosted by Institute of Marine Research. Bergen, Norway. June 20-24, 2011.
- Wahle, R.A., C. Bergeron*, J. Tremblay, C. Wilson, V. Burdett-Coutts*, M.I Comeau, R. Rochette, P. Lawton, R. Glenn, M. Gibson. 2011. American lobster benthic recruitment from New England to Newfoundland as measured by diver-based suction sampling and passive postlarval collectors. 9th International Conference & Workshop on Lobsters. Hosted by Institute of Marine Research. Bergen, Norway. June 20-24, 2011.
- Wahle, R.A., M. Gibson, M. Fogarty. 2011. Distinguishing disease impacts from larval supply effects in southern New England's lobster fishery collapse. 9th International Conference & Workshop on Lobsters. Hosted by Institute of Marine Research. Bergen, Norway. June 20-24, 2011.
- Jaini, M.*, R. Wahle, A. Thomas. 2011. Environmental correlates of American lobster settlement at the sea surface as measured by satellites and oceanographic buoys. 9th International Conference & Workshop on Lobsters. Hosted by Institute of Marine Research. Bergen, Norway. June 20-24, 2011. (BEST STUDENT PAPER)
- Wahle, R.A., K. Hovel, C. Brown*. 2011. Geography of top-down forcing in the Northwest Atlantic lobster-groundfish interaction: the role of predator diversity, identity and abundance. 9th International Conference and Workshop on Lobsters. Institute of Marine Research. Bergen, Norway, June 20-24, 2011.
- Phillips, B. F., R. Wahle and M. Jaini*. 2011. Lobsters as part of Marine Ecosystems- A review. 9th International Conference and Workshop on Lobsters. Institute of Marine Research. Bergen, Norway, June 20-24, 2011.
- Wahle, R.A. 2011. Larval Transport, Settlement and Nurseries. Casco Bay Workshop. Hosted by Casco Bay Estuary Partnership. Portland, ME. May 18, 2011.
- Wahle, R.A. 2011. Update 2010: American Lobster Settlement Index - A Fisherman-Scientist Collaboration. ALSI Workshop during Fishermen and Scientists Research Society Annual Meeting. Truro, NS Canada, Mar 23-26, 2011
- Tremblay, J. and R.A. Wahle. 2011. What do we know about: Lobster Settlement & Early Juveniles. Fishermen and Scientists Research Society Annual Meeting. Truro, NS, Canada. 23 Mar 2011.
- Wahle, R.A. 2011. Developing Tools to Understand & Predict Fisheries Trends. Webinar Hosted by UMaine's COSEE-Ocean Sciences . 16 Feb 2011. <http://cosee.umaine.edu/about/>
- Wahle, R.A., G. Gerlach, J. Depperman*, T. Ames. 2010. Developing Genetic Fingerprinting Techniques for Lobster Seeding Trials in New England. Alaska Inter-agency Crab Meeting. [Annual meeting hosted by Alaska Dept Fish and Game, Anchorage, AK, 10 Dec 2010]
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