

MARTIN D. SMITH

Associate Professor of Environmental Economics
Nicholas School of the Environment
Duke University
Box 90328, Durham, NC 27708
Email: mar smith@duke.edu, Phone: (919) 613-8028

Education

UNIVERSITY OF CALIFORNIA, DAVIS

Ph.D. in Agricultural and Resource Economics, 2001

Fields: Environmental and Resource Economics, Econometrics

Dissertation: "Spatial Behavior, Marine Reserves, and the California Red Sea Urchin Fishery"

Committee: James E. Wilen (chair), Douglas M. Larson, David F. Layton, Jeffrey C. Williams

STANFORD UNIVERSITY

B.A. in Public Policy with a concentration in Environmental Policy, 1992

Honors and Awards

- 2010 Quality of Research Discovery, Agricultural and Applied Economics Association (w/ J.N. Sanchirico and J.E. Wilen)
- 2008 Dr. S.-Y. Hong Award for Outstanding Article in *Marine Resource Economics* (w/ J. Zhang and F.C. Coleman)
- 2004 Quality of Research Discovery, American Agricultural Economics Association (AAEA) (w/ J.E. Wilen)
- 2002 AAEA Outstanding Dissertation
- 2001 AAEA Outstanding Essay for the 21st Century Honorable Mention (w/ J.E. Wilen)
- 2001 Gordon A. King Outstanding Dissertation Award in Agricultural and Resource Economics, U.C. Davis
- 2000 Best Student Paper, International Institute for Fisheries Economics and Trade
- 1999 Jastro Shields Research Fellowship
- 1998 California Sea Grant College Traineeship
- 1996 Giannini Foundation Fellowship
- 1991 Krupp Foundation Fellowship

Professional Positions and Appointments

- 2008 – present Associate Professor of Environmental Economics
- 2001 – 2008 Assistant Professor of Environmental Economics
Division of Environmental Science and Policy
Nicholas School of the Environment
Duke University
- 2007 – 2009
and 2010-present Co-Editor, *Journal of Environmental Economics and Management*
- 2008 – present Scientific and Statistical Committee, Mid-Atlantic Fishery Management Council
- 2006 – 2007
and 2008-2009 Editorial Council, *Journal of Environmental Economics and Management*

2004 – 2007	Associate Editor, <i>Marine Resource Economics</i>
2003 – present	Assistant/Associate Professor of Economics (Secondary Appointment) Department of Economics Duke University
2005 – present	Assistant/Associate Professor (Secondary Appointment) Division of Marine Science and Conservation (formerly Coastal Systems Science and Policy) Nicholas School of the Environment Duke University
1996 – 2001	Post Graduate Researcher; Instructor; Research Assistant; Teaching Assistant University of California, Davis
1993 – 1996	Associate; Research Analyst Law and Economics Consulting Group, Inc. (LECG), Emeryville, CA
1986 – 1990, 1992 (summers)	Data Analyst Del Mar Thoroughbred Club, Del Mar, CA
1991 (summer)	Intern United Nations Environment Programme, Washington, D.C.

PROFESSIONAL WRITING

Journal Articles

In Review

Huang, L., and **M.D. Smith**, “The Dynamic Efficiency Costs of Common-pool Resource Exploitation,”
Revise-and-Resubmit, *The American Economic Review*, 2010.

Huang, L., L.A.B. Nichols, J.K. Craig, and **M.D. Smith**. “Measuring Welfare Losses from Hypoxia: The
Case of North Carolina Brown Shrimp,” In Review, 2010

McNamara, D.E., A.B. Murray, and **M.D. Smith**, “Coastal Sustainability Depends on How Economic and
Coastline Responses to Climate Change Affect Each Other,” In Review, 2010

Klinger, D.H., M. Turnipseed, J.L. Anderson, F. Asche, A.G. Guttormsen, B.S. Halpern, M.I. O’Connor, R.
Sagarin, K.A. Selkoe, G. Shester, **M.D. Smith**, and P. Tyedmers, “The false dichotomy of farmed and wild
seafood,” In Review, 2010

Published or In Press

Smith, M.D., F. Asche, A.G. Guttormsen, and J.B. Wiener, “Genetically Modified Salmon and Full Impact
Assessment,” *Science* 330:1052-53, 19 November 2010

Gopalakrishnan, S., **M.D. Smith**, J.M. Slott, and A.B. Murray, “The Value of Disappearing Beaches: A
Hedonic Model with Endogenous Beach Width,” forthcoming, *Journal of Environmental Economics and
Management*, 2011.

Huang, L., **M.D. Smith**, “Management of an Annual Fishery in the Presence of Ecological Stress: The Case of Shrimp and Hypoxia,” forthcoming, *Ecological Economics*, 2011

Zhang, J. and **M.D. Smith**, “Heterogeneous Response to Marine Reserve Formation: A Sorting Model Approach,” forthcoming, *Environmental and Resource Economics*, 2011

Smith, M.D., C.A. Roheim, L.B. Crowder, B.S. Halpern, M. Turnipseed, J.L. Anderson, F. Asche., L. Bourillón, A.G. Guttormsen, A. Khan, L.A. Liguori, A. McNevin, M.I. O’Connor, D. Squires, P. Tyedmers, C. Brownstein, K. Carden, D.H. Klinger, R. Sagarin, and K.A. Selkoe. “Sustainability and Global Seafood,” *Science* 327:784-786, 12 February 2010

Huang, L., **M.D. Smith**, and J.K. Craig, “Quantifying the Economic Effects of Hypoxia on a Fishery for Brown Shrimp *Farfantepenaeus aztecus*,” *Marine and Coastal Fisheries: Dynamics, Management, and Ecosystem Science* 2:232–248, 2010

Smith, M.D., J. Lynham, J.N. Sanchirico, and J. Wilson, “The Political Economy of Marine Reserves: Understanding the Role of Opportunity Costs,” forthcoming, *Proceedings of the National Academy of Sciences* 107(43): 18300-18305, 2010
PNAS Early Edition, www.pnas.org/cgi/doi/10.1073/pnas.0907365107.

Zhang, J. and **M.D. Smith**, “Estimation of a Generalized Fishery Model: A Two-Stage Approach,” forthcoming, *The Review of Economics and Statistics*, 2011

Smith, M.D., “Toward an Econometric Foundation for Marine Ecosystem-based Management,” *Bulletin of Marine Science* 86(2): 461–477, 2010.

Smith, M.D., J.N. Sanchirico, and J.E. Wilen, “The Economics of Spatial-Dynamic Processes: Applications to Renewable Resources,” *Journal of Environmental Economics and Management* 57: 104-121, 2009

Smith, M.D., J.M. Slott, D. McNamara, and A.B. Murray, “Beach Nourishment as a Dynamic Capital Accumulation Problem,” *Journal of Environmental Economics and Management* 58: 58-71, 2009

Smith, M.D., J. Zhang, and F.C. Coleman, “Econometric Modeling of Fisheries with Complex Life Histories: Avoiding Biological Management Failures,” *Journal of Environmental Economics and Management*, 55:265-280, 2008

Slott, J.M., **M.D. Smith**, and A.B. Murray, “Synergies Between Adjacent Beach-Nourishing Communities in a Morpho-economic Coupled Coastline Model,” *Coastal Management* 36:374-91, 2008.

Smith, M.D., “Bioeconometrics: Empirical Modeling of Bioeconomic Systems,” *Marine Resource Economics*, 23:1-23, 2008

Sanchirico, J.N. and **M.D. Smith**, and D.W. Lipton, “An empirical approach to ecosystem-based fishery management,” (Sanchirico and Smith co-lead authors), *Ecological Economics* 64(3):586-96, 2008

Smith, M.D., J. Zhang, and F.C. Coleman, “Structural Modeling of Marine Reserves with Bayesian Estimation,” *Marine Resource Economics*, 22:131-46, 2007

Smith, M.D., “Generating Value in Habitat-dependent Fisheries: The Importance of Fishery Management

Institutions,” *Land Economics* 83(1): 59-73, February 2007

Liese, C., **M.D. Smith**, and R.A. Kramer, “Open Access in a Spatially Delineated Artisanal Fishery: The Case of Minahasa, Indonesia,” *Environment and Development Economics* 12(1): 123-143, February 2007

Smith, M.D., J. Zhang, and F.C. Coleman, “Effectiveness of Marine Reserves for Large-Scale Fisheries Management,” *Canadian Journal of Fisheries and Aquatic Sciences* 63:153-164, 2006

Smith, M.D., “State Dependence and Heterogeneity in Fishing Location Choice,” *Journal of Environmental Economics and Management* 50(2):319-340, 2005

Smith, M.D. and J.E. Wilen, “Heterogeneous and Correlated Risk Preferences and Behavior of Commercial Fishermen: *The Perfect Storm* Dilemma,” *The Journal of Risk and Uncertainty* 31(1):53-71, 2005

Smith, M.D., “Fishing Yield, Curvature, and Spatial Behavior: Implications for Modeling Marine Reserves,” *Natural Resource Modeling* 17(3):273-298, 2004

Smith, M.D., “Limited Entry Licensing: Insights from a Duration Model,” *American Journal of Agricultural Economics* 86(3):605-618, 2004

Smith, M.D. and J.E. Wilen, “Marine Reserves with Endogenous Ports: Empirical Bioeconomics of the California Sea Urchin Fishery,” *Marine Resource Economics* 19(1):85-112, 2004

Smith, M.D. and J.E. Wilen, “Economic Impacts of Marine Reserves: The Importance of Spatial Behavior,” *Journal of Environmental Economics and Management* 46(2), 183-206, 2003

Reprinted in J. Geoghegan and W. Gray (eds.) *Spatial Aspects of Environmental Policy*, The International Library of Environmental Economics and Policy, Ashgate, 2006

Smith, M.D., “Two Econometric Approaches for Predicting the Spatial Behavior of Renewable Resource Harvesters,” *Land Economics*, 78(4), 522-538, 2002

Wilen, J.E., **M.D. Smith**, D. Lockwood, and L. Botsford, “Avoiding Surprises: Incorporating Fishermen Behavior into Management Models,” *Bulletin of Marine Science* 70(2), 553-575, 2002

Smith, M.D. and J.E. Wilen, “The Marine Environment: Fencing the Last Frontier,” *Review of Agricultural Economics* 24(1), 31-42, 2002

Smith, M.D., “Breeding Incentives and the Demand for California Thoroughbred Racing: Is there a Quality/Quantity Tradeoff?” *Applied Economics* 33, 1755-1762, 2001

Smith, M.D., “Spatial Search and Fishing Location Choice: Methodological Challenges of Empirical Modeling,” *American Journal of Agricultural Economics* 82(5), 1198-1206, 2000, proceedings issue.

Peer-reviewed Book Chapters

In Review

Smith, M.D. and L.B. Crowder, “Valuing Ecosystem Services with Fishery Rents: A Lumped-Parameter Approach to Hypoxia in the Neuse River Estuary,” submitted as a book chapter in *Linking Economics and*

Ecology, edited by V.K. Smith, (Working Paper Version: Fondazione Eni Enrico Mattei, Nota Di Lavoro 115.2005, September 2005)

Smith, M.D., “Rapporteur Report on Natural Resource Scarcity: From Non-renewable to Renewable Resource Scarcity” submitted as a book chapter in a special collection of essays in honor of the 50th anniversary of Resources for the Future, edited by R.T. Carson, W.M. Hanemann, and V.K. Smith, 2002

Published

Klonsky, K. and **M.D. Smith**, “Entry and Exit in California’s Organic Farming Sector,” in D.C. Hall and L.J. Moffitt, editors, *Economics of Pesticides, Sustainable Food Production and Organic Food Markets*, Advances in the Economics of Environmental Resources Volume 4, New York: Elsevier Science, 2002

Other Published Articles, Editorials, and Reviews (not peer-reviewed in entirety)

Huang, L., L.A.B. Nichols, J.K. Craig, and **M.D. Smith**. “Economic Impacts of Hypoxia on North Carolina Brown Shrimp” Forthcoming, *CD ROM Proceedings of the 15th Biennial Conference of the International Institute for Fisheries Economics and Trade*, 2011

Smith, M.D., and S. Gopalakrishnan “Combining Property Rights and Landings Taxes to Mitigate the Ecological Impacts of Fishing,” Forthcoming, *CD ROM Proceedings of the 15th Biennial Conference of the International Institute for Fisheries Economics and Trade*, 2011

Gopalakrishnan, S., D. McNamara, A.B. Murray, J.M. Slott, and **M.D. Smith**. 2010. “Shifting Shorelines: Adapting to the Future,” Forthcoming, Proceedings of the Coastal Society's 2010 International Conference, Wilmington, NC.

Smith, M.D., Review of *Fisheries Management: Pandemic Failure and Workable Solutions* (by Giulio Pontecorvo and William Schrank., Emerald Group Publishing, Bingley UK 2009), *International Journal of Maritime History* 22:351-52, 2010

Smith, M.D., Review of *Climate Change and the Economics of the World’s Fisheries: Examples of Small Pelagic Stocks* (Edited by Rögnvaldur Hannesson, Manuael Barange, and Samuel F. Herrick Jr., Northampton, MA: Edward Elgar, 2006), *International Journal of Maritime History* 19:476-78, 2007

Sanchirico, J.N. and **M.D. Smith**, and D.W. Lipton, “Managing Fish Portfolios,” *Resources* Winter 2007

Saterson, K.A., N.L. Christensen, R.B. Jackson, R.A. Kramer, S.L. Pimm, **M.D. Smith**, and J.B. Wiener, “Disconnects in Evaluating the Relative Effectiveness of Conservation Strategies,” Editorial, *Conservation Biology* 18(3):1-3, June 2004.

Smith, M.D. and J.E. Wilen, “State Dependence in Modeling the Spatial Behavior of Renewable Resource Users,” *CD ROM Proceedings of the 11th Biennial Conference of the International Institute for Fisheries Economics and Trade*, 2003

Smith, M.D., Review of *The Economics of Conserving Wildlife and Natural Areas* (by C. Tisdell), *Australian Journal of Agricultural and Resource Economics* 47 (3), 418-420, 2003

Kaplan, J.D. and **M.D. Smith**, “Optimal Fisheries Management in the Presence of an Endangered Predator and Harvestable Prey,” *CD ROM Proceedings of the 10th Biennial Conference of the International Institute for Fisheries Economics and Trade*, 2001

Smith, M.D., “Two Econometric Approaches for Spatial Fisheries Management,” *CD ROM Proceedings of the 10th Biennial Conference of the International Institute for Fisheries Economics and Trade*, 2001

Unpublished Working Papers and Technical Reports

Asche, F. and **M.D. Smith**, “Trade and Fisheries: Key Issues for the World Trade Organization,” Technical Report Commissioned by the WTO, 61 pp., 2009.

Smith, M.D., “Combining Property Rights and Landings Taxes to Mitigate the Ecological Impacts of Fishing,” working paper, 2008

Smith, M.D., “Endogenous Fishing Mortality in Fish Life History Models: Relaxing Some Implicit Assumptions,” working paper available at <http://agecon.lib.umn.edu/>, 2007

Smith, M.D. and J. Zhang, “Sorting Models in Discrete Choice Fisheries Analysis,” working paper available at <http://agecon.lib.umn.edu/>, 2007

J. Zhang and **Smith, M.D.**, “Evaluating the Effectiveness of Marine Reserves with a Simplified Biological Process,” Working Paper, 2006

Wilen, J.E., J.N. Sanchirico, and **M.D. Smith**, “Marine Reserves: The Importance of Economic and Biological Spatial Processes,” Working Paper, 2005

Smith, M.D. and B. Provencher, “Spatial Search in Marine Fisheries: A Discrete Choice Dynamic Programming Approach,” Proceedings of the AERE 2003 Summer Workshop: Spatial Theory, Modeling, and Econometrics in Environmental and Resource Economics, 2003

Sanchirico, J.N. and **M.D. Smith**, “Trophic Portfolios in Marine Fisheries: A Step Towards Ecosystem Management,” working paper available at <http://agecon.lib.umn.edu/>, 2003

Smith, M.D., J. Zhang, and F.C. Coleman, “Empirical Approaches to Evaluate the Effectiveness of Marine Reserves for Fisheries Management,” Working Paper, Duke University, 2005

Smith, M.D. and J.E. Wilen, “Analysis of a Spatial Rotation Plan for the Tule Lake National Wildlife Refuge,” working paper available at <http://agecon.lib.umn.edu/>, 2000

Smith, M.D., “Statistical Models of Catch Per Unit Effort: Localized Depletions of Pacific Cod in the Eastern Bering Sea,” Report to the Alaskan Fisheries Science Center, NOAA, 2000

Smith, M.D., “Statistical Models of Catch Per Unit Effort: Assessing Localized Depletions of Alaskan Atka Mackerel,” Report to the Alaskan Fisheries Science Center, NOAA, 1999

Smith, M.D., “Report on Leslie Regressions of Alaskan Atka Mackerel Populations,” Report to the Alaskan Fisheries Science Center, NOAA, 1998

Papers in Preparation

Squires, D., K. Carden, A. Khan, and **M.D. Smith**, “Rethinking Marine Conservation: From Solving the Commons Problem to Conserving Public Goods.”

Smith, M.D., L. Huang, and R. Felthoven, “The race to fish and the Alaskan crab rationalization.”

Gopalakrishnan, S., D. McNamara, **M.D. Smith**, and A.B. Murray, “The spatial-dynamics of optimized coastlines.”

McNamara, D., A.B. Murray, and **M.D. Smith**, “The tragedy of the Carolina sand commons.”

McNamara, D., S. Gopalakrishnan and **M.D. Smith**, “Stochastic storms and the dynamics of beach nourishment.”

Smith, M.D., “Fisherman Behavior 101: What to fish for, with what, where, when, and how hard.”

Smith, M.D., “Numerical Experiments in Empirical Spatial Fisheries Modeling.”

Smith, M.D. and Z. Brown, “A Two-state Two-control Model of Bycatch Avoidance when Compensatory Mitigation is Possible.”

Smith, M.D. and L. Huang, “Linking Hypoxia, Population Dynamics, and Spatial Fishing Choices”

Working Paper Versions of Subsequently Published Articles

Sanchirico, J.N. and **M.D. Smith**, and D.W. Lipton, “An Approach to Ecosystem-Based Fisheries Management,” (Sanchirico and Smith share lead authorship), Resources for the Future Discussion Paper 06-40, 2006

Smith, M.D., “Generating Value in Habitat-dependent Fisheries: The Importance of Fishery Management Institutions,” Duke University, Department of Economics, Working Paper 05-12, 2005

Liese, C., **M.D. Smith**, and R.A. Kramer, “Open Access with Product and Labor Market Failure: The Case of Artisanal Fishing in Indonesia,” Duke University, Department of Economics, Working Paper 03-11, 2003

Media Attention

Quoted in *Bloomberg News* and *Business Week Online*, “Gulf of Mexico ‘Dead Zone’ Grows as Spill Impact Is Studied,” Leslie Patton, August 12, 2010

Quoted in *Houston Chronicle*, “Guls dead zone now deeper into Texas,” Eric Berger, August 3, 2010

Articles about “Sustainability and Global Seafood” paper in *Science*:

“More aid needed for sustainable seafood,” United Press International, February 12, 2010, http://www.upi.com/Science_News/2010/02/12/More-aid-needed-for-sustainable-seafood/UPI-51151266006015/

“Sustainable fisheries needed for global food security,” Genetic Engineering and Biotechnology News, February 11, 2010, <http://www.genengnews.com/news/bnitem.aspx?name=75300448>

Quoted in *Duke Magazine*, “Green Energy Viable?” November-December 2006, p. 5.

Quoted in *The Christian Science Monitor*, “Off Florida, a fight over a kettle of fish: sport fishermen decry a

US decision to bar them from grouper grounds in Gulf this winter,” Patrik Jonsson (Correspondent of *The Christian Science Monitor*), August 8, 2005

Quoted in the *Charlotte Observer*, “Marine Refuges Spawn Debate,” Bruce Henderson (staff writer), January 26, 2004

Published Abstracts

L. Huang and **M.D. Smith**. 2010. Abstract of “Measuring the dynamic efficiency costs of common-pool resource exploitation.” *Economics of fish resources and aquatic ecosystems: balancing uses, balancing costs*, The Fifteenth Biennial Conference of the International Institute of Fisheries Economics and Trade Book of Abstracts

L. Huang, L.A.B. Nichols, J.K. Craig, and **M.D. Smith**. 2010. Abstract of “Economic Impacts of Hypoxia on North Carolina Brown Shrimp.” *Economics of fish resources and aquatic ecosystems: balancing uses, balancing costs*, The Fifteenth Biennial Conference of the International Institute of Fisheries Economics and Trade Book of Abstracts

Smith, M.D. and S. Gopalakrishnan. 2010. Abstract of “Combining property rights and landings taxes to mitigate the ecological impacts of fishing.” *Economics of fish resources and aquatic ecosystems: balancing uses, balancing costs*, The Fifteenth Biennial Conference of the International Institute of Fisheries Economics and Trade Book of Abstracts

Smith, M.D. Abstract of “Toward a microbehavioral foundation for ecosystem-based management,” Program of the Seventh William R. and Lenore Mote International Symposium, Spatial Dimensions of Fisheries: Putting it All in Place, November 2008

Huang, L. and **M.D. Smith**. Abstract of “Spatial assessment of a fish stock: a sorting method approach with commercial fishery data,” Program of the Seventh William R. and Lenore Mote International Symposium, Spatial Dimensions of Fisheries: Putting it All in Place, November 2008

Smith, M.D. Abstract of “Fishermen Behavior 101: What to fish for, with what, where, when, and how hard,” *Program of the American Fisheries Society 137th Annual Meeting (CD ROM)*, 2007

Smith, M.D. and J. Zhang. Abstract of “Sorting Models in Discrete Choice Fisheries Analysis,” *Program of the American Fisheries Society 137th Annual Meeting (CD ROM)*, 2007

Smith, M.D. and L. Huang, Abstract of “Effects of Hypoxia on Fishery Productivity,” *Program of NAAFE 2007: The Role of Economics in Mitigating Unsustainability of Fisheries*, Mérida, Yucatán, México, 2007.

Smith, M.D., Abstract of “Numerical Experiments in Empirical Spatial Fisheries Modeling,” *Program of NAAFE 2007: The Role of Economics in Mitigating Unsustainability of Fisheries*, Mérida, Yucatán, México, 2007.

Smith, M.D. and J. Zhang, Abstract of “Sorting Models in Discrete Choice Fisheries Analysis,” *Program of NAAFE 2007: The Role of Economics in Mitigating Unsustainability of Fisheries*, Mérida, Yucatán, México, 2007.

Smith, M.D., Abstract of “Endogenous fishing mortality in life history models: Relaxing some implicit assumptions,” *Program of NAAFE 2007: The Role of Economics in Mitigating Unsustainability of Fisheries*, Mérida, Yucatán, México, 2007.

Smith, M.D., Abstract of “Bioeconometrics: Empirical Modeling of Bioeconomic Systems,” *IIFET 2006: Rebuilding Fisheries in an Uncertain Environment Book of Abstracts*, The Thirteenth Biennial Conference of the International Institute of Fisheries Economics and Trade, Portsmouth, UK, 2006.

Sanchirico, J.N., **M.D. Smith**, and D.W. Lipton, Abstract of “Ecosystem Portfolios: A Finance-based Approach to Ecosystem Management,” *IIFET 2006: Rebuilding Fisheries in an Uncertain Environment Book of Abstracts*, The Thirteenth Biennial Conference of the International Institute of Fisheries Economics and Trade, Portsmouth, UK, 2006.

Smith, M.D., J. Zhang, and F.C. Coleman, Abstract of “A Hierarchical Bayes Approach to Discrete Choice Fisheries Modeling: The Effects of Marine Reserves on Fishing Behaviour,” program for the 2005 Forum of the North American Association of Fisheries Economists, *Fisheries Benefits to All Generations: The Role of Economics*

Smith, M.D. and L.B. Crowder, Abstract of “Valuing Ecosystem Services with Fishery Rents: A Lumped-Parameter Approach to Hypoxia in the Neuse River Estuary,” program for the 2005 Forum of the North American Association of Fisheries Economists, *Fisheries Benefits to All Generations: The Role of Economics*

Smith, M.D. and J.E. Wilen, Abstract of “State Dependence and Heterogeneity in Fishing Location Choice,” *International Institute for Fisheries Economics and Trade Book of Abstracts*, Wellington, New Zealand, August 2002

Smith, M.D., Abstract of “Limited Entry Licensing and Adaptive Management,” *International Institute for Fisheries Economics and Trade Book of Abstracts*, Wellington, New Zealand, August 2002

Smith, M.D. and J.E. Wilen, Abstract of “Economic Impacts of Marine Reserves: The Importance of Spatial Behavior,” *2nd World Congress of Environmental and Resource Economists Book of Abstracts*

Smith, M.D. and J.E. Wilen, Abstract of “Correlated Risk Preferences and Behavior of Commercial Fishermen: *The Perfect Storm* Dilemma” *2nd World Congress of Environmental and Resource Economists Book of Abstracts*

Smith, M.D. and J.E. Wilen, Abstract of “Spatial Patterns of Renewable Resource Exploitation: The Case of the California Sea Urchin Fishery,” *American Journal of Agricultural Economics* 81(5), 1291, 1999

Smith, M.D., Abstract of “Breeding Incentive Programs and Demand for California Thoroughbred Racing: The Trade-off Between Quantity and Quality,” *American Journal of Agricultural Economics* 81(5), 1316, 1999

RESEARCH FUNDING

Grants, Contracts, and Funded Working Groups

Murray, A.B. and **M.D. Smith** (Co-PI), “Modeling New Behaviors Emerging from Coupling Physical Coastal Processes and Coastal Economies,” NSF ESE Collaborative Research, **FUNDED**, 2010-2013.

Smith, M.D. (PI), “Spatial behavior of Pacific cod catcher vessels and oceanographic indicators: an exploratory analysis using a horizontal sorting model,” NOAA Alaska Fisheries Science Center (through Oak Management), **FUNDED**, 2010-2011.

Craig, J.K. (PI), **M.D. Smith** (PI), L.S. Benneer, J. Nance, “Effects of hypoxia on harvest dynamics and economics of the shrimp fishery in the northwestern Gulf of Mexico,” NOAA NGOMEX, **FUNDED**, 2009-13

Smith, M.D. (PI) and M.S. Lozier, “Towards an Empirical Foundation for Marine Ecosystem-based Management: Fishing Behavior, Fish Abundance, and Climate Change,” Duke Center for Global Change, Internal Funding for a Working Group, **FUNDED**, 2009-10

Crowder, L.B. and **M.D. Smith** (Co-PI), “Sustainable Global Seafood Markets,” Working Group, National Center for Ecological Analysis and Synthesis, **FUNDED**, 2009-10

Smith, M.D. (PI), “Dynamic Search Behavior and the Alaskan Crab Rationalization Program,” Pacific States Marine Fisheries Commission, **FUNDED**, 2008-09

Murray, A.B., T. Crowley, M. Orbach, J. Ramus, and **M.D. Smith** (Co-PI), "Coupling Human and Natural Influences on Coastline Evolution as Climate Changes," NSF Biocomplexity – Coupled Human Natural Systems Program, **FUNDED**, 2005-2010

Craig, J.K., L.B. Crowder, and **M.D. Smith** (Co-PI), “Linking hypoxia-induced habitat degradation to fishery outcomes: a bioeconomic approach based on brown shrimp,” NOAA Coastal Oceans Program, **FUNDED**, 2005-2008

Smith, M.D. (PI), “A Pilot Analysis of Size-based High-grading and the Potential for Individualized Landings Taxes to Embed Size-based Incentives: A Case Study of the U.S. West Coast Sablefish Fishery,” Subcontract from UC Santa Barbara, **FUNDED**, 2007-2008.

Smith, M.D. (PI), J.N. Sanchirico (PI), and D.W. Lipton, “Trophic Portfolios in Commercial Fishing: A Finance-based Approach to Ecosystem Management with and Application to the Chesapeake Bay,” Chesapeake Bay Fisheries Research Program, National Marine Fisheries Service, NOAA, **FUNDED**, July 2004 – October 2006

Smith, M.D. (PI) and F.C. Coleman (PI), “Incorporating Fisher Behavior Into Management Models: A Case Study of the Reef Fish Fishery of the Eastern Gulf of Mexico,” Saltonstall-Kennedy (National Marine Fisheries Service), NOAA, **FUNDED**, 2003-2007

Smith, M.D.(PI), “Renewable Resource Production Surfaces, Bioeconomic Steady States, and Space,” Fishery Statistics and Economics Division, National Marine Fisheries Service, NOAA, 2002, **FUNDED**

Smith, M.D. (PI), “Statistical Models of Catch Per Unit Effort: Localized Depletions of Pacific Cod in the Eastern Bering Sea,” Alaska Fisheries Science Center, National Marine Fisheries Service, NOAA , 2000, **FUNDED**

Smith, M.D. (PI), “Statistical Models of Catch Per Unit Effort: Assessing Localized Depletions of Alaskan Atka Mackerel,” Alaska Fisheries Science Center, National Marine Fisheries Service, 1999, **FUNDED**

Smith, M.D. (PI), “Report on Leslie Regressions of Alaskan Atka Mackerel Populations,” Alaska Fisheries Science Center, National Marine Fisheries Service, NOAA, 1998, **FUNDED**

Travel Awards and Honoraria

Honorarium for *Micro-econometric Modeling in Environmental and Resource Economics*, EPA-sponsored Workshop, Washington DC, May 2009
Honorarium for Keynote Address, Workshop on Choice Modeling, Centre for Fisheries & Aquaculture Management & Economics, University of Southern Denmark, June 2008
Honorarium for Contributed Paper to *The Frontiers in Environmental Economics*, Resources for the Future, Washington, D.C., 2007
Honorarium for *Micro-econometric Modeling in Environmental and Resource Economics*, EPA-sponsored Workshop, Research Triangle Park, NC, Fall 2006
Honorarium for Contributed Paper to *Linking Economic and Ecological Models for Environmental Policy Analysis: Challenges and Research Strategies*, NSF-EPA Biocomplexity Workshop, 2005
University of Maryland Department of Agricultural and Resource Economics Seminar Honorarium, 2003
Honorarium for Natural Resource Scarcity Session, 2nd World Congress of Env. and Resource Econ., 2002
International Travel Award for Junior Faculty, Duke University International Affairs Committee, 2002
Duke Marine Lab Speaker Series Honorarium, 2001
American Agricultural Economics Association Student Travel Award, Summer 1999
U.C. Davis Graduate Student Association Travel Award, Summer 1999

TEACHING and ADVISING

Courses Taught or in Progress

ENV 379 (ECON Cross-list): Natural Resource Economics (Duke, Fall 2005, 2008, 2010, Spring 2007)
ENV 252 (formerly 298.32): Sustainability and Renewable Resource Economics (Duke, Spring 2002, 2003, 2004, 2007, 2008, Fall 2005)
ENV 270 (ECON/PPS Cross-list): Resource and Environmental Economics (Duke, Fall 2001, 2002, 2003, 2007, 2008)
ENV 395.05S: Masters Project Seminar for Resource Economics and Policy, (Duke, 2003-04)
ENV 298.22: Clean Electricity (with R. Harkrader), (Duke, Fall 2003)
ARE 100A: Intermediate Microeconomics (U.C. Davis, Fall 1999)

Planned Courses

ENV 1/2__ Economic Perspectives on Marine and Coastal Resource Policy (undergrad/masters)
ENV 186S Should I Eat Fish? Economics, Ecology, and Health (marine conservation leadership certificate capstone course)

Mini-courses and Guest Lectures

Simulation in Renewable Resource Economics (Duke, Spring 2007)
Fishing for Chocolates (Duke, Fall 2006, 2007, 2008, 2010)
Fossil Fuel Scarcity and the Environment (Duke, Spring 2004)
Economics of Water and Water Markets (Duke, 2001, 2002, 2003)
Economics of Marine Protected Areas (Duke, Fall 2002)
Nicholas School Mathematics Review (Duke, Fall 2001, 2002, 2003, 2005, 2006, 2007, 2008)
Nicholas School Microeconomics Review (Fall 2002, 2003, 2007, 2008)
Discounting in Environmental Economics (U.C. Davis, Spring 2001)

Teaching Assistant

Intermediate Microeconomics (U.C. Davis, Fall 1997)
Linear Programming (U.C. Davis, Spring 1997)
Econometrics (U.C. Davis, Winter 1997 and Fall 1996)

Ph.D. Student Advising

Supervisor for 4 Ph.D. Students

Junjie Zhang, Nicholas School, (2003- 2008)

Dissertation Title: “Production from Natural Resources with a Latent Stock: The Case of the Fishery”

Joseph L. Fisher Doctoral Dissertation Award, Resources for the Future, 2007-08

Assistant Professor of Environmental Economics (from August 2008), School of International Relations and Pacific Studies, University of California, San Diego

Ling Huang, NSEES, (2004-2009)

Dissertation Title: “Analyses of Marine Resources Management with Micro-data”

Best Student Paper Honorable Mention, 2010 Conference of the International Institute of Fisheries Economics and Trade, Montpellier, France

Post-doctoral Fellow (from January 2010), Fisheries Centre, University of British Columbia

Sathya Gopalakrishnan (2005- 2010)

Dissertation Working Title: “Economics of Coastline Change”

Sea Grant Association Award for the Best Student Paper/Presentation at the Coastal Society's International Conference, Wilmington, NC 2010

Ashley Vissing (2010-present), Co-chair with Lori Benneer

Member of 15 Ph.D. Committees

Christopher Liese, Duke, Nicholas School, DESP (completed in 2003)

Jon Eisen-Hecht, Duke, Nicholas School, DESP (completed in 2005)

James Abbott, Duke, Nicholas School, CSSP (completed in 2005)

Katie Hansen Dickinson, Duke, Nicholas School, DESP (completed in 2008)

Jordan Slott, Duke, Nicholas School, EOS (completed in 2008)

Zachary Brown, Duke, Nicholas School, DESP (2007 – present)

Bentley Coffey, Duke, Economics Department (completed in 2004)

Kelly Bishop, Duke, Economics Department, (completed in 2008)

Chris Moore, NC State, Economics Department (completed in 2008)

Mitchell Dudley NC State, Economics Department (2006 – present)

Peter Maniloff, Duke, Nicholas School, DESP (2008 – present)

Nujin Prasertsom, Duke, Economics Department (2008 – present)

Daniela Miteva, Duke, Nicholas School (2009 – present)

Kenny Ells, Nicholas School (2009-present)

Jennifer Lau, Nicholas School (2009-present)

Masters Student Advising

Supervisor for 28 Masters Projects (26 completed), Duke, Nicholas School

Alejandro Escobar (2002)

Christopher Frangione (2002)

Miwa Fujinuma (2002)

Jason Hummel (2002)

Michelle Pugliese (2002)

Helik Shemer (2002)

Jennifer Shweky 2002)

Shufang Zhang (2002)

Makato Hamatani (2003)

Yuhki Kushiro (2003)

Emily Woglom (2003)

Takaharu Funatomi (2004)

Lena Hansen (2004)

Andrew Hecht (2004)

Shinsuke Murikame (2004)
Sarah Darley (co-advisor, 2006)
Kevin Dudney (2007)
Douglas Gorecki (2007)
Bradley Strode (2007)
Oliver Ferrari (2007)
Carla Frisch (2008)

Lauren Nichols (2008)
Bo Zhong (2009)
Michael Press (2009)
Mary Greene (2009)
Susannah Vale (2009)
Ting Lei (in progress)
Xiaoyuan Gu (in progress)

Course Advisor for 50+ Masters of Environmental Management Students, Duke, Nicholas School
Exams Committee, 2 Master of Arts, Duke, Nicholas School, 2002, 2008
Committee Member for 1 Masters of Public Policy, Duke, Sanford Institute, 2001

Undergraduate Student Advising

Advisor for 1 Undergraduate Senior Thesis, Duke, Environmental Science and Policy
Aaron Windecker (completed in 2003)
Major Advisor for 6 Undergraduate Environmental Science and Policy Majors, Duke 2002-2005
Supervisor for 3 Undergraduate Independent Studies, Duke, 2002-2003
Second Reader, Duke Economics Department Undergraduate Honors Thesis, 2006

OTHER PROFESSIONAL INFORMATION

University Service

Duke University

Program Chair, Environmental Economics and Policy, Nicholas School MEM Degree, 2010-present
Social Science Disciplinary Representative, Nicholas School, 2010-present
Faculty Council, Nicholas School, 2010-present
Faculty Diversity Standing Committee (FDSC), September 2008 - present
Executive Committee, Duke Center for Marine Conservation, 2005-present
Duke Advisory Committee on Investment Responsibility, 2006-2009
Ad hoc Committee on Incentives and Compensation, ESP Division, 2007-08
Seminar Coordinator, Nicholas Institute for Environmental Policy Solutions, 2005 – 2007
Search Committee for Gendell Chair in Energy and the Environment, 2005 – 2006
Graduate Admissions Committee, Nicholas School, 2002-04
Presidential Management Interns Program Selection Committee, Nicholas School, 2002
Executive Committee, Duke Center for Environmental Solutions, 2003-2005
Search Committee for Assistant Professor of Environmental Policy, 2003-04
Faculty Participant, Duke Up Close Program, Spring 2003, 2004, 2005, 2006
Duke University Greening Initiative Board of Advisors, 2003-present
Ad Hoc Statistics Teaching Committee, Nicholas School, 2003
Computer and Data Committee, Social Science Research Institute, 2004 – 2005
Energy Program Task Force, Nicholas School, 2005-present

University of California, Davis

Student Member, Search Committee for Assistant Professor of Agricultural Economics
Graduate Student Seminar Co-Chair, Ag. and Resource Economics, 1999-2001
Graduate Student Association President, Ag. and Resource Economics, 1998-1999
Teaching Assistant Retreat Organizer, Ag. and Resource Economics, 1998 and 1999
Computer Committee, Ag. and Resource Economics, 1997-1999

Professional Affiliations and Service

Member

American Economic Association
Association of Environmental and Resource Economists
Agricultural and Applied Economics Association
International Institute for Fisheries Economics and Trade
North American Association of Fisheries Economists
American Fisheries Society

Program Committee

Association of Environmental and Resource Economists, 2008 – present (Chair in 2010)

Journal Reviewing

American Journal of Agricultural Economics
Applied Economics
The B.E. Journal of Economic Analysis and Policy
Bulletin of Marine Science
Canadian Journal of Agricultural Economics
Canadian Journal of Fisheries and Aquatic Sciences
Conservation Biology
Conservation Ecology
Ecological Economics
Environmental and Resource Economics
Environment and Development Economics
Environmental Health Perspectives
Environmental Modeling and Assessment
European Economic Review
Fisheries Research
Food Policy
Frontiers in Ecology and the Environment
Journal of Agricultural and Applied Economics
Journal of Agricultural and Resource Economics
Journal of Business and Economic Statistics
Journal of Environmental Economics and Management
Journal of Risk and Uncertainty
Land Economics
Marine Resource Economics
Natural Resource Modeling
Proceedings of the National Academy of Sciences
Proceedings of the Royal Society: Biological Sciences
Resource and Energy Economics
Science
Sustainability
Theoretical Ecology

Other Reviewing

Addison-Wesley
American Agricultural Economics Association Annual Meetings
Cambridge University Press
Congressional Research Service

Island Press
Maine Sea Grant College Program
National Science Foundation
National Oceanic and Atmospheric Administration
Pew Environment Group
Research Council of Norway
Stanford University Press
Triangle Census Data Research Center
Virginia Marine Resources Commission

Rapporteur

Natural Resource Scarcity Session in Honor of Resources for the Future, 2nd World Congress of Environmental and Resource Economists, Monterey, June, 2002

Session Moderator

American Agricultural Economics Association Annual Meeting, Long Beach, CA, 2002
North American Association of Fisheries Economists 2005 Forum, Vancouver, BC Canada
International Institute for Fisheries Economics and Trade (2 sessions), Portsmouth, UK, 2006

Paper Discussant

Association of Environmental and Resource Economists (AERE) Sessions (2 papers) at American Agricultural Economics Association Annual Meeting, Montreal, Canada, July 2003
AERE Workshop: Natural Resources at Risk, Jackson, WY, June 2005
AERE Sessions at American Agricultural Economics Association Annual Meeting, Providence, RI, July 2005
3rd World Congress of Environmental and Resource Economists, Kyoto, Japan, 2006
AERE Sessions at Southern Economic Association Annual Meetings, Charleston, SC, November 2006
AERE Sessions at Allied Social Science Associations Annual Meeting, San Francisco, CA, January 2009

Judge

Undergraduate Student Paper Contest, American Agricultural Economics Association Annual Meetings, Portland, OR, 2007

PRESENTATIONS AND ORGANIZED SESSIONS

Organized Sessions

1. *Economics of Beach Management and Coastal Hazard Mitigation*, (with C. Landry), Organized Symposium, American Agricultural Economics Association, Portland, OR, July 2007
2. *Modeling Risk and Uncertainty in Capture Fisheries*, (with L. Pendleton), 2nd World Congress of Environmental and Resource Economists, Monterey, June 2002

Presentations at Professional Meetings (selection based on peer review of abstracts or full papers, all presented by M.D. Smith unless otherwise indicated)

1. "Economic Impacts of Hypoxia on North Carolina Brown Shrimp" Forthcoming, *Conference of the International Institute for Fisheries Economics and Trade*, Montpellier, France, July 2011
2. "Combining Property Rights and Landings Taxes to Mitigate the Ecological Impacts of Fishing," Forthcoming, *Conference of the International Institute for Fisheries Economics and Trade*, Montpellier,

France, July 2011

3. "Economic Impacts of Hypoxia on North Carolina Brown Shrimp," Coasts and Estuaries Research Federation Conference, Portland, OR, November 4, 2009 (presented by L. Huang)
4. "The Value of Disappearing Beaches in North Carolina: Incorporating feedbacks between housing markets and the coastal system," AERE Session, 2009 American Agricultural Economics Association Annual Meeting, Milwaukee, WI, July 26– 28, 2009 (presented by S. Gopalakrishnan)
5. "Measuring the Dynamic Efficiency Costs of Common-pool Resource Exploitation," AERE Session, 84th Annual Conference of the Western Economics Association International, Vancouver, BC, Canada, June 29-July 3, 2009 (presented by L. Huang)
6. "The Value of Disappearing Beaches in North Carolina: A Hedonic Pricing Model with Endogenous Beach Width," AERE Session, 84th Annual Conference of the Western Economics Association International, Vancouver, BC, Canada, June 29-July 3, 2009 (presented by S. Gopalakrishnan)
7. "Empirical Impacts of MPAs: Lessons from Econometrics," International Marine Conservation Congress, George Mason University, May 2009
8. "Combining Property Rights and Landings Taxes to Mitigate the Ecological Impacts of Fishing," AERE Session, Allied Social Science Associations Annual Meeting, San Francisco, CA, January 2009
9. "Towards an Econometric Foundation for Marine Ecosystem-based Management," (Invited Lecture) Seventh William R. and Lenore Mote International Symposium, Spatial Dimensions of Fisheries: Putting it All in Place, November 2008
10. "Spatial assessment of a fish stock: a sorting method approach with commercial fishery data," Seventh William R. and Lenore Mote International Symposium, Spatial Dimensions of Fisheries: Putting it All in Place, November 2008 (presented by L. Huang)
11. "Optimal Beach Nourishment with Strategic Interaction Between Adjacent Communities," Camp Resources XV, Wilmington, NC, August 2008 (presented by S. Gopalakrishnan).
12. "Dynamic Modeling of Beach Management," Triangle Resource and Environmental Economics Workshop, NCSU, September 27-28, 2007
13. "Fishermen Behavior 101: What to fish for, with what, where, when, and how hard." in *Modeling Fisher Behavior: State of the Art*, American Fisheries Society 137th Annual Meeting, San Francisco, CA September 2007
14. "Sorting Models in Discrete Choice Fisheries Analysis," (with J. Zhang), in *Modeling Fisher Behavior: State of the Art*, American Fisheries Society 137th Annual Meeting, San Francisco, CA September 2007
15. "Economic Modeling and the Dynamics of Coastal Change,"(with J.M. Slott, A.B. Murray, and S. Gopalakrishnan), in *Economics of Beach Management and Coastal Hazard Mitigation*, Organized Symposium, American Agricultural Economics Association, Portland, OR, July 2007
16. "Endogenous Fishing Mortality in Life History Models: Relaxing Some Implicit Assumptions," Selected Paper, American Agricultural Economics Association, Portland, OR, July 2007
17. "Sorting Models in Discrete Choice Fisheries Analysis," (with J. Zhang), Selected Paper, American

Agricultural Economics Association, Portland, OR, July 2007

18. "Numerical Experiments in Empirical Spatial Fisheries Modeling," *The Role of Economics in Mitigating Unsustainability of Fisheries, Dealing with Ecosystems, Environmental Fluctuations, Governance, and Trade*, Forum of the North American Association of Fisheries Economists, Mérida, Yucatán, México, March 27-30, 2007.
19. "Sorting Models in Discrete Choice Fisheries Analysis," (with J. Zhang) *The Role of Economics in Mitigating Unsustainability of Fisheries, Dealing with Ecosystems, Environmental Fluctuations, Governance, and Trade*, Forum of the North American Association of Fisheries Economists, Mérida, Yucatán, México, March 27-30, 2007.
20. "Effects of Hypoxia on Fishery Productivity," (with L. Huang) *The Role of Economics in Mitigating Unsustainability of Fisheries, Dealing with Ecosystems, Environmental Fluctuations, Governance, and Trade*, Forum of the North American Association of Fisheries Economists, Mérida, Yucatán, México, March 27-30, 2007.
21. "Endogenous Fishing Mortality in Life History Models: Relaxing Some Implicit Assumptions," *The Role of Economics in Mitigating Unsustainability of Fisheries, Dealing with Ecosystems, Environmental Fluctuations, Governance, and Trade*, Forum of the North American Association of Fisheries Economists, Mérida, Yucatán, México, March 27-30, 2007.
22. "The Economics of Spatial-Dynamic Processes: Applications to Renewable Resources," (with J.N. Sanchirico and J.E. Wilen), *The Frontiers of Environmental Economics*, Washington, D.C., February 26, 2007, 1 of 9 papers selected out of 175 submissions
23. "Endogenous Fishing Mortality in Life History Models: Relaxing Some Implicit Assumptions," Sixth William R. and Lenore Mote International Symposium: Life History in Fisheries Ecology and Management, Sarasota, FL, November 2006
24. "Bioeconometrics: Empirical Modeling of Bioeconomic Systems," Selected Paper, Southern Economic Association Annual Meetings, AERE Sessions, Charleston, SC, November 2006
25. "Structural Econometric Modeling of Fisheries with Complex Life Histories: Avoiding Biological Management Failures," Selected Paper, Camp Resources Conference, Wilmington, NC, August 2006
26. "Dynamic Harvest Strategies: Building a Stable Ecosystem," (with L. Huang), Selected Paper, Camp Resources Conference, Wilmington, NC, August 2006, (presented by L. Huang)
27. "Bioeconometrics: Empirical Modeling of Bioeconomic Systems," Selected Paper, 3rd World Congress of Environmental and Resource Economics, Kyoto, Japan, July 2006
28. "Ecosystem Portfolios: A Finance-based Approach to Ecosystem Management," (with J.N. Sanchirico and D.W. Lipton), Selected Paper, 3rd World Congress of Environmental and Resource Economics, Kyoto, Japan, July 2006
29. "Bioeconometrics: Empirical Modeling of Bioeconomic Systems," Selected Paper, International Institute for Fisheries Economics and Trade Conference, Portsmouth, England, July 2006
30. "Ecosystem Portfolios: A Finance-based Approach to Ecosystem Management," (with J.N. Sanchirico and D.W. Lipton), Selected Paper, International Institute for Fisheries Economics and Trade Conference, Portsmouth, England, July 2006

31. "Estimating a Generalized Gordon-Schaefer Model with Heterogeneous Fishing Data," (with J. Zhang), Selected Paper, International Institute for Fisheries Economics and Trade Conference, Portsmouth, England, July 2006 (presented by J. Zhang)
32. "Bayesian Bioeconomics of Marine Reserves," (with J. Zhang, and F.C. Coleman), Selected Paper, American Agricultural Economics Association Annual Meetings, Providence, RI, July 2005
33. "Ecosystem Portfolios: A Finance-based Approach to Ecosystem Management," (with J.N. Sanchirico and D.W. Lipton), Selected Paper, Association of Environmental and Resource Economists 2005 Workshop: Natural Resources at Risk, Jackson, WY, June 2005
34. "A Hierarchical Bayes Approach to Discrete Choice Fisheries Modeling," (with J. Zhang, and F.C. Coleman), Selected Paper, 2005 Forum of the North American Association of Fisheries Economists, Vancouver, BC Canada, May 2005
35. "Valuing Ecosystem Services with Fishery Rents," (with L.B. Crowder), Selected Paper, 2005 Forum of the North American Association of Fisheries Economists, Vancouver, BC Canada, May 2005
36. "Empirical Approaches to Evaluate the Effectiveness of Marine Reserves for Fisheries Management" (with J. Zhang, and F.C. Coleman), AERE Sessions, Allied Social Science Associations Annual Meetings, Philadelphia, PA, January 2005
37. "Marine Reserves: The Importance of Economic and Biological Spatial Processes," presented by J.E. Wilen and with J.N. Sanchirico, AERE Sessions, Allied Social Science Associations Annual Meetings, Philadelphia, PA, January 2005
38. "Do Marine Protected Areas Enhance Fisheries in the Gulf of Mexico?" (with J. Zhang, and F.C. Coleman) Camp Resources Conference, Wilmington, NC, August 2004
39. "Trophic Portfolios in Marine Fisheries," (with J.N. Sanchirico), Selected Paper, American Agricultural Economics Association Annual Meetings, Montreal, Canada, July 2003
40. "Spatial Search in Marine Fisheries: A Discrete Choice Dynamic Programming Approach," (with B. Provencher) AERE Workshop on Spatial Modeling, Madison, WI, June 2003 and Selected Paper, American Agricultural Economics Association Annual Meetings, Montreal, Canada, July 2003
41. "Limited Entry Licensing and Adaptive Management," Selected Paper, International Institute for Fisheries Economics and Trade Conference, Wellington, New Zealand, August 2002
42. "State Dependence and Heterogeneity in Fishing Location Choice," (with J.E. Wilen), Selected Paper, International Institute for Fisheries Economics and Trade Conference, Wellington, New Zealand, August 2002 (also presented at Camp Resources X, Wilmington, NC, August 2002 and a revised version presented at North American Association of Fisheries Economists, Williamsburg, VA, April 2003)
43. "Renewable Resource Production Surfaces, Bioeconomic Steady-states, and Space," Selected Paper, American Agricultural Economics Association Annual Meeting, Long Beach, CA, July 2002
44. "Open Access and Missing Markets in Artisanal Fishing," (with C. Liese and R.A. Kramer), Selected Paper, American Agricultural Economics Association Annual Meeting, Long Beach, CA, July 2002
45. "Economic Impacts of Marine Reserves: The Importance of Spatial Behavior," (with J.E. Wilen), Long

Selected Paper, 2nd World Congress of Environmental and Resource Economists, Monterey, June 2002

46. “Correlated Risk Preferences and Behavior of Commercial Fishermen: *The Perfect Storm* Dilemma,” (with J.E. Wilen), Long Selected Paper, 2nd World Congress of Environmental and Resource Economists, Monterey, June 2002
47. “Imperfect Testing of *The Perfect Storm* Hypotheses,” Selected Paper, Camp Resources IX, Wilmington, NC, August 2001
48. “Farming Benefits of Agro-Wildfowl Reserve Rotation in the Tule Lake Basin,” (with J.E. Wilen), Selected Paper, American Agricultural Economics Association Annual Meeting, Tampa, FL, August 2000
49. “A Bioeconomic Model of Spatial Policy Options,” (with J.E. Wilen), Selected Paper, American Agricultural Economics Association Annual Meeting, Tampa, FL, August 2000
50. “Spatial Search and Fishing Location Choice: Methodological Challenges of Empirical Modeling,” Principal Paper, American Agricultural Economics Association Annual Meeting, Tampa, FL, August 2000
51. “Two Econometric Approaches for Spatial Fisheries Management,” Selected Paper, International Institute for Fisheries Economics and Trade Conference, Corvallis, OR, July 2000
52. “Optimal Fisheries Management in the Presence of an Endangered Predator and Harvestable Prey,” (with J.D. Kaplan), Selected Paper, International Institute for Fisheries Economics and Trade Conference, Corvallis, OR, July 2000
53. “A Dynamic Spatial Model of Marine Reserve Formation: The California Red Sea Urchin Fishery,” (with J.E. Wilen), Fifth California Workshop on Environmental and Resource Economics, University of California, Santa Barbara, May 2000
54. “Breeding Incentives and the Demand for California Thoroughbred Racing: The Tradeoff Between Quality and Quantity,” Selected Paper, American Agricultural Economics Association Annual Meeting, Nashville, TN, August 1999
55. “Spatial Patterns of Renewable Resource Exploitation: The California Sea Urchin Fishery,” (with J.E. Wilen), Selected Paper, American Agricultural Economics Association Annual Meeting, Nashville, TN, August 1999
56. “Spatial Behavior of Harvesters in the California Sea Urchin Fishery,” (with J.E. Wilen), Fourth California Workshop on Environmental and Resource Economics, University of California, Santa Barbara, October 1998

Invited Lectures, Workshops, and Other Scholarly Presentations (does not include job talks)

1. “Now that fisheries economists have what they want, what now? Growth overfishing and intra-seasonal fisheries models,” Invited Seminar, University of California, San Diego and NOAA Fisheries Southwest Fisheries Science Center, November 15, 2010
2. “Dynamic Decisions and Before/After Analyses of the Crab Rationalization,” NOAA Fisheries Alaska Fisheries Science Center Workshop on Bering Sea and Aleutians Islands Crab Fisheries Data Collection and Analysis, Seattle, WA, December 2009
3. “Economics of Coastlines and Beaches under Climate Change,” Norwegian University of Life Sciences,

Department of Economics and Social Science ,September 2009

4. Instructor and Participant, *Micro-econometric Modeling in Environmental and Resource Economics*, EPA-sponsored Workshop, Washington DC, May 2009, presentation: Smith, M.D., “Discrete Choice in Renewable Resource Economics: Lessons from Simulation.”
5. “Beach Capital and Dynamic Coastal Management Strategies,” The Ohio State University, Department of Agricultural, Environmental, and Development Economics, January 2009
6. “Beach Capital and Dynamic Coastal Management Strategies,” Cornell University, Department of Agricultural and Applied Economics, October 2008
7. Invited Keynote Speaker, Workshop on Choice modeling: Producers and consumers reaction to policy changes in natural resource policy models, Centre for Fisheries & Aquaculture Management & Economics, University of Southern Denmark, June 2008
8. “Towards an Econometric Foundation for Marine Ecosystem-based Management,” Duke Marine Lab Speaker Series, April 2, 2008
9. Instructor, *Spatial Bioeconomic Analysis of Coastal Fisheries*, North American Association of Fisheries Economists 2007 Pre-forum Workshop, Mérida, Yucatán, México, March 27, 2007.
10. “Endogenous Fishing Mortality in Life History Models: Relaxing Some Implicit Assumptions,” Center for Marine Sciences and Technology, NC State University, Morehead City, February 2, 2007.
11. Participant, NCEAS Working Group on Property Rights in Fisheries, Santa Barbara, CA, February 2007, presentation: Smith, M.D., “Individualized Landings Taxes in an ITQ Fishery.”
12. Instructor and Participant, *Micro-econometric Modeling in Environmental and Resource Economics*, EPA-sponsored Workshop, Research Triangle Park, NC, Fall 2006, presentation: Smith, M.D., “Discrete Choice in Renewable Resource Economics.”
13. “Structural Econometric Modeling of Fisheries with Complex Life Histories: Avoiding Biological Management Failures,” Invited Seminar, University of Stravanger, Stravanger, Norway, September 4, 2006 (also presented at Department of Economics and Social Science, Norwegian University of Life Sciences, Ås, Norway, September 7, 2006; Centre for Ecological and Evolutionary Synthesis, Department of Biology, University of Oslo, Oslo, Norway, September 8, 2006)
14. “Structural Econometric Modeling of Fisheries with Complex Life Histories: Revisiting Biological Bias in Regulation,” Invited Seminar, Public Economics and Environmental Economics Workshop, Department of Economics, Stanford University, May 2, 2006 (also presented at UC Davis Department of Agricultural and Resource Economics Brown Bag Seminar, May 3, 2006)
15. Participant and Speaker, *Sustainability of Deep-Sea Fisheries*, Workshop Sponsored by the Marine Conservation Biology Institute, Miami, FL, May 2006, presentation: Smith, M.D., “Fisherman Behavior 101: What to fish for, with what, where, when, and how hard.”
16. “Bioeconometrics: Empirical Modeling of Bioeconomic Systems,” Invited Seminar, Resources for the Future, Washington D.C., March 16, 2006
17. “Using Financial Portfolio Analysis to Guide Ecosystem-Based Fishery Management,” Nicholas Institute Speaker Series, Duke University, March 2, 2006

18. "Bayesian Bioeconometrics of Marine Reserves," J. Norman Efferson Lectures in Agricultural Economics, Louisiana State University, October 24, 2005 (also presented at Department of Economics Seminar Series, College of Business Administration, University of Central Florida, December 9, 2005).
19. "A Spatial Bioeconomic Model of Nutrient Pollution" 3rd Workshop on Spatial-Dynamic Models of Economics and Ecosystems, The Abdus Salam International Centre for Theoretical Physics, Trieste, Italy, April 11-13, 2005
20. "Valuing Ecosystem Services with Fishery Rents: A Lumped-Parameter Approach to Hypoxia in the Neuse River Estuary," (with L.B. Crowder), Linking Economic and Ecological Models for Environmental Policy Analysis: Challenges and Research Strategies, NSF-EPA Biocomplexity Workshop, Santa Fe, NM, April 17-19, 2005 (presented preliminary results at Triangle Environmental and Resource Economics Seminar, October 18, 2004)
21. "International Trade, Fisheries, and the Environment," SIDG Annual Spring Conference, NSEES, Duke University, February 2004
22. "Fishing Behavior," Environmental and Resource Economics Seminar Series, Department of Applied Economics, University of Minnesota, November 2003
23. Participant in "Spatial Fisheries Economic Modeling Workshop: Application to the Bering Sea Pollock Catcher Boat Fishery," Seattle, WA, June 2003
24. "Incorporating Fisher Behavior into Management Models: A case study of the reef fish fishery of the eastern Gulf of Mexico," NOAA Fisheries Southeast Fisheries Science Center, Miami FL, June 2003 (also presented at Florida Marine Research Institute, St. Petersburg FL, February 2004).
25. "Spatial Supply Response in Marine Fisheries," Department of Agricultural and Resource Economics Seminar Series, University of Maryland, April 2003
26. "Correlated Risk Preferences in Commercial Fishing," Public Economics Seminar Series, Duke Economics Department, March 2003
27. "Economics of Marine Reserves: Lessons from Empirical Bioeconomics," Invited Presentation, Spatial Models in Fisheries Economics Workshop, National Marine Fisheries Service, Silver Spring, MD, October 2002
28. "Economic Impacts of Marine Reserves: The Importance of Spatial Behavior," Invited Presentation, Environmental Institutions Seminar, Duke Center for Environmental Solutions, February 2002
29. "Testing of *The Perfect Storm* Hypotheses: Behavioral Modeling of Commercial Fishing," Invited Presentation, Duke Marine Lab Speaker Series, September 2001 (also presented at Nicholas School of the Environment and Earth Sciences Graduate Afternoon Seminar, October 2001)
30. "Betting on a Long-shot: Breeding Incentives and Demand for Thoroughbred Racing in California," Department of Agricultural and Resource Economics Brown Bag Seminar Series, University of California, Davis, April 1999
31. "Spatial Behavior of Harvesters in the California Sea Urchin Fishery," (with J.E. Wilen), Department of Agricultural and Resource Economics Brown Bag Seminar Series, University of California, Davis, November 1998

Public Outreach

1. Presentation at Fisherman Stakeholder Meeting: “Economic Issues in the California Sea Urchin Fishery,” (with J.E. Wilen), Sea Urchin Workshop, Santa Barbara, CA, June 1999
2. Presentation at Fisherman Stakeholder Meeting: Smith, M.D. and F.C. Coleman, “Incorporating Fisher Behavior into Management Models,” Apalachicola FL, March 11, 2004
3. Prepared presentation for commercial fishermen of results from ‘Incorporating Fisher Behavior into Management Models: A case study of the reef fish fishery in the Gulf of Mexico,’ Apalachicola, FL, December 13, 2005 (presented by Felicia C. Coleman)
4. Public testimony before the Gulf of Mexico Fishery Management Council, Mobile, AL, March 22, 2006