National Association of Marine Laboratories

February 28, 2008

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Dr. David Fluharty, Chairman
NOAA Science Advisory Board
c/o Dr. Cynthia Decker
1315 East-West Highway
Room 11142
Silver Spring, MD 20190

Dear Mr. Chairman:

This letter is in response to the Notice of Solicitation for Members of the NOAA Science Advisory Board posted in the Federal Register (Vol. 73, No. 21) dated Thursday, January 31, 2008.

On behalf of the National Association of Marine Laboratories (NAML) I respectfully submit four (4) nominees for consideration for appointment to the NOAA Science Advisory Board (SAB). Each of these individuals is an excellent scientist with a multi-disciplinary perspective and a keen sense of the link between science and the needs of society. In one form or another, each has dedicated his or her career to ocean, coastal and Great Lakes research and education. Each would provide a unique dynamic and perspective to the SAB in its role as advisor to the NOAA Administrator on issues pertaining to research, education, and the application of science to meeting the resource management and environmental assessment and protection needs of the Nation.

NAML is a nonprofit organization of about 120 institutions employing more than 10,000 scientists, engineers, and professionals and representing ocean, coastal and Great Lakes laboratories stretching from Maine to the Gulf of Mexico to the west coast, from Guam to Bermuda and from Alaska to Puerto Rico. NAML labs conduct high quality ocean, coastal and Great Lakes research and education in the natural and social sciences and promote the effective use of that science for decision-making on important issues that face our country. We are careful stewards of federally-funded research involving the oceans, coasts and Great Lakes and thanks to our local connections have the ability to bring the excitement of ocean and marine research, science and education to all Americans. These four candidates have long-standing histories as active members of NAML.

National Association of Marine Laboratories

After careful consideration, NAML enthusiastically endorses the following individuals (biographical sketches and/or CVs are attached for each):

- **Anthony Michaels**, Professor of Biology at the University of Southern California, Director of Proteus Environmental Technologies, LLC, and immediate past-President of NAML (2005-2007)

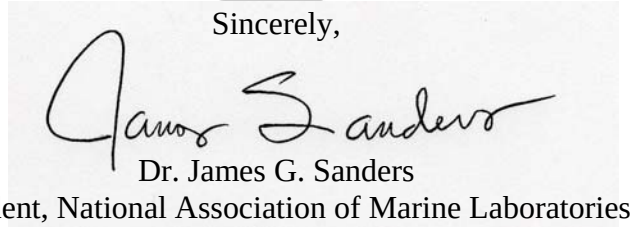
- **Michael K. Orbach,** Professor of Marine Affairs and Policy, Immediate Past Director of Duke University Marine Laboratory, and Director of the Coastal Environmental Management Program

- **Shirley Pomponi**, President and Chief Executive Officer of Harbor Branch Oceanographic Institution, and Chair of the Ocean Studies Board (OSB) of the National Academy of Science

- **Kenneth P. Sebens**, Professor of Biology at the University of Washington and Director of Friday Harbor Laboratories

Thank for the opportunity to present these nominees to the SAB. We hope each will be given due consideration. If you require additional information, please do not hesitate to contact me at the information on the first page.

Sincerely,



Dr. James G. Sanders
President, National Association of Marine Laboratories
Director, Skidaway Institute of Oceanography

Curriculum Vitae: Anthony Francis Michaels

Director of the USC Wrigley Institute for Environmental Studies
Professor of Biology

USC Wrigley Institute for Environmental Studies

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Wrigley Marine Science Center
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Avalon, California 90704
Phone: (310) 510-0811
FAX: (310) 510-1364

Education

1976 - 1979 University of California, San Diego.
1980 - 1982 B.S. in Ecology and Evolutionary Biology, University of Arizona. With Highest Distinction and Honors
1982 - 1983 M.S. in Ecology and Evolutionary Biology, University of Arizona.
1983 - 1988 Ph.D. in Biology, University of California, Santa Cruz.

Postdoctoral Employment

2003 – present Professor, Biology, University of Southern California
1996 - present Director of the USC Wrigley Institute for Environmental Studies
1996 - 2003 Associate Professor, Biology, University of Southern California
1995 - 1996 Occasional Acting Director of the Bermuda Biological Station for Research
1992 - 1996 Associate Research Scientist, Bermuda Biological Station for Research, Inc.
1989 - 1992 Assistant Research Scientist, Bermuda Biological Station for Research, Inc.
1988 - 1989 Postdoctoral Scholar, Woods Hole Oceanographic Institution.
1988 Postdoctoral Researcher, Univ. of California, Santa Cruz.

Awards

McNichol Fellowship, Bermuda Biological Station for Research, 1989-1991
Woods Hole Oceanographic Institution, Postdoctoral Scholar, 1988 - 1989.
Regents Fellowship, 1983. Regents of the University of California.
The Outstanding Senior Award, 1982. The College of Liberal Arts, University of Arizona.
Phi Beta Kappa. 1982

Professional Societies

American Geophysical Union
American Society of Limnology and Oceanography
The Oceanography Society
American Meteorological Society
American Association for the Advancement of Science

Management Experience and Professional Service

Academic Management Experience

1996-Present: Director of the USC Wrigley Institute for Environmental Studies. The USC Wrigley Institute is an Organized Research Unit within the USC College of Letters, Arts and Sciences. The Director answers to the Dean of the College (Dr. Morton Schapiro, 1996-2000, Dr. Joseph Aoun, 2000-2006, Dr. Peter Starr, 2006-present) for overall direction and through the Dean of Research for all other issues (Dr. Maria Pellegrini, 1996-1998, Dr. Larry Swanson, 1998-2000, Dr. Donal Manahan, 2000-2005, Michael Quick, 2005-present). All fundraising activities and advisory board management are done jointly with the Deans' office.

Primary responsibilities for defining and implementing the vision for the USC Wrigley Institute for Environmental Studies in close coordination with USC and USC College goals, SCU College Deans and the faculty. This includes the academic mission, the outreach goals, the financial and academic health of the island marine lab and broad connections to the other academic activities at USC and elsewhere.

Direct management responsibilities for a staff of approximately 40 people. Indirect management and some coordination responsibilities for an addition group of approximately 20 faculty and 30-40 associated staff, students and postdoctoral scientists.

Management of the Wrigley Marine Science Center on Catalina Island and the University Park Campus offices of the Wrigley Institute. Management of WMSC involves all aspects of a small campus, a "science hotel" and all of the program and support needs of over 5000 science and education visitors each year.

Direct control of an annual College budget of approximately $3.7 million for the operational and programmatic aspects of the Wrigley Institute.

Management (at the ORU Director level) for four different capital projects of $2 million to $4 million each for construction or renovation of buildings on Catalina Island.

Primary management, in conjunction with the LAS Deans, of total gifts and pledges (1996-present) of over $30 million. Direct participation in fundraising with the Deans has resulted in new gifts and pledges to the College for the Wrigley Institute of over $23 million from 1997 to present

Federal Research Grant activity by Wrigley Institute faculty and staff of over $9 million per year (includes over $1.5 million per year for USC Sea Grant)

Shared management responsibilities (with the LAS Deans) for the Wrigley Institute Advisory Board, a group of 12-15 prominent philanthropists, business leaders and USC alumni. Primary management responsibility for the Friends of the Wrigley Institute Board.

1989-1996: Coordinator of the U.S. Joint Global Ocean Flux Study, Bermuda Atlantic Time-series (BATS). Oversaw the operations and expansion of the BATS research activities including both my own science and the science of a large group of researchers in an interdisciplinary team.

Primary responsibilities involved operation of the time-series study and the conduct of novel research in this context.

Direct management and oversight of a group of 2-3 postdoctoral scientists (postdoctoral fellows or assistant scientists) and a technical staff of 7-10 people.

Managed a "time-share technician" program that allowed scientists from other institutions to participate in the time-series study in a very cost-effective manner. By 1996, this group of ancillary scientists had grown to over 60 people.

1993-1996: Co-founder and co-leader of the Risk Prediction Initiative. Co-founder, with Dr. Anthony Knap, of a special program that created a unique connection between the academic climate science community and the insurance and reinsurance industries.

With Dr. Knap, I raised over $3 million and managed the deliverable products to a group of 7-13 insurance and reinsurance companies from around the world.

Coordinated a staff of 1-2 Ph.D. scientists and 2-6 staff members.

Ran a *de facto* granting agency that conducted an academic peer-review of 30-50 proposals from faculty at major universities and distributed $400,000-$700,000 per year to successful grantees.

Managed a community of the Principle Investigators of up to 30 operating grants and coordinated their science products to ensure publication in the academic literature and customized insurance-relevant summaries to the donor community.

Made regular presentations to senior insurance executives from both member companies and non-member companies. Made regular speeches at insurance industry conferences. Conducted short courses on environmental risks for insurers and risk managers.

Additional Academic and Institutional Service at the University of Southern California

Chair, Search Committee for the "Cluster Hire" in marine and environmental science, 2005-2006
Chair of the Planning Committee for the USC Future Fuels and Energy Initiative, 2006-2007
Member of the Planning Committee for the USC Future Fuels and Energy Initiative, 2006
Member of the Executive Committee of the Biology Department (2003-present)
Member of USC University Committee on Academic Review (UCAR), 1999-2003
Chair of UCAR subcommittee to review the Neuroscience program (NIBS), 1999-2003
Chair of UCAR subcommittee to review the Political Science department, 2000-2003
Participant in the Provost Planning Committees for the Life Science Initiative

Member of USC Dive Control Board 1996-present
Member of faculty search committees in the Biological Science Department, 1996-2004
Member of a faculty search committee in the Political Science Department, 1999
Member of a faculty/staff search committee in the Information Services Division, 1999
Lead author of a report on the Life Sciences Critical Pathway for the USC Provost, 1999
Member of the search committee for the second Wrigley Chair, 1997-2001
Member of the search committee for the first Wrigley Chair, 1996-1998

Academic and Institutional Service at the Bermuda Biological Station for Research

Member of team to conduct an across-the-board overhaul of BBSR management, 1993-1995
Chair of Dive Control Board, BBSR, 1989-1994
Helped bring the internet to BBSR, 1991
Initiated and ran the BBSR REU site program, 1991-1996

Professional Service

President, National Association of Marine Labs, 2006-present
Member of the Board for the National Council for Science and the Environment, 2004-present
Chair, NSF Advisory Committee for Environmental Research and Education, April 2005-present
Member, NSF Advisory Committee for Environmental Research and Education, Oct 2003-present
Vice Chair of the Board for the Catalina Island Conservancy, 2006-present
Member of Executive Committee, Council of Environmental Deans and Directors, 2006 & 2007
Past President, Council of Environmental Deans and Directors, 2004 & 2005
Founding President, Council of Environmental Deans and Directors, 2002 & 2003
Member of the planning committee to create a Council of Environmental Deans and Directors through the National Council for Science and the Environment, 2000-2001
President-Elect, National Association of Marine Labs, 2005
Past-President, Western Association of Marine Labs, 2005 and 2006
President, Western Association of Marine Labs, 2003 and 2004
President-Elect, Western Association of Marine Labs, 2001 and 2002
Member of the Governing Board for the Council for Ocean Research and Education, 1999-present
Associate Member, Scientific Committee on Oceanic Research Working Group on Sediment Trap and ^{234}Th Methods for POC Export in the Upper Ocean (2000-2006)
Associate Editor, Biogeochemistry, October 1995 to 2001
Co-editor of two special editions of Deep-sea Research on Ocean Time-series
Invited participant – National Academy of Science meeting on ocean observatories (January 2000)
Invited participant and speaker– National Academy of Science meeting on climate dynamics and feedback processes (August 2001)
President of the Board, Southern California Marine Institute 1996-present
Member of the Board for the Long Beach Aquarium of the Pacific Marine Conservation Research Institute, 2002-present
Member of the Board for the Catalina Island Conservancy, 2001-present
President of the Board for the Los Angeles Water Science Education Center, 2000-2003.
Member of ASLO's committee on Public Policy and Science 1998-2004

Member of ASLO's ad hoc committee on Electronic Publishing 1995-1997
Member of ASLO's endowment committee 1996-1998
Member of the U.S. JGOFS Steering Committee 1996-2003
Assistant Coordinator at SCOR WG 73 Workshop on Network Modeling, 1984

Other Professional Activities

Statistics and Experimental Design (Consulting)
Environmental Risk Analysis (Consulting)
Teaching Executive Courses in Risk Analysis and Natural Hazards
President, St. Georges Preparatory School Parent-Teacher Association, 1994-1996
Member, Board of Advisors for Two Harbors School, Catalina Island
Created innovative summer research program, Palos Verdes High School, CA

Research Experience

1999 - present	Complex systems in ocean biology and biogeochemistry
1986 - present	Food-web dynamics and sinking exports from oceanic ecosystems
1984 - present	Nitrogen fixation in the oligotrophic Pacific and Atlantic Oceans
1995 – 1997	Simulating the insurance industry as a complex system (Insurance World)
1994 - 2002	Climate, Hurricanes and Environmental Risk in the Insurance Industry
1993 - 2000	Remote Sensing and Ocean Biogeochemistry of the Sargasso Sea.
1990 - 2000	Optical characterization of the ocean at the Bermuda Atlantic Time-Series.
1989 - 2000	Temporal variability in the biogeochemistry of the Sargasso Sea
1983 - 1996	The Acantharia-algal symbiosis in upper ocean carbon and nitrogen cycles
1989 - 1996	Scientific oversight of the Bermuda Atlantic Time-Series Program
1989 - 1995	Dynamics of dimethylsulfide in the Sargasso Sea.
1987 - 1988	The role of Acantharia in the fluxes of strontium and associated trace elements.
1984 - 1988	Vertex: Phytoplankton Origins and Biological Attrition of the Detrital Rain. Postdoctoral Researcher (1988) or Research Assistant for Dr. Mary Silver, Univ. Cal. Santa Cruz.
1984 - 1985	Satellite image redigitization and processing. Research Assistant with Dr. Kenneth Briggs, Univ. Cal. Santa Cruz.
1983	Demography and reproductive strategies of desert annual plants. Research Assistant with Dr. Larry Venable, University of Arizona.
1981 - 1983	The evolution of algal-invertebrate symbiosis and seasonality of the *Prochloron*-Didemnum Tunicate symbiosis. Masters Research with Dr. Robert Hoshaw, University of Arizona.
1981 - 1983	The affects of herbicides on mesquite grassland ecology. Research Assistant with Dr. Norman Smith, University of Arizona.
1983 - present	Participant on 27 oceanographic cruises and chief scientist on 11 of those cruises.
1989 - 1996	Participant and Chief Scientist on frequent BBSR and JGOFS Time-series cruises

Funding History (National Science Foundation)

REU Site: Geobiology – Marine science at the interface between the life and earth sciences - renewal. NSF OCE. Other PI: Linda Duguay. Anticipated total award: $155,000. Duration: April 1, 2006 to March 31, 2009.

International Geobiology Summer Course: Providing focus for an emerging field. NSF GEO 0453124. Other PI: William Berelson. Anticipated totals award: $350,000. Duration: April 1, 2005 to March 31, 2007.

REU Site: Geobiology – Marine science at the interface between the life and earth sciences. NSF OCE 0244013. Other PI: Linda Duguay. Anticipated total award: $151,680. Duration: April 1, 2003 to March 31, 2006.

COSEE-West (Center for Ocean Science Educational Excellence). Funding Agency: NSF: OCE 0215497. Other P.I.s: Linda Duguay, Bill Hamner. Anticipated Total Award: $2,500,000. USC Award: $1,250,000. Duration: September 2002-August 2007.

Biocomplexity: Collaborative Research: Oceanic N2 Fixation and Global Climate. Funding Agency: NSF, OCE-9981545. Other P.I.s include D. Capone, A. Subramanian and G. Haug at USC and D. Karl, E. Carpenter, D. Siegel, N. Mahowald, S. Doney, E. Boyle, R. Siefert. Total Award: $4,000,000, USC Award: $2,037,585. Duration: October 1999 to Sept 2005.

IGERT: Urban Environmental Sustainability: A multidisciplinary doctoral education program. NSF IGERT 9870711. Other PIs: J. Devinny, J. Wolch, L. Pulido, M. Shinozuka, T. Tsotsis and others. Total Award: $2,700,000. Duration: April 1, 1998 to March 31, 2003

The Bermuda Atlantic Time-series Study: Years 11-13. Funding Agency: NSF. Other P.I.s Dr. A. Knap, D. Steinberg, C. Carlson, N. Bates. Projected Total Award: $2,900,000 Duration: May 1998 - April 2001.

The Bermuda Atlantic Time-series Study: Years 6-10. Funding Agency: NSF. Other P.I. Dr. Anthony Knap. Projected Total Award: $3,200,000 Duration: May 1993 - April 1998

Reproductive periodicity in planktonic Sarcodines: Implications for temporal variability in abundance and flux. Funding Agency: NSF OCE 9317739. Other P.I.: Dr. Dave Caron. Total award: $470,000. BBSR Award: $212,310. Duration: November 1993 to October 1996

Open Ocean and Global Change Research Experiences at the Bermuda Biological Station. Funding Agency: NSF. REU NSF. Other P.I..s Dr. Bob Jones, Lauren Yelle. Total Award: $150,000. Duration: September 1, 1994 - August 30, 1997.

Dynamics of Dimethylsulphide in Ocean Water. Funding Agency: NSF OCE-9123419. Other P.I.s: John Dacey and Stuart Wakeham. Total Award: $690,000 BBSR Budget: $242,000. Duration: October 15, 1991 - October 14, 1994.

Open Ocean and Global Change Research Experiences at the Bermuda Biological Station. Funding Agency: NSF. REU NSF 90-79. Other P.I. Susan Cook. Total Award: $135,000. Duration: September 1, 1991 - August 30, 1994.

Characterization of the Undersea photoenvironment at the U.S. JGOFS Bermuda Atlantic Time-series. Funding Agency: NSF OCE-9016990. Other P.I.s: Dave Siegel and Ray Smith. Total Award: $770,000. BBSR Budget: $238,000. Duration: June 1, 1991 - May 31, 1994.

Oceanographic Instrumentation. Funding Agency: NSF OCE-9123049. Other P.I.: Anthony Knap. Total Award: $57,185. Duration: August 15, 1992 - Jan 31, 1994.

SGER: Evaluation of Sediment Trap Fluxes by Thorium Scavenging, a Three Dimensional Approach. Funding Agency: NSF OCE-9123888. Other P.I.s: Ken Buesseler and Anthony Knap. Total Award: $50,000. Duration: December 15, 1991 - December 14, 1992.

The role of Sarcodine-Algal Symbiotic Associations in Upper Ocean Carbon and Nitrogen Cycles. Funding Agency: NSF OCE-9017173. Other P.I.s: David Caron and Neil Swanberg. Total Award: $385,000. BBSR Budget: $140,000. Duration: June 1, 1990 - November 30, 1992.

Funding History (National Aeronautics and Space Administration)

Satellite analysis of ocean biogeochemistry and mesoscale variability in the Sargasso Sea. Funding Agency: NASA. Other P.I. Dr. Dave Siegel. Total Award: $449,891. BBSR Award: $420,719. Duration: October 1993 to September, 1996.

Spatial and temporal variability in DMS in oligotrophic surface waters. Funding Agency: NASA. Other P.I. Dr. John Dacey. Total Award: $120,000. BBSR Award: $39,000. Duration: October 1995 to September, 1996.

Training courses in time-series research. Funding Agency: NASA. Other P.I.: Dr. Dennis Hansell. Total Award: $255,000. Duration: June 1993 to May 1996

Inherent optical property inversion of SeaWiFS ocean color imagery. Funding Agency: NASA. Other P.I.s: Dr. Dave Siegel, Dr. Mark Brzezinski, Dr. Dennis Hansell. Total Award: $750,000 BBSR Budget: $268,000. Duration: January 1993 - December 1996

SeaWiFS Calibration and Validation Support. Funding Agency: NASA. Main P.I.: Dr. Dave Siegel. Total Award: $260,000 BBSR Budget: $99,000 Duration: June 1992 - May 1996

Funding History (Private Sources)

Wrigley Institute. 1997-2006. Worked with the Deans of the College of Letters, Arts and Sciences to secure over $23 million in support from private donors for the Wrigley Institute for Environmental Studies. Of this, $11 million came from Bill and Julie Wrigley, building upon an earlier (1995) gift of $5 million that created the USC Wrigley Institute. A few examples:

- USC Fisheries Project. 1999-present Worked with the Deans of the College of Letters, Arts and Sciences to secure cash and future commitments of approximately $2 million from private donors to support fisheries research at USC.

- USC-Agouron International Geobiology Course 2002-2007. Funding of $2.5 million from the Agouron Institute created the geobiology course each summer in 2002-2006. This course should continue at about this level for at least the next three years with a diversified funding base.

- QuikScience Challenge. Funding commitments of $1.25 million from Quiksilver Corporation, through CEO Bob McKnight, creates and sustains a competition-based program for improving science education in middle and high schools.

- Capital Projects: Helped raise funds for four capital projects, two renovations and two for construction of new housing. Each project required $2-$4 million in private funds.

- Two Endowed Chairs and One Endowed Professorship.

Sun Microsystems, 1997. Donation of a SUN Sparcserver 3000, multi-processor server. Approximate value $100,000

The Risk Prediction Initiative. Funding source: Various international insurance and reinsurance corporations. Other P.I.: Anthony Knap. Annual gifts by late 1996 of approximately $1,300,000 per year. Total gifts of approximately $3 million during my active participation (1993-1996).

McNichol Fellowship. Funding Source: BBSR. Scientific Support Grant. Total Award: $48,000. Duration: September 1, 1989 - August 31, 1991.

Sun Microsystems Inc, Latin America Division. Computer System Support. Donation of SparcServer 4-470VX Graphics Workstation and Imaging Software. Value $200,000. January 1991.

Computer facilities support request to ARCO, 1991. $10,000. 1992, $10,000.

Publication Record
Total: 98
Peer Reviewed Journals: 67
Hirsch h-index (2007): 30

Publications (peer reviewed):

Submitted

1. Buesseler, K.O., A.N. Antia, M. Chen, S.W. Fowler, W.D. Gardner, O. Gustafsson, K. Harada, A.F. Michaels, M. Rutgers van der Loeff, M. Sarin, D.K. Steinberg, T. Trull (submitted) Estimating upper ocean particle fluxes using sediment traps. Journal of Marine Research.

2007

2. Michaels, A.F. (2007) Science Perspectives: Highly Active Eddies. Science (in press)

2006

3. Moore, K.J., S.C. Doney, K. Lindsay, N. Mahowald, A.F.Michaels (2006). Nitrogen fixation amplifies the ocean biogeochemical response to decadal timescale variations in mineral dust deposition. Tellus 58B:560-572.

2005

4. Mahaffey, C., A.F. Michaels, D. G. Capone (2005) The Conundrum of Marine Nitrogen Fixation. The American Journal of Science 305:546-595

5. Pfirman, S.L., J.P. Collins, S. Lowes, A.F. Michaels (2005) Hiring, fostering and tenuring interdisciplinary scholars. The Chronicle of Higher Education. Volume LI (23): B15-B16.

6. Capone, D.G., J.A. Burns, C. Mahaffey, T. Gunderson, A.F. Michaels, J.P. Montoya, A. Subramanian, E.J. Carpenter (2005) Nitrogen fixation by Trichodesmium spp.: An important source of new nitrogen to the tropical and subtropical North Atlantic Ocean. Global Biogeochemical Cycles 19

2004

7. Galloway, J.N., F.J. Dentener, D.G. Capone, E.W. Boyer, R.W. Howarth, S.P. Seitzinger, G.P. Asner, C. Cleveland, P. Green, E. Holland, D.M. Karl, A. F. Michaels, J.H. Porter, A. Townsend, C. Vorosmarty (2004) Nitrogen Cycles: Past, Present, Future. Biogeochemistry 70:153-226

2003

8. Karl, D. M., N. R. Bates, S. Emerson, P. J. Harrison, C. Jeandal, O. Llinas, K. K. Liu, J.-C. Marty, A. F. Michaels, J. C. Miquel, S. Neuer, Y. Nojiri and C. S. Wong,. (2003) Temporal studies of biogeochemical processes in the world's oceans during the JGOFS era. In: Ocean Biogeochemistry: The role of the Ocean Carbon Cycle in Global Change (Ed: M.J.R. Fasham), Springer-Verlag, New York. pp. 239-267

2002

9. Karl, D., A.F. Michaels, B. Bergman, D. Capone, E. Carpenter, R. Letelier, F. Lipschultz, H. Paerl, D. Sigman & L. Stal. (2002) Dinitrogen fixation in the World's Oceans. Biogeochemistry 57: 47-94

10. Dennett, M.R., D.A. Caron, A.F. Michaels, S.M. Gallager, C.S. Davis (2002). Video plankton recorder reveals high abundances of colonial radiolaria in surface waters of the central North Pacific. J. Plankton Research 24: 797-805

2001

11. Michaels, A.F., D.M. Karl and D. Capone. (2001) Element stoichiometry, new production and nitrogen fixation. Oceanography 14:68-77.

12. Karl, D.M, J.E. Dore, R. Lucas, A.F. Michaels, N.R. Bates and A.H. Knap. (2001) The U.S. JGOFS Time-series Observation Programs. Oceanography 14:6-17.

13. Siegal, D.A., D.M. Karl, DM and A.F. Michaels, AF. (2001) Interpretations of biogeochemical processes from the US JGOFS Bermuda and Hawaii time-series sites. Deep-sea Research II 48:1403-1404.

14. Steinberg, D.K., C.A. Carlson, N.R. Bates, R.J. Johnson, A.F. Michaels, and A.F. Knap (2001) Overview of the U.S. JGOFS Bermuda Atlantic Time-series Study (BATS): A decade-scale look at ocean biology and biogeochemistry. Deep-sea Research II 48:1405-1447

15. Karl, D.M. and A.F. Michaels. Nitrogen Cycle. In: J. Steele, S. Thorpe and K. Turekian (Eds), Encyclopedia of Ocean Sciences, pp 1876-1884.

16. Orcutt, K.M, F. Lipschultz, K. Gundersen, R. Arimoto, A. F. Michaels, A.H. Knap, J.R. Gallon. (2001) Seasonal pattern and significance of N2 fixation by Trichodesmium spp.at the Bermuda Atlantic Time-series Study (BATS) site. Deep-sea Research II 48:1583-1608

17. Gundersen, K, K. Orcutt, D. Purdie, A.F. Michaels & A. Knap (2001) Elemental carbon mass distribution at the Bermuda Atlantic Time-series study (BATS) site. Deep-sea Research II 48:1697-1718

18. Nelson N., N. Bates, A.F. Michaels and D.A. Siegel. (2001) Spatial Variability of the CO2 sink in the Sargasso Sea. Deep-sea Research II 48:1801-1821

19. Siegel, DA, T.K. Westberry, M.C. O'Brien, N.B. Nelson, A.F. Michaels, J.R. Morrison, A. Scott, E.A. Caporelli, J.C. Sorensen, S. Maritorena, S.A. Garver, E.A. Brody, J. Ubante, M.A. Hammer. (2001) Bio-optical modeling of primary production on regional scales: the Bermuda BioOptics project. Deep-sea Research II 48: 1865-1896.

20. Fasham MJR, Balino BM, Bowles MC, Anderson R, Archer D, Bathmann U, Boyd P, Buesseler K, Burkill P, Bychkov A, Carlson C, Chen CTA, Doney S, Ducklow H, Emerson S, Feely R, Feldman G, Garcon V, Hansell D, Hanson R, Harrison P, Honjo S, Jeandel C, Karl D, Le Borgne R, Liu KK, Lochte K, Louanchi F, Lowry R, Michaels A, Monfray P, Murray J, Oschlies A, Platt T, Priddle J, Quinones R, Ruiz-Pino D, Saino T, Sakshaug E, Shimmield G, Smith S, Smith W, Takahashi T, Treguer P, Wallace D, Wanninkhof R, Watson A, Willebrand J, Wong CS. (2001) A new vision of ocean biogeochemistry after a decade of the Joint Global Ocean Flux Study (JGOFS). AMBIO Sp. Issue 10: 4-31

2000

21. Howarth, R.W and A.F. Michaels. The measurement of primary production in aquatic ecosystems. In: Methods in Ecosystem Science, Sala, O.E, R.B. Jackson, H.A. Mooney and R.W Howarth (eds.) Springer, New York. Pages 72-85.

22. Michaels, A.F., D.A. Karl and A.H.Knap. (2000) Temporal studies of biogeochemical dynamics in oligotrophic oceans. In. The Changing Ocean Carbon Cycle, Hanson, R.B., Ducklow H.W., Field, J.G. (eds.). Cambridge University Press, Cambridge. Pages 392-413.

23. Steinberg, D.K., C.A. Carlson, N.R. Bates, S.A. Goldthwait, L.P. Madin, and A.F. Michaels. (2000) Zooplankton vertical migrations and the active transport of dissolved organic and inorganic carbon in the Sargasso Sea. Deep-sea Research 47:137-158

24. Murnane, R.J., C. Barton, E. Collins, J. Donnelly, J. Elsner, K. Emanuel, I. Ginis, S. Howard, C. Landsea, K. Liu, D. Malmquist, M. McKay, A. Michaels, N. Nelson, J. O'Brien, D. Scott, T. Webb III. (2000) Model estimates of hurricane wind speed probabilities. EOS 81:433, 438

25. Buesseler, K.O., D. K. Steinberg, A. F. Michaels, R. J. Johnson, J. E. Andrews, J. R. Valdes and J. F. Price. (2000) A Comparison of the Quantity and Composition of Material caught in a Neutrally Buoyant versus Surface-Tethered Sediment Trap. Deep-sea Research 47:277-294.

26. Febvre, C., J. Febvre and A. Michaels (2000) Acantharia Haeckel, 1881. In: The Illustrated Guide to the Protozoology, J.J. Lee, G.F. Leedale, P. Bradbury (eds), Society of Protozoologists, Lawrence, KA

1999

27. McGillicuddy, D.J., R. Johnson, D.A. Siegel, A. F. Michaels, N.R. Bates, A.H. Knap. (1999) Mesoscale variations of biogeochemical properties in the Sargasso Sea. J. Geophysical Research 104:13381-13394.

1998

28. Bates, N.R., A,H. Knap, A.F. Michaels. (1998) Contribution of hurricanes to local and global estimates of air-sea exchange of CO2. Nature 395:58-61.

29. Dacey, J.W.H., F.A. Howse, A.F. Michaels, and S.G. Wakeham. (1998) Temporal variability of dimethylsulfide and dimethylsulfoniopropionate in the Sargasso Sea. Deep-Sea Research 45:2085-2104.

30. McGillicuddy, D.J., A.R. Robinson, D.A. Siegel, H.W. Jannasch, R. Johnson, T.D. Dickey, J. McNeil, A. F. Michaels, A.H. Knap. (1998) Influence of mesoscale eddies on new production in the Sargasso Sea. Nature 394:263-266

31. Nelson, N, D.A. Siegel, A.F. Michaels. (1998) Dynamics of colored dissolved organic matter in the Sargasso Sea. Deep-Sea Research 45: 931-957.

32. Dickey, T., D. Frye, J. McNeil, D. Manov, N. Nelson, D. Sigurdson, H. Jannasch, D. Siegel, T. Michaels, R. Johnson (1998) Upper-Ocean temperature response to hurricane Felix as measured by the Bermuda Testbed Mooring. Monthly Weather Review 126:1195-2101

33. Dickey, T., D. Frye, H. Jannasch, E. Boyle, D. Manov, D. Sigurdson, J. McNeil, M. Stramska, A. Michaels, N. Nelson, D. Siegel, G. Chang, J. Wu, A. Knap. (1998) Initial results from the Bermuda Testbed Mooring program. Deep-Sea Research 45:771-794.

1997

34. Michaels, A.F., D. Malmquist, A.H. Knap, A. Close (1997) Climate Science and Insurance Risk. Nature 389:225-227

1996

35. McClintock, J.B., D.P. Swenson, D.K. Steinberg and A.F. Michaels. (1996) Feeding deterrent properties of common oceanic holoplankton from Bermudian waters. Limnol. Oceanogr. 41:798-801.

36. Michaels, A.F., D. Olson, J. Sarmiento, J. Ammerman, K. Fanning, R. Jahnke, A.H. Knap, F. Lipschultz, J. Prospero (1996) Inputs, Losses and Transformations of Nitrogen and Phosphorus in the Pelagic North Atlantic Ocean. Biogeochemistry 35:181-226.

37. Galloway, J.N., R.W. Howarth, A.F. Michaels, S.W. Nixon, J.M. Prospero, F.J. Dentener. (1996) Nitrogen and Phosphorus budgets of the North Atlantic Ocean and its watershed. Biogeochemistry 35:3-25.

38. Michaels, A.F. and A.H. Knap (1996) Overview of the U.S. JGOFS Bermuda Atlantic Time-series Study and the Hydrostation S Program. Deep-Sea Research 43: 157-198.

39. Karl, D.M. and A.F. Michaels (1996) Preface: The Hawaiian Ocean Time-series (HOT) and the Bermuda Atlantic Time-series study (BATS). Deep-Sea Res. 43:127-128.

40. Siegel, D.A. and A.F. Michaels (1996) Quantification of Non-Algal Light Attenuation in the Sargasso Sea: Implications for Biogeochemistry and Remote Sensing. Deep-Sea Research 43:321-345

41. Bates, N.R., A.F. Michaels and A.H. Knap (1996) Alkalinity changes in the Sargasso Sea: Geochemical evidence of calcification? Marine Chemistry 51:347-358

42. Bates, N.R., A.F. Michaels, A.H. Knap (1996). Seasonal and interannual variability of the oceanic carbon dioxide system at the U.S.JGOFS Bermuda Atlantic Time-series Site. Deep-Sea Research 43:347-383

43. Waser, N.A.D., M.P. Bacon and A.F. Michaels. (1996) Natural activities of 32P and 33P and the 33P/32P ratio in suspended particulate matter and plankton in the Sargasso Sea. Deep-Sea Research 43:421-436

1995

44. Ducklow, H.W., C.A. Carlson, N.R. Bates, A.H. Knap and A.F. Michaels (1995) Dissolved organic carbon as a component of the biological pump in the North Atlantic Ocean. Phil. Trans. Roy. Soc. Lond. Ser. B - Biol. Sci. 348:161-167

45. Galloway J.N., W.H. Schlesinger, H. Levy II, A.F. Michaels, J.L. Schnoor (1995) Nitrogen fixation: Anthropogenic enhancement-environmental response. Global Biogeochemical Cycles 9:235-252.

46. Siegel, D.A., A.F. Michaels, J.C. Sorensen, M.C. O'Brien, M.A. Hammer. (1995) Seasonal Variability of Light Availability and Its Utilization in the Sargasso Sea. Journal of Geophysical Research 100:8695-8713.

47. Michaels, A.F., D. A. Caron, N. R. Swanberg, F. A. Howse and C. M. Michaels. (1995) Planktonic sarcodines (Acantharia, Radiolaria and Foraminifera) in surface waters near Bermuda: Abundance, biomass and vertical flux. Journal of Plankton Research. 17:131-163

48. Caron, D.A., A. F. Michaels, N. R. Swanberg and F. A. Howse. (1995) Primary productivity by symbiont-bearing planktonic sarcodines (Acantharia, Radiolaria and Foraminifera) in surface waters near Bermuda. Journal of Plankton Research. 17:103-129

1994

49. Michaels, A.F., N.R. Bates, K.O. Buesseler, C.A. Carlson, A.H. Knap. (1994) Carbon System Imbalances in the Sargasso Sea. Nature 372:537-540

50. Michaels, A. F., A. H. Knap, R. L. Dow, K. Gundersen, R. J. Johnson, J. Sorensen, A. Close, G. A. Knauer, S. E. Lohrenz, V. A. Asper, M. Tuel, and R.R. Bidigare. (1994) Seasonal Patterns of Ocean Biogeochemistry at the U.S.JGOFS Bermuda Atlantic Time-series Study Site. Deep-Sea Research 41:1013-1038

51. Carlson, C.A., H.W. Ducklow, A.F. Michaels. (1994) Annual flux of dissolved organic carbon from the euphotic zone in the northwestern Sargasso Sea. Nature 371:405-408

52. Gust, G., A.F. Michaels, R. Johnson, W.G. Deuser, W. Bowles (1994). Mooring line motions and sediment trap hydromechanics: in situ intercomparison of three common deployment designs. Deep-Sea Research 41:831-857.

53. Buesseler, K.O., A.F. Michaels, D.A. Siegel, A.H. Knap. (1994). A 3-D time-dependent approach to calibrating sediment trap fluxes. Global Biogeochemical Cycles 8:179-193

1993

54. Michaels, A.F., D.A. Siegel, R.J. Johnson, A.H. Knap, J.N. Galloway. (1993) Episodic Inputs of Atmospheric Nitrogen to the Sargasso Sea: Contributions to New Production and Phytoplankton Blooms. Global Biogeochemical Cycles 7:339-351

1992

55. Lohrenz, S.E., G.A. Knauer, V.L. Asper, M. Tuel, A.F. Michaels and A.H. Knap (1992) Seasonal and interannual variability in primary production and particle flux in the northwestern Sargasso Sea: U.S. JGOFS Bermuda Atlantic Time Series. Deep-Sea Research, 39:1373-1391

56. Golomb, D.S., S.G. Zemba, J.W.H. Dacey and A.F. Michaels (1992) The fate of CO2 sequestered in the deep ocean. Energy Convers. Mgmt. 33:675-683.

57. Galloway, J.N. and 36 other authors including A.F. Michaels. (1992) Sulfur and nitrogen levels in the North Atlantic ocean's atmosphere: A synthesis of field and modeling results. Global Biogeochemical Cycles, 6:77-100.

1991

58. Michaels, A.F. (1991) Acantharia abundance and symbiont productivity at the VERTEX Seasonal Station. Journal of Plankton Research 13: 399-418.

1990-1984

59. Michaels, A.F., M.W. Silver, M.M. Gowing and G.A. Knauer. (1990) Cryptic zooplankton "swimmers" in upper ocean sediment traps. Deep-Sea Research. 37:1285-1296

60. Michaels, A.F. and A.R. Flegal. (1990) Lead in Marine Planktonic Organisms and Pelagic Food Webs. Limnology and Oceanography. 35:287-295

61. Siegel, D.A., T.C. Granata, A.F. Michaels and T.D. Dickey. (1990) Eddy diffusion, particle sinking and the interpretation of sediment trap data. J. Geophys. Res. 95:5305-5312

62. Michaels, A.F. and M.W. Silver. (1988) Primary production, sinking flux and the microbial food web. Deep-Sea Research 35: 473-490.

63. Michaels, A.F. (1988) Vertical distribution and abundance of acantharia and their symbionts. Marine Biology 97:559-569.

64. Scranton, M.I., P.C. Novelli, A.F. Michaels, S.Horrigan and E.J. Carpenter. (1987) Hydrogen production and nitrogen fixation by *Oscillatoria thiebauti* during in situ incubations. Limnology and Oceanography 32: 998-1006.

65. Bernstein, R.E., P.R. Betzer, R.A. Feely, R.H. Byrne, M.F. Lamb and A.F. Michaels. (1987) Acantharian fluxes and strontium to chlorinity ratios in the North Pacific Ocean. Science 237: 1490-1494.

66. Carpenter, E.J., M.I. Scranton, P.C. Novelli and A.F. Michaels. (1987) Validity of N2 fixation rate measurements in marine *Oscillatoria* (*Trichodesmuim*). Journal of Plankton Research 9:1047-1056.

67. McCourt, R.M., A.F. Michaels and R.W. Hoshaw. (1984) Seasonality of symbiotic *Prochloron* (Prochlorophyta) and its Didemnid host in the northern Gulf of California. Phycologia 23: 95-101.

Other Publications (theses, book chapters, reports, popular publications and meetings proceedings)

2005

1. Pfirman, S.L., J.P. Collins, S. Lowes, A.F. Michaels (2005) To thrive and prosper: Hiring, fostering and tenuring interdisciplinary scholars. Project Kaleidoscope special report. Also available at: http://www.pkal.org/documents/Pfirman_et-al_To-thrive-and-prosper.pdf?CFID=2

2003

2. Michaels, A.F. 2003. Ecological Stoichiometry – the biology of elements from molecules to the biosphere. Science 300:906-907 (book review)

2001

3. Hood, R.R., A. F. Michaels, D.G. Capone. (2001) Answers sought to the enigma of marine nitrogen fixation. EOS Transactions 81:133-139

2000

4. Malmquist, D. L., and A.F. Michaels (2000) Severe storms and the insurance industry. In: Storms, R. A. Pielke, Jr. and R. A. Pielke, Sr. (Eds),Routledge Press.

1998

5. Knap, A.H., Michaels, A.F. and others. (1998) BATS Methods Manual, Version 4. U.S.JGOFS Planning Office, Woods Hole, MA.

6. Bates, N.R., N.R., Knap, A.H., and Michaels, A.F., 1998. Carbon dioxide, climate change and hurricanes. The Journal of the Forum for Environmental Law, Science, Engineering and Finance. December Issue, publisher. M.A. Frodl, Washington D.C., U.S.A.

1997

7. Michaels, A.F. Contributor to: Risk Prediction Initiative, 1997: Tropical Cyclones and Climate Variability: A Research Agenda for the Next Century. Malmquist, D., Ed., 46 pp.

8. Knap, A.H., and Michaels, A.F., 1997, A model for the interaction between business and science: the Risk Prediction Initiative at the Bermuda Biological Station for Research, Oceanography, Volume 9, p. 191-193.

9. Knap, A.H., Michaels, A.F., Hansell, D.A., Bahr, F., Bates, N.R., Becker, S., Caporelli, E., Close, A.R., Doyle, A.P., Dow, R.L., Johnson, R.J., Kelly, R., Little, R., Gundersen, K., Howse, F.A., and Waterhouse, T., 1997. U.S. JGOFS Bermuda Atlantic Time-series Study. Data Report for BATS 61-BATS 72. October1 1993-September 1994, U.S. JGOFS Planning and Coordination Office, Woods Hole, 281pp.

10. Knap, A.H., Michaels, A.F., Steinberg, D.K., Bahr, F., Bates, N.R., Bell, S., Countway, P., Close, A.R., Doyle, A.P., Dow, R.L., Howse, F.A., Gundersen, K., Johnson, R.J., Kelly, R., Little, R., Orcutt, K., Parsons, R., Rathburn, C., Sanderson, M. and Stone, S., 1997. BATS Methods Manual. Version 4, April 1997, U.S. JGOFS Planning and Coordination Office, Woods Hole, 136pp.

1995

11. Knap, A.H., Michaels, A.F. and others. (1995) BATS Data Report, BATS 49-60 October, 1992 to September 1993. U.S.JGOFS Planning Office, Woods Hole, MA

12. Knap, A.H. and A.F. Michaels, (1995) U.S. JGOFS Time Series: an update and implications for international programs. In: The Arabian Sea, Living Resources and the Environment (E. Thompson and N. Tirmizi eds), Vanguard Books, Lahore Pakistan p 25-37

13. Levitus, S, J.I. Antonov, Z, Zengxi, H. Dooley, V. Tsereschenkov, K. Selemenov, A.F. Michaels (1995) Observational Evidence of Decadal-Scale Variability of the North Atlantic Ocean. In: Natural Climate Variability on Decade-to-Century Time Scales. National Academies Press. Pp 318-324.

1994

14. Michaels, A.F. (1994) Scientific prediction of climate. Global Reinsurance. September-November, 1994 pp 99-102

15. Weir, C., D.A. Siegel, A.F. Michaels, M.C. O'Brien and D. Menzies. (1994) In Situ Evaluation of a Ship's Shadow. SPIE - Ocean Optics XII. SPIE Vol 2258: 815-821.

16. Michaels, A.F. (1994) Ocean Time-series Research Near Bermuda: The Hydrostation S time-series and the Bermuda Atlantic Time-series Study (BATS) programs. In: Ecological Time Series. Powell, T.M. and J.H. Steele (eds). Chapman and Hall.

17. Grennfelt, P., A.F. Michaels, F. Lipschultz, D. Hansell, J.N. Galloway. (1994) Effects of Acidic Deposition. Chapter 3. In: Miller, J.M., C.C. Wallen, D.M. Whelpdale (eds). Acid Deposition Assessment Project Report. Word Meteorological Organization, UNEP, New York.

18. Knap, A.H., Michaels, A.F. and others. (1994) BATS Data Report, BATS 37-48 October, 1991 to September 1992. U.S.JGOFS Planning Office, Woods Hole, MA

1993

19. Knap, A.H., Michaels, A.F. and others. (1993) BATS Methods Manual, Version 3. U.S.JGOFS Planning Office, Woods Hole, MA

20. Knap, A.H., Michaels, A.F. and others. (1993) BATS Data Report, BATS 25-36 October, 1990 to September 1991. U.S.JGOFS Planning Office, Woods Hole, MA

1992

21. Michaels A.F. and A.H. Knap. (1992) U.S. JGOFS Ocean Time-series Near Bermuda: Validation Site for Remote Sensing of Ocean Biogeochemistry. In: Proceedings of the Autonomous Bio-optical Ocean Observing System Workshop.

22. Michaels A.F. and A.H. Knap. (1992) Ocean Time-series Near Bermuda: Hydrostation S and the U.S.JGOFS Bermuda Atlantic Time-series Study. In: Proceedings of the Ocean Climate Data Workshop. IOC/UNESCO, pp. 295-315.

23. Michaels, A.F., A.H. Knap and J.W.H. Dacey (1992) The U.S.JGOFS Bermuda Atlantic Time-series Study: Towards an understanding of the temporal and spatial scales of ocean biogeochemistry. MTS '92 Conference Proceedings, 2: 535-541.

24. Galloway, J.N. and 36 other authors including A.F. Michaels. (1992) Sulfur and nitrogen cycling in the North Atlantic ocean's atmosphere: Synthesis of field and modeling results. NOAA Technical Memo, in press

25. Knap, A.H., Michaels, A.F. and others. (1992) BATS Data Report, BATS 13-24 October, 1989 to September 1990. U.S.JGOFS Planning Office, Woods Hole, MA

1991

26. Knap, A.H., Michaels, A.F. and others. (1991) BATS Data Report, BATS 1-12, October, 1988 to September 1989. U.S.JGOFS Planning Office, Woods Hole, MA

1989

27. Dacey, J.W.H., J.E. Craddock, L.P. Madin, A.F. Michaels, and J.R. Weinberg. (1989) Biological impact of deep sea carbon dioxide disposal. In: Feasibility, modeling and economics of sequestering power plant CO2 emissions in the deep ocean. D. Golomb, H. Herzog, J. Tester, D. White and S. Zemba, MIT Energy Lab Report 89-003.

1988

28. Michaels, A.F. (1988) Acantharia in the carbon and nitrogen cycles of the Pacific Ocean. Ph.D. Dissertation. University of California, Santa Cruz, 226 pp.

1986

29. Coale, K.H., A.F. Michaels and R.L. Pinto. (1986) General blue water diving procedures and guidelines. *In*: J. Heine (ed.) *Blue Water Diving Guidelines*, California Sea Grant Publication T-CSGCP-014

30. Coale, K.H., A.F. Michaels and R.L. Pinto. (1986) Blue water diving equipment and procedures used at the University of California, Santa Cruz. *In*: J. Heine (ed.) *Blue Water Diving Guidelines*, California Sea Grant Publ. T-CSGCP-014

1983

31. Michaels, A.F. (1983) The evolution of algal-invertebrate symbioses with special reference to the *Prochloron-Didemnum* symbiosis. Masters Thesis, University of Arizona.

Teaching and Education Experience

2006

Co-Instructor – BISC 585, Scientific Writing and Reviewing, Equally co-taught with Dr. Dave Caron
Guest-Lecturer – BISC 102, Humans and the Environment. One lecture on global change

2005

Co-Instructor – BISC 585, Scientific Writing and Reviewing, Equally co-taught with Dr. Dave Caron
Co-Instructor – BISC 582, Advanced Biological Oceanography, One lecture on the global carbon and nitrogen cycles.

2004

Co-Instructor – BISC 530 – Advanced studies in plankton biology, Equally co-taught with Dr. Dave Caron (Fall 2004)

Guest-Lecturer – BISC 102, Humans and the Environment. One lecture on global change

2003

Co-Instructor – BISC 585, Scientific Writing and Reviewing, Equally co-taught with Dr. Dave Caron

Co-Instructor – BISC 581L Ran a seminar on the scientific proposal process for the incoming graduate students.

Co-Instructor – BISC 582, Advanced Biological Oceanography, One lecture on the global carbon and nitrogen cycles.

Guest-Lecturer – BISC 102, Humans and the Environment. One lecture on global change

Guest-Lecturer – BISC 290, Introduction to Biological Research

2002

Co-Instructor – BISC 581L Ran a seminar on the scientific proposal process for the incoming graduate students.

Co-Instructor – BISC 582, Advanced Biological Oceanography, One lecture on the global carbon and nitrogen cycles.

Guest-Lecturer – BISC 290, Introduction to Biological Research

2001

Co-Instructor – Thematic Option 103, Human Impacts on the Ocean Planet. Equally co-taught with Dr. Dave Caron in Fall 2001

Co-Instructor – ENST 440, Environmental Risk Assessment. Taught at the Wrigley Marine Science Center, Spring 2001 Catalina Semester. Equally co-taught with Dr. Robert Vos (Political Science)

Co-Instructor – BISC 530 Equally co-taught with Dr. Dave Caron in Spring 2001

Guest Lecturer – Environmental Studies 595. Graduate Seminar – Environmental Risk Analysis

Guest Lecturer – Sustainable Cities Graduate Seminar – Healthy Beaches, Environmental Risks and Market Mechanisms for Environmental Solutions

Guest Lecturer – Biological Sciences 419. Global Biogeochemical Processes

2000

Co-Instructor – ENST 440, Environmental Risk Assessment. Taught at the Wrigley Marine Science Center, Spring 2000 Catalina Semester. Equally co-taught with Dr. Robert Vos (Political Science)

Co-Instructor – BISC 581L Ran two seminars on the scientific proposal process for the incoming graduate students.

Designed a Thematic Option course entitled "Human Impact on the Ocean Planet" with Prof. Dave Caron. The course was approved in 2001 and will be first taught in Fall 2001.

1999

Co-Instructor – BISC 473L, Biological Oceanography. Taught at the Wrigley Marine Science Center, Spring 1999 Catalina Semester. Equally co-taught with Prof. Jed Fuhrman

Planning for creation of a Master of Science degree in Environmental Risk. This is as part of a Sloan Foundation grant awarded to USC for the creation of a set of professional masters degrees. The M.S. degree has been approved and is in the USC Catalog.

1998

Co-Instructor – BISC 473L, Biological Oceanography. Taught at the Wrigley Marine Science Center, Spring 1999 Catalina Semester. Equally co-taught with Jed Fuhrman and Dale Kiefer

Guest Lecturer – Environmental Studies Senior Seminar

Guest Lecturer – Graduate Seminar in Remote Sensing at UCSB. At the invitation of Professor David Siegel I gave a lecture on Hurricanes and Business Risk.

Guest Instructor – Zurich Risk Engineering. I presented 6 hours of lectures over 2 days on climate, hurricanes and other natural hazard risks.

1997

Guest Lecturer – Environmental Studies Senior Seminar

Guest Lecturer – Environmental Law

Designed an USC Environmental Studies course in Environmental Risk Analysis with Prof. Sheldon Kamieniecki. The course was approved in 1998 and was taught on Catalina Island starting in Spring 2000.

1996

co-P.I. and Coordinator - NSF Research Experiences for Undergraduates Site at BBSR. Provided coordination oversight and planning.

co-P.I. - NASA funded courses in the operation of a time-series station. Instructed small groups of scientists from foreign countries in the operation of an ocean time-series station and the appropriate analytical methods for ocean biogeochemistry.

Guest Lecturer - BBSR Elderhostel Program, visiting groups, local business and civic groups

1995

Instructor - Biological Oceanography, Graduate level summer course taught at the Bermuda Biological Station for Research. Co-taught with Dr. Deborah Steinberg.

co-P.I. and Coordinator - NSF Research Experiences for Undergraduates Site at BBSR. Provided coordination oversight and planning. Presented lectures on experimental design, statistics and biological oceanography. Provided general mentorship for a group of 8 undergraduates involved in a 12 week intensive period of independent research.

co-P.I. - NASA funded courses in the operation of a time-series station. Instructed small groups of scientists from foreign countries in the operation of an ocean time-series station and the appropriate analytical methods for ocean biogeochemistry.

Guest Lecturer - BBSR Elderhostel Program, visiting groups, local business and civic groups

1994

Instructor - Biological Oceanography, Graduate level summer course taught at the Bermuda Biological Station for Research. Co-taught with Dr. Mary Silver, UC, Santa Cruz.

co-P.I. and Coordinator - NSF Research Experiences for Undergraduates Site at BBSR. Provided coordination oversight and planning. Presented lectures on experimental design, statistics and biological oceanography. Provided general mentorship for a group of 8 undergraduates involved in a 12 week intensive period of independent research.

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Guest Lecturer - BBSR Elderhostel Program, visiting groups, local business and civic groups

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co-P.I. - NASA funded courses in the operation of a time-series station. Instructed small groups of scientists from foreign countries in the operation of an ocean time-series station and the appropriate analytical methods for ocean biogeochemistry.

Guest Lecturer - BBSR Elderhostel Program, visiting groups, local business and civic groups

1992

Visiting Instructor - Summer Course on Ecological Time-series, Cornell, 1992. Presented a series of lectures over the course of one week on ocean biogeochemistry and time-series analysis.

co-P.I. and Coordinator - NSF Research Experiences for Undergraduates Site at BBSR. Provided coordination oversight and planning. Presented lectures on experimental design, statistics and biological oceanography. Provided general mentorship for a group of 8 undergraduates involved in a 12 week intensive period of independent research.

Guest Lecturer - BBSR Elderhostel Program, visiting groups, local business and civic groups

1991

Instructor - Biological Oceanography, Graduate level summer course taught at the Bermuda Biological Station for Research. Co-taught with Dr. Mary Silver, UC, Santa Cruz.

co-P.I. and Coordinator - NSF Research Experiences for Undergraduates Site at BBSR. Provided coordination oversight and planning. Presented lectures on experimental design, statistics and

biological oceanography. Provided general mentorship for a group of 8 undergraduates involved in a 12 week intensive period of independent research.

Guest Lecturer - BBSR Elderhostel Program, visiting groups, local business and civic groups

1990

Instructor - Biological Oceanography, Graduate level summer course taught at the Bermuda Biological Station for Research. Co-taught with Dr. Mary Silver, UC, Santa Cruz.

Guest Lecturer - BBSR Elderhostel Program, visiting groups, local business and civic groups

1987-1984

Instructor - Summer Course in Marine Biology, University of California, Santa Cruz, 1987. Co-taught with Dr. Jim McClintock.

Teaching Assistant in many courses at the University of California, Santa Cruz, 1984-1987

1982-1983

Teaching Assistant in introductory biology courses at the University of Arizona

1979

Coordinator and lead instructor. The Wilderness Course, Muir College, University of California, San Diego. This was the only student-run course at UCSD under the oversight of Provost Stewart. As coordinator, I and one other student organized the entire course, ran the teacher training course in the Winter Quarter and coordinated the full course in Spring Quarter. The enrollment was approximately 200 students. I also taught one of the discussion sections where most of the instruction occurred.

1978

Discussion Leader. The Wilderness Course, Muir College, University of California, San Diego. This was the only student-run course at UCSD under the oversight of Provost Stewart. The enrollment was approximately 200 students. I taught one of the discussion sections where most of the instruction occurred.

Student and Postdoctoral Mentorship

University of Southern California

Josh Steele (Biology Graduate Student, I am a member of his Ph.D. committee)
Victoria Bertics (Biology Graduate Student, I am a member of her Ph.D. committee)
Catherine Purcell (Biology Graduate Student, I am a member of her Ph.D. committee)
Beverly Flood (Biology Graduate Student, I am a member of her Ph.D. committee)
Jill Sohm (Biology Graduate Student, I was a member of her Ph.D. committee)
Julliete Finzi (Biology Graduate Student, I was a member of her Ph.D. committee)
Augie Vogel (Biology Graduate Student, I was a member of his Ph.D. committee)
Diana Webster (Political Economics and Policy Graduate Student, I was a member of her Ph.D. committee)
John Griffith (Biology Graduate Student, I am a member of his Ph.D. committee)
Jake Riley (Biology Graduate Student, I was a member of his M.S. committee)
Maria Echarte (Environmental Studies Graduate Student, member of thesis committee)
Jamie Allshouse (Environmental Studies Graduate Student, member of thesis committee)
Tina Cummins (Political Economics Graduate Student, I was a member of oral exam committee)
Oleg Pavlov (Economics Graduate Student, I was the outside member of his oral exam and Ph.D. committees)
Chona Sister (Biology Graduate Student, I was a member of her screening exam committee)

Bermuda Biological Station for Research.

As a research scientist at BBSR, I worked closely with a large number of graduate students from many different institutions (BBSR does not award degrees itself). For some of these students, I sat on their Ph.D. committees. For others, I was the local advisor, a position required by BBSR for all resident graduate students.

BBSR Graduate Students

Natalie Waser (member of Ph.D. committee, MIT-WHOI Joint Program), received Ph.D. 1992
Nick Bates (local advisor) University of Southampton, U.K., received Ph.D. 1995
Kjell Gundersen (local advisor) University of Southampton U.K., received Ph.D. 1998
Karen Orcutt (local advisor) University of Warwick U.K., received Ph.D. 1998
Rod Johnson (local advisor) University of Southampton U.K, received Ph.D. 2002

BBSR Postdoctoral Scientists (some later hired onto my grants as research scientists)

Dr. Deborah Steinberg
Dr. Nick Bates
Dr. Norm Nelson
Dr. Craig Carlson
Dr. Dave Malmquist
Dr. Fielding Norton

SHORT BIOGRAPHY FOR MICHAEL K. ORBACH

Michael K. Orbach is Professor of Marine Affairs and Policy and Director of the Duke University Marine Laboratory and the Coastal Environmental Management Program in the School of the Environment at Duke University. His BA is in Economics from the University of California at Irvine, and his MA and PhD are in Cultural Anthropology from the University of California at San Diego. From 1976-79 he was Social Anthropologist and Social Science Advisor with the National Oceanic and Atmospheric Administration in Washington, D.C. From 1979-82 he was Associate Director of the Center for Coastal Marine Studies at the University of California at Santa Cruz. From 1983-93 he was Professor of Anthropology in the Department of Sociology and Anthropology and Senior Scientist with the Institute for Coastal and Marine Resources at East Carolina University. He joined Duke, with offices at the Duke Marine Laboratory in Beaufort, North Carolina, in 1993, and served as Director of the Laboratory from1998 to 2006.

Dr. Orbach's primary Area of expertise is environmental policy and his secondary area of expertise is coastal zone management. Dr. Orbach's generic statement of expertise is that he applies the tenets of the social sciences to environmental policy and management, focusing on marine fisheries and integrated coastal management. He has always been very active in informing and engaging the public and has a record of strong participatory action in affecting informed decision making at all levels in environmental issues.

Mike has performed research on, and has been involved in development and implementation of, coastal and marine policy on all coasts of the U.S. and in Mexico, Central America, the Caribbean, Alaska and the Pacific, and has published widely on social science and policy in coastal and marine environments.

Among his selected honors, awards and appointments are:

Scientific and Statistical Committee, Pacific Fisheries Management Council (1979-82);

North Carolina Marine Fisheries Commission (Governor's appointments, one republican, one democrat, 1985-95; Vice-chair, 1994-95);

Chair, North Carolina Ocean Affairs Council (Governor's appointments, one republican, one democrat, 1985-93);

Technical/Management Committee, Albemarle-Pamlico Estuarine Study (EPA National Estuary Program, 1985-1995);

National Advisory Committee, National Coastal Resources Institute (1985-1995);

Praxis Award (with J. Johnson), Washington Association of Practicing Anthropologists (1991);

Founding Board Member, Partnership for the Sounds (1992-present);

Founding Board Member, Marine Affairs and Policy Association, 1993-present;

Visiting Regents Scholar, University of California, Santa Cruz, Spring, 1995

National Research Council Committees on

1) Reducing Porpoise Mortality from Tuna Fishing (1989-92);
2) the National Sea Grant College Program (1994);
3) Science and Policy in the Coastal Ocean (1995);
4) Individual Fishing Quotas (1997-1999);

President, The Coastal Society (1995-98);

Advisory/Selection Committee, Pew Charitable Trusts Scholars in Marine Conservation Program (1996-99);

Ocean Studies Board, National Research Council (1997-1999);

Founding Board Member, North Carolina Beaches, Inlets and Waterways Association (1997-present);

National Board of Directors, Surfrider Foundation (2001-present; Chair since 2002);

Advisor, Pew Oceans Commission, 2000-03;

Science Advisory Committee, U.S. Commission on Ocean Policy, 2001-04;

Bevin Lecturer, School of Fisheries and Aquatic Sciences, University of Washington, 2003-4;

President, Southern Association of Marine Laboratories, 2005-present

Board of Directors, National Associationof Marine Laboratories, 2005-present

Board of Directors, Consortium for Ocean Research and Education, 2005-present

Science Advisory Committee for Marine Managed Areas, Conservation International and the Gordon and Betty Moore Foundation, 2005-present.

Chair, “Reverse Review” Panel for the NOEN Program, National Science Foundation, 2005

Board of Directors, The Ocean Conservancy (2005-present)

[Full Vitae on request]

Michael K. Orbach
Professor of Marine Affairs and Policy and
Director
Duke University Marine Laboratory
135 Duke Marine Lab Road
Beaufort, NC 28516-9721
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(252)725-1371 (cell)
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CURRICULUM VITAE -- MICHAEL K. ORBACH

CURRENT ADDRESS

103 Leonda Drive
Beaufort, NC 28516
(252) 728-5991
E-mail: orbox@clis.com

CURRENT POSITION

Professor in the Practice of Marine Affairs and Policy
And
Immediate Past Director, Duke University Marine Laboratory
Director, Coastal Environmental Management Program

Duke University Marine Laboratory
Nicholas School of the Environment
Duke University
135 Duke Marine Lab Road
Beaufort, NC 28516-9721
Office (252) 504-7606; Cell (252) 725-1371
FAX (252) 504-7648
E-Mail: mko@duke.edu

BIRTH DATE AND PLACE

November 19, 1947 -- Los Angeles, CA

EDUCATION

1975 -- Ph.D., University of California, San Diego, Cultural Anthropology
1973 -- M.A., University of California, San Diego, Cultural Anthropology
1969 -- B.A. -- University of California, Irvine, Economics

PREVIOUS POSITIONS

1983-93 -- Professor of Anthropology, Department of Sociology and Anthropology;
Senior Scientist, Institute for Coastal and Marine Resources;
East Carolina University

1979-82 -- Associate Director, Center for Coastal Marine Studies;

Adjunct Professor, Anthropology Board of Studies;
Adjunct Professor, Environmental Board of Studies;
University of California, Santa Cruz

1976-79 -- Social Anthropologist, Office of Resource Conservation and Management, National Marine Fisheries Service;
Social Science Advisor, Office of Sea Grant;
National Oceanic and Atmospheric Administration,
Washington, D.C.

1969-70 -- Instructor in Mathematics and German, Santa Ana Union High School District, Santa Ana, CA

COURSES TAUGHT

-Introduction to Anthropology (Four Field)
-Theory in Anthropology
-Ethnographic Methods
-Applied Anthropology
-Protected Species in a Changing Coastal Environment
-Community-Based Environmental Management
-Social Systems and the Environment
-Anthropology of Maritime People
-Marine Policy
-Marine Fisheries Policy
-Economic Development and Social Change
-Human Values and Environmental Ethics
-Marine Conservation Biology and Policy

CONTRACTS, GRANTS AND FUNDRAISING

Major External Fundraising (in role as Director, Duke University Marine Laboratory)

2000 -- $3,000,000 for two Endowed Professorships in 1) Marine Conservation Biology and 2) Marine Affairs and Policy, Oak Foundation

2003 -- $1,000,000 for Lawrence E. Blanchard Society of Fellow and Scholars, Blanchard Family

2004 -- $2,000,000 for Endowed Professorship in Marine Conservation Technology, Randy Repass and Sally-Christine Rodgers

2004 -- $1,000,000 for construction of Ocean Science Teaching Center, Randy Repass and Sally Christine Rodgers

2002-2004 -- $600,000 for construction of Ocean Science Teaching Center, various sources

Contracts and Grants

2005 – B. Murray, T. Crowley, M. Orbach, J. Ramus, M. Smith, National Science Foundation, Coupling Human and Natural Influences on Coastline Evolution as Climate Changes, $1,198,138

2002 – C. Bonaventura and M. Orbach, National Science Foundation, NSF Graduate Teaching Fellows Program of the Duke University Marine Laboratory, $988,850

2001 – M. Orbach, NOAA Coastal Services Center, Cooperative Program for Coastal Program Development and Coordination, $161,797

2001– M. Orbach, NC Department of Environment and Natural Resources, Development of Marine Fisheries Habitat Protection Plans, $25,000

2000– M. Orbach, NOAA Coastal Services Center, Cooperative Program for Coastal Program Development and Coordination, $120,879

1998 – M. Orbach, Cooperative Agreement on Science and Policy, Coastal Services Center, NOAA, $97,000

1998 – M. Orbach, Human Use Mapping and User Coordination Plan for Core Sound, North Carolina, NC Department of Environment and Natural Resources, $98,000

1996 -- M. Orbach, Limited Entry Alternatives for the Georgia Blue Crab Fishery, State of Georgia, $49,000

1996 -- M. Orbach, Data Analysis in the Pacific Longline Fishery, National Marine Fisheries Service, $10,000

1996 -- M. Orbach, Policy Analysis and Application for the Coastal Services Center, NOAA Coastal Services Center, $54,000

1996 -- M. Orbach, The Island Design Project, Turner Foundation, $20,000

1996 -- M. Orbach and J. Johnson, Emerging Fisheries Policy: A Longitudinal Analysis, North Carolina Sea Grant College Program, $28,000

1995 -- M. Orbach and J. Johnson, Limited Entry in North Carolina Fisheries: A Total Systems Approach, North Carolina Sea Grant College Program, $76,000

1994 -- M. Orbach and J. Johnson, Social Network Analysis of Emerging Fisheries Policy, North Carolina Sea Grant College Program, $28,890

1993 -- M. Miller and M. Orbach, Small-Scale Pelagic Fisheries in Hawaii, Pacific Pelagics Research Program, University of Hawaii, $35,000

1993 -- M. Orbach and J. Johnson, Limited Entry in the Florida Stone Crab Fishery: A Multi-Species Approach, Year II. National Marine Fisheries Service, $87,007

1992 -- M. Orbach and J. Johnson, Multi-Fishery Direct Effort Management: Development of Techniques. North Carolina Sea Grant College Program, $58,000

1991 -- M. Orbach and J. Johnson, Limited Entry in the Florida Stone Crab Fishery: A Multi-species Approach. National Marine Fisheries Service, $100,699

1990-92 -- M. Orbach, A Citizen's Water Quality Monitoring Program for the Albemarle-Pamlico Region. Albemarle-Pamlico Estuarine Study, $120,000 (cumulative)

1989 -- M. Orbach and J. Johnson, An Industry-Derived Framework for Limited Entry in the Florida Spiny Lobster Fishery. Gulf and South Atlantic Fishery Development Foundation, $65,000

1986 -- M. Orbach and J. Johnson, Socio-Cultural and Economic Aspects of the Florida Spiny Lobster Fishery. Office of Sea Grant, NOAA, $60,000

1985 -- M. Orbach, Archaeological Investigations of the Pomeiooc Site. North Carolina Division of Archives and History and Friends of North Carolina Archaeology, $53,000

1984-87 -- M. Orbach and J. Johnson, The Movement of Commercial Fishermen and Vessels among Atlantic Coastal States: Management and Policy Implications. North Carolina Sea Grant College Program, $95,311 (cumulative)

1984-92 -- W. Queen and M. Orbach, North Carolina Marine Policy Fellowship. North Carolina Sea Grant College Program, $80,000 (Cumulative)

1982 -- M. Orbach, Social and Cultural Impacts of Management Alternatives for the Monterey Bay Sablefish Fishery. National Marine Fisheries Service, $6,500

1981 -- R. Gaudino and M. Orbach, A Day on the Bay: Celebration of Italian-American Heritage in the Santa Cruz, CA Fishing Community. Various private individual and foundation contributions, $60,000

1981 -- B. Cicin-Sain and M. Orbach, U.S.-Mexico Relations on Fisheries Policy. University of California Sea Grant College Program, $50,023

1981 -- M. Orbach, The Social Impact of Land Use Changes in Moss Landing, CA. U.S. Army Corps of Engineers, $6,500

1981 -- M. Orbach, Social and Cultural Aspects of the Renegotiation of the North Pacific Fur Seal Convention. Center for Marine Conservation, $35,000

1980 -- M. Orbach, Social and Cultural Aspect of Fisheries Development in the U.S. Trust Territories of the Pacific. Pacific Marine Fisheries Commission, $17,500

1980 -- M. Orbach and B. Cicin-Sain, The Role of Individual Perception and Structural Position in the Development of Fisheries Management Policy. University of California Sea Grant College Program, $10,889

1980 -- M. Orbach, Indochinese Adaptation to the Monterey Bay Fishing Community. University of California Sea Grant College Program, $9,672

COMMITTEES AND APPOINTMENTS (Selected)

External -- Policy

National Science Foundation Committee to review the National Ecological Observatory Network (member, first review panel; Chair, "Reverse Review" panel), 2006

Scientific Advisory Panel, U.S. Commission on Ocean Policy (Presidential Commission), 2002-2004

Pew Oceans Commission, Social Science Advisor, 2001-2004

Ocean Studies Board, National Research Council, 1997-2000

National Research Council Committee on Individual Transferable Fishing Quotas, 1997-1999

Panel on Ecosystem Principles in Fisheries, National Marine Fisheries Service (Congressionally-mandated, National Academy of Science-recommended panel), 1997-1999

National Research Council Committee on Science and Policy in the Coastal Ocean, 1995-96

Chair (elected), Carteret County Beach Preservation Task Force, 1996-1999; member, 1996-present

North Carolina Marine Fisheries Commission, 1985-1995 (Governor's Appointment);

Commission Vice Chair (elected), 1994-1995;
Chair, Saltwater Recreational License Committee, 1994-95;
Chair, Blue Crab Committee, 1994-95;
Chair, Bycatch Review Committee, 1990-91
Chair, License Review Committee, 1988-89;
Chair, Regulation Review Committee, 1986-88;

Chair, North Carolina Ocean Affairs Council, 1985-1993 (Governor's appointment)

Board of Directors, Partnership for the Sounds, 1992-present

National Academy of Science Committee on the Sea Grant College Program, 1994

Technical Committee, Albemarle-Pamlico Estuarine Study; Chair, Public Involvement Subcommittee, 1986-1994

North Carolina State-Federal Ocean Phosphates Task Force, 1986-1992 (Governor's appointment)

National Academy of Science Committee on Tuna-Porpoise Mortality, 1989-91

Environmental Science Review Panel (National Academy of Science-based panel to review Mobil Oil Consortium proposal for OCS development off North Carolina; joint Governor-Secretary of Interior appointment), 1990-92

Scientific and Statistical Committee, Pacific Fisheries Management Council, 1979-82

Santa Cruz City Museum Commission, 1980-82

External – Professional

Member, Board of Directors, The Ocean Conservancy, 2006-present

Member, South Carolina Sea Grant College Program Advisory Board

Member, Science Advisory Board, Gulf of Maine Research Institute, 2006-present

Member, Board of Directors, National Association of Marine Laboratories, 2005-present

President, Southern Association of Marine Laboratories, 2005-6

Board of Directors, Surfrider Foundation, 2001-present; Chair, 2002-2005

Board of Directors, North Carolina Shore and Beach Preservation Association, 1998-present

Board of Directors, Carolina Coastal Classrooms Foundation, 2002-present

President, The Coastal Society (1995-1998; Past President,1998-2001)

Advisory Board, Pew Scholars Program, 1996-2000

Board of Directors, Marine Affairs and Policy Association, 1991-present

National Advisory Board, National Coastal Resources Institute, 1985-1995

Nominations Committee, American Anthropological Association, 1980-81; Chair, 1981

Chair, Social Impact Assessment Committee, Society for Applied Anthropology, 1979-85

Publications Policy Committee, Society for Applied Anthropology, 1979-85

University

Duke University, Nicholas School of the Environment

Admissions and Awards Committee, 1993-present
Education Committee,1993-present
Coastal and Marine Science and Policy Task Force, 1998-2000
Faculty Advisory Council, 2001-present

East Carolina University

Chancellor's Committee on the Status of Women, 1990-93
Vice-Chair 1992-93 (elected)
Vice-Chancellor's Committee on Tenure and Promotion, 1987-92

University of California, Santa Cruz

Chancellor's Advisory Committee for Ethnic Studies, 1980-82
Chancellor's Advisory Committee on Academic Administrators, 1981-82
Advisory Committee, Merrill College Field Program for Experiential Learning, 1979-82
Chancellor's Advisory Committee for the Board of Environmental Studies, 1980-82
Career Planning and Placement Advisory Committee, 1981-82

Editorial

Editorial Review Board, *Coastal Management Journal*, 1980-present

Anthropology Editor, *Journal of Contemporary Ethnography*, 1985-89

Contributing Editor, *Practicing Anthropology*, 1979-85

LEGISLATIVE INVOLVEMENT

Assistance in Drafting of Legislation

Georgia General Assembly, Blue Crab Fishery Limited Entry Legislation, 1997

North Carolina General Assembly, Marine Fisheries Moratorium Legislation, 1994; Fisheries Reform Act, 1997

North Carolina General Assembly, Legislation to abolish the Marine Science Council and establish the Ocean Affairs Council, 1992

Florida Legislature, Spiny Lobster Trap Certificate Program Legislation, 1991

Testimony

Moderator and Summary Speaker, Symposium on "The Coral Reef Crisis", U.S. House of Representatives, May 31, 2002 (sponsored by the House Oceans Caucus)

U.S. Senate, Committee on Science, Commerce and Transportation, Subcommittee on Fisheries and Wildlife, on the reauthorization of the Magnuson-Stevens Fishery Conservation and Management Act, May, 2001

North Carolina General Assembly, Joint Study Commission on Seafood and Aquaculture, on the Core Sound Human Uses Mapping Project, January, 1999

North Carolina General Assembly, Joint Study Commission on Seafood and Aquaculture, on provisions for a saltwater recreational fishing license, February, 1997

North Carolina General Assembly, Shellfish Task Force, Joint Study Commission on Seafood and Aquaculture, on the documentation of human use of marine resources, November-December, 1996

North Carolina General Assembly, Joint Study Commission on Seafood and Aquaculture, on the potential for a commercial fisheries license moratorium, April-May 1994

North Carolina General Assembly, Joint Study Commission on Seafood and Aquaculture, on the proposal for a saltwater recreational fishing license, December, 1993

U.S. Senate, Committee on Science, Commerce and Transportation, on marine fisheries policy, June, 1992

North Carolina General Assembly, House Environment Committee, on the restructuring of the North Carolina Marine Science Council, May, 1992

Florida Legislature, House and Senate Natural Resource Committees, on the Florida Spiny Lobster Trap Certificate System, February-March, 1991

U.S. House of Representatives, Committee on Merchant Marine and Fisheries, on behalf of the State of North Carolina concerning the extension of coastal state jurisdiction, May, 1989

CONSULTANCIES

Pew Oceans Commission, Marine Fisheries Policy and Ocean Governance, 2001-2004

Pew Charitable Trusts and Rockefeller Brothers Foundation, Constituent-Based Marine Fisheries Policy and Management, 1995-97

South Atlantic and Western Pacific Fishery Management Councils, Policy for Highly Migratory Marine Fish Species, periodically 1986-92.

Gulf of Mexico Fisheries Management Council, Effort Management in Gulf of Mexico Fisheries, 1992-present

State of Hawaii, Ocean Management Planning, 1990-91

University of New Orleans, Social Impacts of Turtle Excluder Devices, 1990-91

North Pacific Fisheries Management Council, Social Impact Assessment and Effort Management, 1993-present

Minerals Management Service, U.S. Department of Interior, North Carolina OCS Socioeconomic Study, 1992-94

Member, Board of Advisors, "The Blue Revolution", documentary film series on man's relationship with the sea, Mare Nostrum Foundation, Washington, D.C., 1982-89

Island Resources Foundation, St. Thomas/Washington, D.C., Fisheries Development in the Caribbean, 1985-87

Honorary Consultant, Survival Service Commission, International Union for the Conservation of Nature, 1981-84

Social Science Advisor to Gulf of Mexico Shrimp and Menhaden Management Plan Task Forces, 1977-79

California Coastal Commission, Socio-economic Impact of OCS Development, 1980

Reviewer for:

National Science Foundation
Office of Sea Grant and Sea Grant College Programs
Social Science Research Board of Canada
American Anthropologist
Human Organization
American Ethnologist
Fisheries
North American Journal of Fisheries Management

Various Presses and Specialty Journals

HONORS AND AWARDS

Honor Scholar in Economics, University of California, Irvine, 1969

Regents Fellow, University of California, San Diego, 1973

Nominated to the Center for Advanced Study in the Social Sciences, Stanford University, 1978

Nominated for the Margaret Mead Award, Society for Applied Anthropology, 1982

National Praxis Award (with J. Johnson), Washington Association of Practicing Anthropologists (for outstanding contributions to the application of anthropological knowledge), for research, design and implementation of a new policy and management system for the Florida spiny lobster fishery), 1991

Nominated for Pew Scholars Program, 1994-95; 1995-96

Visiting Regent's Scholar, University of California, Santa Cruz, Spring, 1995

Plenary Speaker, American Fisheries Society Annual Meeting, Baltimore, MD, August 2002

Roger Revelle Memorial Lecture Speaker, National Academy of Science and Engineering, Washington, D.C., November 2002

Bevin Lecturer, School of Fisheries and Aquatic Sciences, University of Washington, 2003-4

PROFESSIONAL ASSOCIATIONS

Fellow, American Anthropological Association
Fellow, Society for Applied Anthropology
Member, American Fisheries Society
Member, Marine Affairs and Policy Association
Member, The Coastal Society

Updated 2-15-07

SHIRLEY A. POMPONI, Ph.D.

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Shirley Pomponi is President and Chief Executive Officer of Harbor Branch Oceanographic Institution. Dr. Pomponi received her Ph.D. in Biological Oceanography from the University of Miami, was a member of the research faculty at the University of Maryland, and joined Harbor Branch in 1984. She has authored or co-authored more than 80 publications in marine biotechnology, biodiversity, cell and molecular biology, systematics and natural products chemistry, and is a co-inventor on several patents. Her research focuses on sponge taxonomy, cell biology, chemical ecology, and production of chemicals with therapeutic potential. Dr. Pomponi has led numerous research expeditions worldwide. She is an affiliate faculty member at Florida Atlantic University and on the graduate faculty at the Florida Institute of Technology. Dr. Pomponi has held numerous positions in advising ocean policy, including an appointment to the President's Panel on Ocean Exploration, several National Research Council Committees, and the Scientific Advisory Panel to the U.S. Commission on Ocean Policy. She chairs the National Research Council's Ocean Studies Board, and is on the Executive Committee of the Consortium for Oceanographic Research and Education (CORE), the Florida Oceans and Coastal Resources Council, the Ocean Research and Resources Advisory Panel, the Board of Directors of BIOFlorida, the U.S. National Committee for the Census of Marine Life, the Board of Trustees of Midwest Research Institute, and the Board of Trustees of the Women Divers Hall of Fame.

EDUCATION:

Institution	Major	Dates Attended	Degree
College of St. Elizabeth	Biology(summa cum laude)	1967-1971	B.A.
University of Miami, RSMAS	Biological Oceanography	1971-1974	M.S.
University of Miami, RSMAS	Biological Oceanography	1975-1977	Ph.D.
University of Miami, RSMAS	Biological Oceanography	1978-1979	post-doctoral

POSITIONS AND EMPLOYMENT:

Dates	Organization	Position
10/04- present	Harbor Branch Oceanographic Institution	CEO and President
4/04 – present	Harbor Branch Oceanographic Institution	Acting Managing Director
4/02-4/04	Harbor Branch Oceanographic Institution	Vice President & Director of Research
3/94-4/02	Harbor Branch Oceanographic Institution	Division Director
7/91-9/92	Harbor Branch Oceanographic Institution	Acting Division Director
2/28-3/94	Harbor Branch Oceanographic Institution	Group Leader, Sample Acquisition
12/84-02/88	SeaPharm, Inc.	Consultant and Group Leader
10/79-12/84	University of Maryland, CEES/HPEL	Res. Assoc., Assistant Res. Scientist
6/78-9/79	University of Miami, RSMAS	Research Associate
1/78-6/78	University of Miami, RSMAS	Postdoctoral Fellow
6/74-1/75	Sea Grant Advisory Services, Univ. Miami, FL	Assistant to the Director

OTHER PROFESSIONAL EXPERIENCE:

2005-2008	Member, Florida Oceans and Coastal Resources Council
2005-2009	Member, Ocean Research and Resources Advisory Panel
2005-2008	Chair, National Academy of Science (NAS) Ocean Studies Board
2003-2005	Member, National Academy of Science (NAS) Ocean Studies Board
2004-2005	Delegate, Scientific Committee on Oceanic Research
2003	Member, NAS Committe on Future Needs in Deep Submergence Science
2003-2006	Member, U.S. National Steering Committee, Census of Marine Life
2003-present	Florida Ocean Alliance, Board of Directors
2002-present	Member, Board of Governors & Executive Committee, Consortium for Oceanographic Research & Education (CORE)
2002-2004	Member, Science Advisory Panel, U.S. Commission on Ocean Policy
2001-2003	Vice Chair, NAS Committee on Exploration of the Seas
2001-2002	Member, NAS Committee on Marine Biotechnology
2001-present	Board Member, Florida Biotechnology Industry Organization (BIOFlorida)
2000	Member, President's Panel on Ocean Exploration
1998-1999	Member, NAS Committee on the Ocean's Role in Human Health

RECENT HONORS:

2006	Fellow Award, Society for In Vitro Biology
2004	Society for In Vitro Biology, Senior Investigator Award for excellence in research, contributions and achievements in the field of Marine and Comparative Biology
2003	Member, Women Diver's Hall of Fame

CURRICULUM VITAE Kenneth Peter Sebens *April 2007*

PRESENT ADDRESS

U.W. Friday Harbor Laboratories, 620 University Rd., Friday Harbor, WA 98250
and Department of Biology, University of Washington, Seattle WA 98195
phone: 206 616 0764 fax: 206 543 1273 email: sebens@u.washington.edu

EDUCATION

B. A. with Honors, Biology, 1972, University of Connecticut, Storrs, CT
Ph.D., Zoology, 1977, University of Washington, Seattle, WA

ACADEMIC POSITIONS

Assistant Professor, Department of Organismal and Evolutionary Biology, Harvard University (1977 - 1982), Associate Professor, (1982 - 1985)
Assistant Curator of Invertebrates, Mus. Comparative Zoology, Harvard (1979 - 1982)
Associate Curator, MCZ, Harvard (1982 - 1985), Research Associate (1985 - present)
Associate Professor of Biology, Northeastern University (1985 - 1986)
Director, Marine Science Center, Northeastern University (1985 - 1991)
Professor of Biology, Northeastern University (1986 - 1992)
Acting Associate Dean of Arts and Sciences, Northeastern Univ. (1986 - 1987)
Adjunct Faculty, Northeastern University (1992 - present)
Adjunct Faculty, U.M. System, Center for Environmental Science, Horn Pt. Environmental Labs (1993 - 1994, 1997 - 2004), Professor (1994 - 1997)
Director, Marine-Estuarine-Environmental Sciences Graduate Program, University of Maryland System (1991 - 1997)
Professor, Zoology/Biology, University of Maryland (1991 - 2005)
Adjunct Faculty, University of Rhode Island (1999 - 2005)
Professor, Biology, University of Massachusetts Boston (2003 - 2005)
Dean, College of Science and Mathematics UMass Boston (2003 – 2005)
Professor, Department of Biology, University of Washington, Seattle (2005 - present)
Director, UW Friday Harbor Laboratories, Friday Harbor, WA (2005 - present)

HONORS RECEIVED

B. A. with Honors, Honors Program, University of Connecticut, 1972
Mercer Award, Ecological Society of America, 1983 for "Outstanding Ecological Paper, 1982"
Fellow, American Association for the Advancement of Science, 1986
Phi Kappa Phi, Faculty Membership, 1987
Fulbright Senior Scholar, Award for 1998 - 1999

PROFESSIONAL SOCIETIES

American Society for Limnology and Oceanography
The Oceanographic Society, A.A.A.S., Sigma Xi
Ecological Society of America, Society for Integrative and Comparative Biology
International Society for Reef Studies

ADVISORY AND EDITORIAL POSITIONS

Aquatic Ecosystems Panel of A.A.A.S./National Park Service- project on Methods for Environmental Studies (1981 - 1982)
Marine Science Fund Advisory Board, Friday Harbor Laboratories, U.W. (1976 - 1983)
Board of Directors, Organization for Tropical Studies (1981 - 1985), Board of Editors, Journal of Exp. Mar. Biol. Ecol. (1984 - 1989)
Board of Directors, Mass. Bay Marine Studies Consortium (1985 - 1990)
Panel Member, National Science Found., Biological Research Resources (1986)
Scientific Review Committee, Harbor Branch Oceanographic Inst. (1985)
Citizens Advisory Committee, S. Essex Sew. Div., Salem, MA (1986 - 1987)
Technical Advisory Group, Mass. Exec. Off. Environmental Affairs (1987 - 1989)
Mass. Bay Program, Technical Advisory Committee. (1988 - 1989)
Boston Harbor/Mass. Bay Univ. Research Consortium, member (1987 - 1989)
Mass. Audubon Resources for the North Shore, Coastal Monitoring Program Advisory Committee (1987 - 1990)
American Society of Zoologists, Centennial Committee, Nominating Committee, Centennial Local Committee (Chairperson) (1986 - 1989)
Ecological Society of America, Awards Committee, (1984 - 1989)
Editor, Marine Flora and Fauna of the Northeastern United States, N.O.A.A. Tech. Repts. Ed. Board, Assoc. Coordinator.(1988 - 1997), Editor (1997 - present)
National Science Foundation Review Panel, Biological Oceanography (October 1989, July 1993, 1999)
National Science Foundation Review Panel, LTER (December 1997)
International Society for Reef Studies, Gov. Board Member, (1992 – 1997)
Visiting Committee, external review, Smithsonian Envir. Research Center (1997)
Pew Fellows Program, Nominating Committee (1997 – 1998)
New England COSEE Advisory Committee (2004-2005)
Marine Resources Committee, San Juan County WA (2005-present), Chair: Science Subcommittee (2007-present)
SeaDoc Society, Science Advisory Committee (2005 - present)
NAML (Natl. Association of Marine Laboratories), Board Member (2006 - present)
WAML (Western Society of Marine Laboratories), President Elect (2007 – present)

GRANTS AND FELLOWSHIPS AWARDED

Doherty Foundation Fellowship, Smithsonian Tropical Research Institute (1974) $2,200
National Science Foundation Dissertation Improvement Award (with R.T. Paine, 1975 - 1977) $2,400
Harvard University: Milton Fund, 1977 - 1978, President's Fund for Innovative Teaching (Tropical Ecology course, with T. Givnish 1978 - 1979), Clarke Fund (1979 - 1980), Tozier Fund (1980 - 1981), Milton Fund (1981 - 1985)
National Oceanic and Atmospheric Administration (N.O.A.A.) National Undersea Research Program (N.U.R.P.) Effects of Water Movement on Corals. (1984) $7,800, (1985) $5,850 and use of' Hydrolab underwater laboratory (St. Croix) for two weeks (2 awards)
N.O.A.A./N.U.R.P. Effects of Water Movement on Coral Feeding, Aquarius Underwater Laboratory, St. Croix. (1988) $27,900 plus 2 weeks use of underwater laboratory.
N.O.A.A./N.U.R.P. Ecology of Rocky Subtidal Benthos in the Gulf of Maine (with J. Witman). Six separate annual grants, including ship/submarine. 2 days ship and submersible (Mermaid 2) time, 1984: 4 days (Johnson Sea-Link) 1985: 3 days (Johnson Sea-Link) 1986: 7 days (Seaward Expl./Nitrox) 1987:$5,000 and 15 days (Nekton Delta, Johnson Sea-Link) 1987; $2,000 and 6 days (Nekton Delta, Johnson Sea-Link) 1988, 8 days (Seaward Expl/Nitrox), 1989 (Johnson Sea Link)
N.S.F. Grant OCE 78 08482. The Effect of Prey Resource Availability on Growth and Competitive Success in a Space Limited Community (1978 - 1980) $83,000
N.S.F. Grant OCE 80 17923, The Effect of Resource Availability II (1980 - 1982) $131,000
N.S.F. Biological Research Resources Program Grant #DEB 80 19732. Coelenterate Collection (MCZ) Relocation and Renovation (with H. Levi, 1981 - 1982) $82,000
N.S.F. Grant OCE 83 08958, The Effect of Resource Availability III (1983 - 1985) $121,000; Supplement (1984 - 1985) $20,000
N.S.F. Grant OCE 85 9835. The Effect of Resource Availability on Competitive Success in a Space-Limited Community (1985 - 1988). Accomplishment Based Renewal, $185,000
N.S.F. Biological Research Resources Program Grant #BSR 6973, Improvements to the general facilities of M.S.M.S.C., Northeastern University, Nahant MA (1985 - 1986). $33,000
N.S.F. Biological Research Resources Program 86 05414. Facilities Improvements for the M.S.M.S.C. (1986 - 1988). $39,000
Marion and Jasper Whiting Foundation. Current Trends in Coral Reef Ecology and Tropical Marine Biology. (1990 - 1991). $5,400
N.S.F. Ocean Sciences. Coastal Research Vessel 'R. V. Mysis.' transfer to Northeastern University (incl. $5,000 outfitting) (ass. value $160,000); (P.I.,with M.P. Morse, J.D. Witman Co-P.I.s)
N.S.F. Instrumentation Award. Development of a Biological Image Processing System. J. Ayers, P.I. (K. Sebens, J. Witman, M.P.Morse co-P.I.s).(1989 - 1991). $27,000
N.S.F. U.S./Australia Cooperative Research Program. The Effects of Water Movement on Zooplankton Capture by Corals. (1991), $24,190 supplement
N.S.F. Biological Research Resources Program, Improvements to the General Facilities of M.S.C., Northeastern University, Nahant, (1990 - 1992) $160,000 (plus $160,000 cost-sharing from N.U.) $320,000 total (P.I., with J. Ayers, J. Witman, M.P. Morse Co-PIs)
Mass. Water Resources Authority. Rocky Subtidal Studies: Outfall Siting Study. Subcontract through Camp Dresser & McKee and Battelle Inc. (1987, with J. Witman Co-P.I.) $20,500
Mass. Water Resources Authority. Monitoring Rocky Subtidal Communities in Broad Sound, MA. (1991 - 1992, with J. Witman Co-P.I.) $ 40,000
N.O.A.A./N.U.R.P., Zooplankton Capture by Corals. (1989 - 1990) $32,000 plus use of Aquarius Underwater Laboratory, St. Croix.
N.O.A.A./N.U.R.P. Epifaunal Community Dynamics Along Onshore-Offshore Gradients in the Gulf of Maine, 6 days NITROX ship time, 3 days submersible time on Johnson Sea Link. (1990). $8,146 science support (co-PI with J. Witman, P.I.)
N.O.A.A./N.U.R.P. Long Term Dynamics of Epifaunal Invertebrate Communities in Deep Rocky Subtidal Habitats in the Gulf of Maine: A Regional Pespective. (1991 - 1992, Co-P.I. with J. Witman, P.I.) $9,230, incl. 7 days Nitrox Support, 2 days Johnson Sea Link submersible.

N.O.A.A./N.U.R.P. Water Movement and Zooplankton Capture by Corals.(1992 –1 993) $18,700 plus use of Nitrox diving facilities, Key Largo, FL.
N.O.A.A./N.U.R.P. Water Movement and Zooplankton Capture by Corals. (1993 - 1994). $18,200 plus use of Aquarius underwater laboratory for two weeks
N.S.F. Biological Oceanography, #OCE 8900144. Community Ecology of the Rocky Subtidal Zone: an Integrated Life History Approach. (1989 - 1993) $258,000
N.S.F. Biological Oceanography. #OCE8911421. Zooplankton Capture by Corals: the Effects of Water Movement Under Field Conditions. (1989 - 1992) $88,000
Smithsonian Institution, N.M.N.H. Coral Reef Ecosystem Studies (1992). Four weeks use of Carrie Bow Cay Lab., Belize (with J.E.N.Veron, 4 persons) incl. Airfare, lodging, plus $1800 travel
Smithsonian Institution, Caribbean Coral Reef Ecosystem Studies, 4 weeks use of Carrie Bow Cay Laboratory, Belize (1994, with B. Helmuth) $1500 plus above, (1995, $850 plus above)
Smithsonian Institution, NMNH,Caribbean Coral Reef Ecosystem Studies, Four weeks use of Carrie Bow Cay Laboratory, Belize, incl. airfare, hotel, boats, meals (1996, 4 persons) (1997, for 7 persons) (March 2000 and July 2002, for 6 persons)
N.O.A.A./N.U.R.P. Water Movement and Zooplankton Capture by Corals. (1994 - 1995). $18,500 plus use of Aquarius underwater lab. for two weeks, (1995 - 1996). $15,000
N.S.F. Biological Oceanography. Zooplankton Capture by Corals: Effects of Water Movement and Prey Escape (1993 - 1996) $350,000 (with J. Purcell, Co-PI)
N.S.F. International Programs, Supplement to above, Belize (1996 - 1996) $20,000
Univ. of Maryland, UMCP International Travel Fund. Travel to Belize for Research at Smithsonian laboratory (1996) $650
N.S.F. Envir. Biology/Biol. Oceanography (LTREB). Community Ecology of Rocky Shores; Long -Term Research in the Subtidal Zone (Mass. 1978 - 1998) (1996 - 1998), $100,000
National Undersea Research Program (NOAA/NURC). Zooplankton Capture by Reef Corals (1999) $19,000 plus use of Aquarius Underwater Laboratory (K.Heidelberg, J. Bythell co-inv.) Corals, (2000 - 2001) $20,000 plus use of Aquarius Underwater Laboratory
Univ. of Maryland, GRB Semester Research Award (Spring 1999), semester salary (sabbatical)
Fulbright Senior Scholars Program. U.S. Israel Educational Foundation. Coral Reef Ecology. $23,000. February - August 1999 (award not accepted, time conflict with other awards)

GRANTS AWARDED/ACTIVE (LAST FIVE YEARS, since 2002)

N.S.F. Biological Oceanography. Nutrition of Reef Corals, Effects of Morphology, Resource Availability, and Water Flow. (1998 - 2003), $350,000
Smithsonian Institution, NMNH, Caribbean Coral Reef Ecosystem Studies, Two weeks use of Carrie Bow Cay Lab., Belize, with B. Helmuth, E. Carrington (2002, 2003)
N.S.F. Envir. Biology/Biological Oceanography (LTREB). Community Ecology of Rocky Shores; Long-Term Res. in the Subtidal Zone (Mass. 1978 - 2004), (awarded 1998 - 2004) $300,000
Ocean Technology Innovation Collaborative (UMass Boston and UMass Dartmouth), President's Science and Technology Fund (L. Goodman, Co-PI) (2004-2005) $90,000
NSF Field Stations and Marine Laboratories Program. Modernization of Computer, Communications, and Data Management Equipment at the Nantucket Field Station. U. Mass Boston (S.Oktay-Quigley PI, G. Beck, W. Robinson, W. Dripps Co-PIs) (2005-2006) $48,685

PUBLICATIONS:

Sebens, K. P. 1976. A vital stain technique for individually marking soft-bodied intertidal invertebrates; a test on the sea anemone *Anthopleura xanthogrammica* J. Fish Res. Bd. Can. 33: 1407 - 1410.

Sebens, K. P. 1976. The ecology of sea anemones in Caribbean Panama; utilization of space on a coral reef. In: Coelenterate Ecology and Behavior, G. Mackie, ed., Plenum, Chicago. 67 - 77.

Sebens, K. P. and K. DeRiemer. 1977. Diel cycles of expansion and contraction behavior in coral reef anthozoans. Marine Biology 43: 247 - 256.

Sebens, K. P. 1977. Autotrophic and heterotrophic nutrition of coral reef zoanthids. Proceedings of the Third International Coral Reef Symposium, Miami, Florida. I. 397 - 404.

Sebens, K. P. and G. Laakso. 1977. The genus *Tealia* (Anthozoa: Actiniaria) in the San Juan Archipelago and the coast of the Olympic Peninsula, Washington, with descriptions of *Tealia piscivora* sp. nov and *Tealia lofotensis* (Danielssen). Wasmann J. Biology 35: 152 - 168.

Sebens, K. P. and R. T. Paine. 1978. Biogeography of anthozoans along the west coast of South America: habitat, disturbance and prey availability. In: Proceedings of the Int. Symposium on Marine Biogeography and Ecology in the Southern Hemisphere. Vol. I., N. Zealand Dept. of Scientific and Industrial Res. Inf. Ser. No. 137, 745 pp., 219 - 237.

Sebens, K. P. 1979. The energetics of asexual reproduction and colony formation in benthic marine intertebrates. Amer. Zool. 19: 683 - 697.

Sebens, K. P. 1980. The regulation of asexual reproduction and body size in the sea anemone *Anthopleura elegantissima* (Brandt). Biol. Bull. 158: 370 - 382.

Sebens, K. P. 1981. Recruitment in a sea anemone population: larval substrate becomes adult prey. Science 213: 785 - 787.

Sebens, K. P. 1981. The allometry of feeding, energetics, and body size in three sea anemone species. Biol. Bull. 161: 152 - 171.

Sebens, K. P. 1981. The reproductive ecology of two species of intertidal sea anemones, *Anthopleura xanthogrammica* (Brandt) and *A.elegantissima*. (Brandt).J. Exp. Mar. Biol. Ecol. 54: 225 - 250.

Sebens, K. P. 1981. Recruitment and habitat selection in the intertidal sea anemones, *Anthopleura elegantissima* (Brandt) and *A. xanthogrammica* (Brandt). J. Exp. Mar. Biol. Ecol. 59: 1 - 22.

Sebens, K. P. 1982. The limits to indeterminate growth: an optimal size model applied to passive suspension feeders. Ecology 82: 209 - 222 (Mercer Award, ESA 1983).

Sebens, K. P. 1982. Intertidal distribution of zoanthids on the Caribbean coast of Panama: effects of predation and desiccation. Bull. Mar. Sci. 32: 316 - 335.

Sebens, K. P. 1982. Asexual reproduction in *Anthopleura elegantissima* (Brandt) (Anthozoa; Actiniaria): seasonality and spatial extent of clones. Ecology 63: 434 - 444.

Sebens, K. P. 1982. Competition for space: prey availability and escape in size.Am.Natur.120:189-197

Sebens, K. P. 1983. Larval and juvenile ecology of the temperate octocoral *Alcyonium siderium* Verrill. I: substrate selection by planula larvae. J. Exp. Mar. Biol. Ecol. 71: 73 - 89.

Sebens, K. P. 1983. Settlement and metamorphosis of a temperate soft-coral larva (*Alcyonium siderium* Verrill): induction by crustose algae. Biol. Bull. 165: 286 - 304..

Sebens, K. P. 1983. The larval and juvenile ecology of the temperate octocoral *Alcyonium siderium* Verrill. II: fecundity, survivorship, and juvenile growth. J. Exp. Mar. Biol. Ecol. 72: 263 - 285

Sebens, K. P., with P. Rogers, L. R. Beard, K. D. Frederick and O. T. Lind. 1983. Chapter II. Aquatic Ecosystems. In: Natural Resource Inventories and Baseline Studies: Methods for Developing Countries. AAAS and Nat. Park Service Publication, AAAS Office of International Science, 193 pp. (pages by K. Sebens: 50 - 57, 61 - 69, 72075 90 - 100, 114 - 130, 149, 151 - 157).

Sebens, K.P. 1983. Population dynamics and habitat suitability in the intertidal sea anemones *Anthopleura xanthogrammica* (Brandt) and *A. elegantissima* (Brandt). Ecol. Monogr. 53: 405 - 433.

Smith, D. S. and K. P. Sebens. 1983. The physiological ecology of growth and reproduction in *Onchidoris aspera* (Gastropoda: Nudibranchia). J. Exp. Mar. Biol. Ecol. 72: 287 - 304.

Sebens, K. P. 1984. Morphological variability during longitudinal fission of the sea anemone *Anthopleura elegantissima*. Pacific Science 37: 121 - 133.

Fadlallah, Y. H., R. H. Karlson, and K. P. Sebens. 1984. A comparative study of sexual reproduction in three species of Panamanian zoanthids (Coelenterata: Anthozoa). Bull. Mar. Sci. 35: 80 - 89.

Sebens, K. P. and M. A. R. Koehl. 1984. The feeding ecology of two subtidal rock wall zooplanktivores, *Alcyonium siderium* and *Metridium senile.* Marine Biology 81: 255 - 274.

Sebens, K. P. 1984. Growth rate and size structure in populations of colonial and solitary invertebrates. Symp. Series for Underwater Res., The Ecology of Deep and Shallow Reefs, N.O.A.A., 2: 9 - 15.

Sebens, K. P. 1984. Water flow determines colony size in a temperate octocoral. Proc. Natl. Acad. Sci. 81: 5473 - 5477.

Sebens, K. P. 1984. Agonistic behavior in a large solitary sea anemone, *Anthopleura xanthogrammica* (Brandt). Biol. Bull. 166: 457 - 472.
Sebens, K. P. 1985. Community ecology of vertical rock walls in the Gulf of Maine sublittoral zone: small - scale processes and alternative community states. Chapter 23. In: P. G. Moore and R. Seed, eds. The Ecology of Rocky Coasts. Hodder and Stoughton Educational, Kent. pp. 346 - 371.
Sebens, K. P. and J. R. Lewis. 1985. Rare events and population structure of the barnacle *Semibalanus cariosus.* J. Exp. Mar. Biol. Ecol. 87: 55 - 65.
Sebens, K. P. and B. L. Thorne. 1985. The relationships among asexual reproduction,clone diversity and disturbance rate. Proc. of the Symposium on Population Biology and Evolution of Clonal Organisms (1982). Yale University Press, New Haven.
Sebens, K. P. 1985. The ecology of New England rocky subtidal communities. American Scientist 73: 548 - 557.
Sebens, K. P. 1986. Spatial relationships among encrusting marine organisms in the New England subtidal. Ecol. Monogr. 56: 73 - 96.
Sebens, K. P. 1987. Applications of unmanned submersibles to benthic marine ecological research. in: Undersea Teleoperators and intelligent Autonomous Undersea Vehicles. Proceedings. N.O.A.A./M.I.T. Seagrant Publication pp. 83 - 100.
Sebens, K. P. 1987. Chapter 4: Coelenterate Energetics. 1987. In: T. J. Pandian and F. J. Vernberg, eds. Animal Energetics. Academic Press, New York. pp 55 - 120.
Sebens, K.P. 1987. The ecology of indeterminate growth in animals. Annual Review of Ecology and Systematics, 18: 371 - 407
Sebens, K. P. 1988. Competition for space: the effects of disturbance and indeterminate competitive success. Theor. Pop. Biol. 953: 430 - 441.
Briscoe, C. S. and K. P. Sebens. 1988. Omnivory in the green sea urchin *Strongylocentrotus droebachiensis* (MŸller) predation on subtidal mussels. J. Exp. Mar. Biol. Ecol. 115: 1 - 24.
Sebens, K.P., J.D. Witman, R.A. Allmon and E.J. Maney, Jr. 1988. Early community development experiments in rocky subtidal habitats (Gulf of Maine, 30 - 80 m). pp. 45 - 66. In. I. Babb and M. DeLuca, eds. Benthic Productivity and Marine Resources in the Gulf of Maine. N.U.R.P. (N.O.A.A.) Research Report 88 - 3.
Allmon, R. A. and K. P. Sebens. 1988. Feeding and ecological impact of an introduced nudibranch, *Tritonia plebeia*, New England, USA. Marine Biology 99: 375 - 385.
Witman, J.D. and K.P. Sebens. 1988. Benthic community structure at a subtidal rock pinnacle in the central Gulf of Maine. pp. 67 - 106. In. I. Babb and M. DeLuca, eds. Benthic Productivity and Marine Resources in the Gulf of Maine. N.U.R.P. (N.O.A.A.) Research Report 88 - 3.
Sebens, K. P. and J. S. Miles. 1988. Sweeper tentacles in a gorgonian octocoral: their function in competition for space. Biol. Bull. 175: 378 - 387.
Witman, J. D. and K. Sebens. 1989. Distribution and ecology of sponges at a subtidal rock ledge in the central Gulf of Maine, U.S.A. in: K. Reutzler, (ed.) Proc. of the Symposium on Sponge Biology, October 1985 Woods Hole, MA. Smithsonian Inst. Press. pp. 391 - 396
Patterson, M. R. and K. P. Sebens. 1989. Forced convection modulates gas exchange in cnidarians PNAS 86:8833 - 8836.
Sebens, K. P. 1990. Habitat structure and community dynamics in marine benthic systems. In: E. D. McCoy, S. A. Bell and H. Mushinsky, eds. Habitat Structure: the Physical Arrangement of Objects in Space. Chapman and Hall, London pp 211 - 234
Sebens, K.P. and A.S. Johnson. 1991. The effects of water movement on prey capture by reef corals. Hydrobiologia 226:91 - 101.
Sebens, K.P. and A.S. Johnson. 1991. Effects of water movement on prey capture and distribution of reef corals - synopsis. R.B. Williams, P.F.S. Cornelius, R.G. Hughes and E.A. Robson (eds), Coelenterate Biology: Recent Research on Cnidaria and Ctenophora. 1991 Kluwer Academic Publishers. Belgium. Hydrobiologia 216/217: 247 - 248.
Patterson, M.R., K.P. Sebens, and R.R. Olson. 1991. *In situ* measurements of forced convection on primary production and dark respiration in reef corals. Limnol. Oceanogr. 36:936 - 948.
Maney, E.J., J. Ayers, K.P. Sebens and J.D. Witman. 1991. Quantitative techniques for underwater video photography. In L.B. Cahoon, ed. Diving for Science. 1991. Proc. of the Amer. Acad. Underwater Sciences, 11th Ann. Symp., Wilmington, N.C.
Witman, J.D. and K.P. Sebens. 1992. Regional variation in fish predation intensity: a historical perspective in the Gulf of Maine. Oecologia 90: 305 - 315.
Sebens, K.P. and E.J. Maney Jr. 1992. A portable diver-operated plankton sampler for for near-substratum use. In L.B. Cahoon, ed. Diving for Science. 1992. Proc. of the Amer. Acad. Underwater Sciences, 12th Ann. Symp., Wilmington, N.C.

Helmuth, B.S.T. and K. P. Sebens 1993. The influence of colony morphology and orientation to flow on particle capture by the scleractinian coral *Agaricia agaricites* (Linnaeus). J. Exp. Mar. Biol. Ecol. 165:251 - 278.

Johnson, A.S. and K P. Sebens. 1993. Consequences of a flattened morphology: effects of flow on feeding rates of the scleractinian coral *Meandrina meandrites*. Mar. Ecol. Prog. Ser. 99:99 - 114.

Sebens,K.P. 1994. Biodiversity of Coral Reefs: What are We Losing and Why? Amer. Zool. 34:115 - 133.

Aronson, R.B., J. P. Ebersole and K. P. Sebens. 1994. Hurricane Hugo's impact on Salt River submarine Canyon, St. Croix, U.S. Virgin Islands. In, Ginsburg, W. 1994. ed. Pp. 189 - 195. Proc. Coll. on Global Aspects of Coral Reefs: Health Hazards, and History, 1993. Univ. of Miami, FL

Sebens, K.P. and T. J. Done. 1994. Water flow, growth form and distribution of sceleractinian corals: Davies Reef (GBR), Australia. Proc. 7th Int. Coral Reef Symposium, Guam, 1992. Vol 1:557 - 568.

Lesser, M., K. Sebens and J. Witman.1994. Effects of flow and seston availability on scope for growth of benthic suspension feeding invertebrates from the Gulf of Maine.Biol. Bull.187:319 - 335

Durante, K.M. and K. P. Sebens. 1994. Reproductive ecology of the ascidians *Molgula citrina* Alder And Hancock, 1848 and *Aplidium glabrum* (Verrill,1871) from the Gulf of Maine. Ophelia 39:1- 21.

Sebens, K.P. 1995. In: H. A. Mooney et al. Ch. 6.1.10. Biodiversity and Ecosytem Functioning: Ecosystem Analyses: Coral Reefs (contributor, multiauthored).pp. 381 - 387. In Global Biodiversity Assessment, V. H. Heywood, ed. Publ. for United Nations Environ. Programme. Cambridge Univ. Press. 1140 pp.

Graham, K. and K. P. Sebens. 1996 Distribution of marine invertebrate larvae near vertical surfaces in the rocky subtidal zone. Ecology 77:933 - 949

Sebens, K.P., J. Witting and B. Helmuth. 1996. Effects of water flow and aggregation on particle capture by the reef coral *Madracis mirabilis*. J. Exp. Mar. Biol. Ecol. 211:1 - 28.

Sebens, K. P. , K. Vandersall, L. Savina and K. Graham. 1996. Zooplankton capture by two scler-actinian corals, *Madracis mirabilis* and *Montastrea cavernosa*, in a field enclosure. Marine Biology 127:303 - 318.

Sebens, K. P. 1997. Adaptive responses to water flow: Morphology, energetics, and distribution of reef corals. Proc. 8th Int. Coral Reef Symposium, Panama City, 1996. Vol 2. 1053 - 1058.

Heidelberg, K. B., K. P. Sebens, and J. E. Purcell. 1997. Effects of prey escape behavior and water flow on prey capture by the scleractinian coral, *Meandrina meandrites*. Proc. 8th Int. Coral Reef Symp. Panama City, 1996. 2:1081 - 1086.

Helmuth, B. S. T, K. P. Sebens, and T. L. Daniel. 1997. Morphological variation in coral aggregations: branch spacing and mass flux to coral tissues. J. Exp. Mar. Biol. Ecol. 209:233 - 259

Mills, M. M. and K. P. Sebens. 1997. Particle ingestion efficiency of the corals *Siderastrea siderea* and *Agaricia agaricites*: Effects of flow speed and sediment loads. Proc. 8th Int. Coral Reef Symposium, Panama City, 1996 Vol. 2:1059 - 1064.

Sebens, K.P., E.J. Maney Jr., and A. Gordon. 1997. Long-term research in the rocky subtidal zone (Massachusetts, 1977 - 1997). Proc. American Academy of Underwater Sciences. pp. 141 - 159.

Helmuth, B.S.T, B.H. Timmerman and K.P. Sebens. 1998. The interplay of host morphology and symbiont microhabitat in coral aggregations. Mar. Biol.130:1 - 10.

Sebens, K.P., S. Grace, B. Helmuth, E. Maney and J. Miles. 1998. Water flow and prey capture by three scleractinian corals, *Madracis mirabilis, Montastrea cavernosa and Porites porites* in a field enclosure. Marine Biology 131:347 - 360.

Sebens, K. P. 1998. Marine flora and fauna of the Eastern United States. Anthozoa: Actiniaria, Corallimorpharia, Ceriantharia and Zoanthidea. N.O.A.A. Technical Rpt. NMFS. 141. 68 pp.

Shyka, T. and K.P. Sebens. 2000. Community structure, water column nutrients and water flow in two Pelican Cays Ponds, Belize. Atoll Research Bulletin 471:106 - 121.

Sebens, K. P. 2002. Energetic constraints, size gradients and size limits in benthic marine invertebrates. Integ. and Comp. Biol. 42:853-861.

Sebens, K.P., B. Helmuth, E. Carrington and B. Agius. 2003. Effects of water flow on growth and energetics of the scleractinian coral *Agaricia tenuifolia*, in Belize. Coral Reefs 22:35-47.. zooplankton on a Jamaican fore-reef. Coral Reefs 23:263-280.

Ferrier-Pagès, J. Witting, E. Tambutté and K. P. Sebens. 2003. Effect of natural zooplankton feeding on the tissue and skeletal growth of the scleractinian coral *Stylophora pistillata*. Coral Reefs 22:229-240.

Heidelberg, K. , J. Purcell and K.P. Sebens. 2003. Composition and sources of near reef zooplankton on a Jamaican fore-reef. Coral Reefs 23:263-280.

Mills, M. M., F. Lipschultz and K. P. Sebens. 2004. Particulate matter ingestion and associated uptake by four species of scleractinian corals. Coral Reefs 23:311-324.

Mills, M.M., and K. P. Sebens. 2005. Ingestion and assimilation of nitrogen from benthic sediments by three species of corals. Marine Biology 145:1097-1106

Badgley, B.D., F. Lipschultz and K. P. Sebens. 2006. Nitrate uptake by the reef coral *Diploria strigosa* : effects of concentration, water flow, and irradiance. Marine Biology 149:229-238

Lipschultz, F., T. Shyka and K.P. Sebens. The effect of flow on uptake of ammonium at nanomolar concentrations by the coral *Madracis mirabilis*. Mar. Ecol. Prog. Ser. (submitted, in revision).

Witting, J. and K. P. Sebens. The role of zooplankton capture in six Caribbean scleractinian corals: in situ evidence that heterotrophy enhances calcification and tissue growth rate. Marine Biology (submitted, in revision)

Heidelberg, K.B,, K. L. O'Neil, and K.P. Sebens. Vertical distribution and diel patterns of zooplankton abundance and biomass over a Florida coral reef. J. Plankton Res. (submitted)

MANUSCRIPTS IN PREPARATION (2007):

Sebens, K. P. and R. Aiello. Population dynamics of the temperate zone octocoral *Alcyonium siderium*: site-specific effects of predation, competition and water flow. Ms in prep for Ecol. Monogr.

Sebens, K. P., B. Agius, A. Gordon, et al. Long-term stability of algal-urchin dominated communities on horizontal surfaces in Massachusetts Bay (1978 -1998). Manuscript in prep. for Ecol. Monogr.

Lipschultz, F., K. P. Sebens and B. Kinetics of Nutrient Uptake in Corals: bridging the gap between biology and engineering. Manuscript in prep. for Limnol. Oceanogr.

Sebens, K. P., G. Goodbody, A. Gordon, and M. Chen. Population dynamics of the sea urchin *Strongylocentrotus droebachiensis* in the shallow subtidal zone, Massachusetts Bay (1978 -1998).

Sebens, K. P., B. Agius, A. Gordon, and R. Sleboda. Long-term community dynamics on vertical rock surfaces in the subtidal zone, Massachusetts Bay (1978 -1998). Manuscript

PUBLICATIONS IN THE POPULAR LITERATURE

Sebens, 1979. Underwater photographs. In: D. McLachlan and J. Ayres, Fieldbook of Pacific Northwest Sea Creatures. Naturegaph Publishers, Calif. 208 pp.

Sebens, K.P. 1981.Underwater Photographs. In: N. A. Meinkoth. The Audubon Society Field Guide to North American Seashore Creatures. Chanticleer Press, New York, 800 pp.

Sebens, K. P. 1986. The anemone below: colorful contenders battle for territory amidst tidal rock and reef. Natural History 95: 48 - 55. (included color photographs by K. Sebens)

Sebens, K.P. 1990. Illustrations and equipment description.pp 26,45,46. In: J. Coyer and J. Witman, The Underwater Catalog: A Guide to Methods in Underwater Research. Shoals Marine Laboratory/N.Y. Sea Grant Program. 72 pp.

Sebens, K.P. 1997. Zooplankton capture by reef corals: corals are not plants! Reef Encounter, Newsletter of the Int. Society for Reef Studies. 21:10 - 15.

Sebens, K.P. 1997. A shoal of American shad (photograph). In: Mann et al. 1997. A clupeid fish can detect ultrasound. Nature 389:341

ABSTRACTS

Koehl, M. A. R. and K. P. Sebens. 1982. Small scale spatial and temporal differences in the zooplankton available to and captured by benthic suspension feeders. Am. Soc. Limnol. Oceanogr. Proceedings (June, 1982).

Koehl, M. A. R. and K. P. Sebens. 1986. Can the food microhabitats of benthic suspension feeders be dfifferent from each other? Western Soc. of Naturalists, Abstract. p.

Witman, J. D. and K. P. Sebens. 1987. Colonization of hard substrata in deep subtidal habitats of the Gulf of Maine. Amer. Zool. 27 - 165.

Witman, J.D. and K.P. Sebens. 1988. Patch dynamics in deep rocky subtidal communities. Amer. Zool. 28 (4): 69.

Witman, J. D. and K. P. Sebens. 1989. Fish predation pressure at subtidal rock ledges in the Gulf of Maine: onshore-offshore differences. Benthic Ecology Meetings, Abstracts. p.

Sebens, K.P. 1988. Population dynamics of a temperate zone octocoral: long term studies. Amer. Zool. 28 (4):

Sebens, K.P. 1989. Water movement and prey capture by corals. Amer. Zool. 29(5):144A.

Durante, K.M. and K.P. Sebens. 1990. Fecundity of subtidal ascidians: a comparison of solitary and colonial life history strategies. Can. Soc. Zoologists., Burnaby, B.C., Canada. Abst.

Sebens, K.P. 1991. Effects of water flow on coral growth and prey capture. Amer. Zool. 31(5): 59A.

Sebens, K.P. 1991. Near-bottom water flow patterns at Discovery Bay, Jamaica, and effects on coral ecology. Reefs Beyond the Golden Gate. Int. Soc. Reef Studies Annual Mtg., Berkeley, CA

Sebens, K.P. 1992. Suspension feeding by corals and their relatives; morphology and ecology. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg. Santa Fe, N.M., Abst. p. 144.

Sebens, K.P. 1993. Historical modification of the Gulf of Maine, a semi-enclosed coastal sea. Envir. Management of Enclosed Coastal Seas. Baltimore, MD. Abstract

Sebens, K.P. 1994. Larval dispersal and community structure in rocky subtidal habitats. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA. Abstract.

Done, T., Sebens, K.P. and W. Wiebe. 1994. Biodiversity of coral reefs. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA. Abstract..

Sebens, K.P. 1996. Spatial pattern in coral communities: effects of water flow on multiple scales. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA. Abstract.

Heidelberg, K.B., K.P. Sebens and J.E. Purcell. 1995. Flow effects on zooplankton escape behaviors from a scleractinian coral. Proc. Symp Zooplankton Behav. Phys.

Done, T., Sebens, K.P. and W. Wiebe. 1994. Biodiversity of coral reefs. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA.

Sebens, K.P. 1996. Effects of water flow on zooplankton capture and energetics of reef corals. p. 84 in: The Ecosystem of the Gulf of Aqaba in relation to the enhanced economical development and the peace process III. Interuniversity Inst. for Marine Science in Eilat.

Shyka, T.A., K. P. Sebens and B. Helmuth. 1996. The effect of flow and nutrients on the growth rate of a common coral *Agaricia tenuifolia* and reef community structure at two Belize cays. Proc. 8th Int. Coral Reef Symposium, Panama City, 1996.

Sebens, K.P. 1996. Spatial pattern in coral communities: effects of water flow on multiple scales. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA.

Mills, M.M., F. Lipschultz and K. P. Sebens 1998. Corals feeding on sediments? Particle ingestion efficiences and possible contributions to coral nutrition. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA.

Heidelberg, K., J.E. Purcell and K. P. Sebens 1998. A model of coral heterotrophy based on prey behavior, coral morphology and water flow. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., San Diego, CA.

Heidelberg, K., K. P. Sebens and J.E. Purcell 1999. Zooplankton escape from coral predators. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., Santa Fe, NM. Abstracts.p. 82

Helmuth, B.S.T. and K. P. Sebens. 1999. When does morphology matter? Biomechanical approaches to sutdying the physiological ecology of corals. NCEAS Workshop: Modelling Growth and Form in Sessile Marine Organisms.

Sebens, K.P. 1999. Marine bioinvasions in the rocky subtidal zone (MA 1977 - 1998). Marine Bioinvasions: Proc. First National Conference, M.I.T., Cambridge, MA p. 122.

Helmuth, B. and K.P. Sebens. 1999. When does morphology matter? Biomechanical approaches to studying the phyiology of corals. In: Modelling Growth and Form of Sessile Marine Organisms Working Group. Nat. Center for Ecological Analysis and Synthesis. UCSB, Santa Barbara, CA

Mills, M.M., F. Lipschultz and K. P. Sebens. 2000. Uptake of suspended and deposited material

associated nitrogen by scleractinian corals. 9th Int. Coral Reef Symposium, Bali. Abstracts. A10.23

Sebens, K.P., J. Witting and C. Ferrier-Pagès. 2001. Zooplankton capture by corals: effects on tissue and skeletal growth. Am. Soc. of Limnology and Oceanography. Abstracts. CS11 - 3.

Heidelberg, K.B. and K.P. Sebens. 2001. Temporal patterns, abundance, and composition of near reef zooplankton on a Jamaican coral forereef. . Am. Soc. of Limnology and Oceanography. Abstracts. CS37 - 20.

Agius, B. and K. P. Sebens. 2001. Community ecology of rocky shores: long-term research in the subtidal zone (1978 - 2001) . Am. Soc. of Limnology and Oceanography. Abstracts. SS40 - 18.

Sebens, K.P., J. Witting and C. Ferrier-Pages. 2001. Zooplankton capture by reef corals enhances tissue and skeletal growth. 30th Annual Marine Benthic Ecology Meetings, Durham N. Hampshire. Abstracts. p. 151

Agius, B.P. and K. P. Sebens 2001. Multidecadal community ecology: research in the rocky subtidal zone of Massachusetts (1978 - 2000). 30th Annual Marine Benthic Ecology Meetings, Durham, N. Hampshire. Abstracts. p.28

Badgley, B.D., F. Lipschultz, and K. P. Sebens. 2001. Nitrate uptake by a Bermudian scleractinian Coral, *Diploria strigosa*, under realistic environmental conditions. 30th Annual Marine Benthic Ecology Meetings, Durham, N. Hampshire. Abstracts. p.33

Geraldi, N.R. and K. P. Sebens. 2001. Rocky subtidal community ecology: comparison of photographic and video sampling of benthic surfaces. 30th Annual Marine Benthic Ecology Meetings, Durham, N. Hampshire. Abstracts. p.211

Sebens, K.P.2001. Long term population dynamics of nudibranch mollusks in New England. World Congress of Malacology. Vienna, Austria, Abstracts.

Sebens, K.P. 2002. Size gradients in intertidal and subtidal marine invertebrates: the role of energetic and mechanical limits. SICB, Anaheim, CA, Abstracts.

Sebens, K.P. 2002. Water flow , growth and energetics of corals in Belize Benthic Ecology Meeting Orlando, FL, Abstracts.

Sebens, K.P. 2003. . Location, allocation, translocation: determinants of growth rate in corals. SICB, Toronto, Canada SICB, Abstracts.

Sebens, K.P. 2003. Benthic Environmental factors limiting tissue and skeletal growth in reef corals. Benthic Ecology Meetings, Groton, CT, Abstracts.

Goodbody and Sebens 2003. Sea urchin demography, Benthic Ecology Meetings, Groton, CT, Abstracts.

Sebens, K. P. 2004. ASLO. Honolulu, HI. Environmental controls on tissue and skeletal growth in reef corals. (in press).

Sebens, K.P. and F. Lipschultz 2004. Int. Coral Reef Symposium, Okinawa.

Lipschultz, F. and K. P. Sebens. 2004 Int. Coral Reef Symposium, Okinawa. Kinetics of nutrient uptake in corals: bridging the gap between biology and engineering.

Carrington, E., B. Helmuth and K. P. Sebens. 2004. Int. Coral Reef Symposium, Okinawa energetics and temperature stress in corals.

Sebens. K. P. 2005, 2006. WSN

Sebens, K.P. 2005, 2006. ASLO

BOOK REVIEWS

Sebens, K. P. 1984. Review of; Sublittoral Ecology: the Ecology of the Shallow Sublittoral Benthos. R. Earll and D. G. Erwin, eds. 277 pp. Oxford University Press (1983) American Scientist, Vol. (Nov - Dec.): pp. 629.

Sebens, K. P. 1986. Review of; Diving and Marine Biology: The Ecology of the Sublittoral. G. Warner. 210 pp. Cambridge Univ. Press (1986) American Scientist. Vol.

Sebens, K. P. 1989. Review of: The Community Ecology of Sea Otters. G. Van Blaricom and J. A. Estes, eds. Springer Verlag 1987. 247 pp. Science 243: 954 - 955.

TECHNICAL REPORTS

Sebens, K. P. and R. Shimek. 1974. Analysis of potential impact on the marine environment (baseline study). Town of Friday Harbor, Washington. 36 pp.

Sebens, K. P. and J. D. Witman. 1988. Rocky subtidal benthic surveys at a proposed sewage outfall location in Mass. Bay. Report to Battelle Ocean Sciences Inc., and Mass.Water Res. Auth. 30 pp.

Sebens, K.P. and J. D. Witman. 1990. Effects of sewage effluent and sludge outfall on the rocky subtidal benthos of Broad Sound, Mass. Report to Massachusetts Water Res. Authority. 54 pp.
Witman, J. D. and K. P. Sebens. 1993. Rocky subtidal communities in Massachusetts Bay: Lovell's Island to Nahant Transect. Report to the Massachusetts water Resources Authority. 84 pp

Ph.D. DISSERTATION

Sebens, K. P. 1977. Habitat suitability, reproductive ecology, and the plasticity of body size in two sea anemone populations (*Anthopleura elegantissima* and *A. xanthogrammica*). University of Washington, Department of Zoology. 257 pp. Advisor: Robert T. Paine

GRADUATE STUDENTS:

Harvard University:
Philip S. Lobel, 1977 - 1979 (Ph.D.) coral reef fish ecology
Kent Redford, 1977 - 1983 (Ph.D.) ecology of myrmecophagous mammals
Richard R. Olson, 1978 - 1984 (Ph.D.) larval ecology of ascidians
Richard Aronson, 1979 - 1985 (Ph.D.) ecology and behavior of octopus, ophiuroids
Colleen Cavanaugh, 1979 - 1985 (Ph.D.) biology of bacteria-invertebrate associations (with J. McCarthy, co-advisor)
Mark Patterson, 1979 - 1985 (Ph.D.) biomechanics of benthic marine organisms. (with T. McMahon, co-advisor)

Northeastern University:
C. Shannon Briscoe, 1986 - 1988 (M. S.). predatory effects of sea urchins.
Kathleen Durante 1985 - 1988 (M. S.). reproductive ecology of ascidians.
Brian Helmuth 1989 - 1991 (M. S.) particle capture by corals
Julia S. Miles 1985 - 1992 (Ph.D.). coelenterate agonistic behavior and energetics
Krista Graham 1989 - 1992 (M. S.). spatial patterns of larval dispersal
Douglas Updike 1988 - 1992 (M. S.) larval ecology of octocorals
Laura Savina 1989 - 1992 (M. S.) coral symbiosis physiology
Maria Abate (1992 - 1998) coral reef fish ecology (Ph.D., F. Davis, co-advisor)
Katherine Paull (1992 - 2000) crustose algal ecology (Ph.D., C. Ellis, co-advisor)
Jan Witting (1992 - 2000).suspension feeding by anthozoans (Ph.D., J. Ayers, co-advisor)

University of Maryland:
(ZOOL – Zoology, BIOL – Biology, MEES – Marine Estuarine Env. Sciences Program)
Karla Heidelberg (1992 - 1999) feeding biology of anthozoans (J. Purcell, co-advisor) (Ph.D.). UMCES Graduate Fellowship recipient (1996 - 1997), MEES
Matthew Mills (1993 - 2000). suspension feeding by corals (Ph.D.) BIOL
Kelton Clark (1993 - 2001). predator prey interactions in estuaries (A. Hines, co-advisor)(Ph.D.) MEES
Brenda Richardson Mallon (1996-1999) Coral bioerosion (Ph.D. Program) BIOL
Thomas Shyka (1993 - 2000) nutrient ecology of coral reefs (M. S.) MEES
Andrea Mandella (1994 - 1996) molecular biology of corals (M. S.) ZOOL
Kimberley Benson (1997 - 1998). water flow effects on benthos (M. S. program) UMCP Graduate Fellowship recipient, 1997 - 1998, MEES (trans. to CONS)
Brian Badgley (1997 - 2001). nutrient effects on reef corals (M. S.) UMCP Graduate Fellowship recipient, 1997 - 1999. MEES
Thomas Eldridge (1999 - 2001) sea urchin population biology (M. S. program) MEES (transferred to Northeastern Univ.)
Elizabeth Jewett (1998 - 2005) biology of invasive species (Ph.D.) BIOL (NSF Training Grant, fellowship)
Ruth Kelty (1998-2000) (Ph.D) Phosphorus uptake by reef corals MEES
Tanja Slota (1999 - 2002) Zooplankton dynamics on coral reefs (M.S.) MEES
Mark Lupisella (2000 - 2006). Models of Mars contamination (Ph.D.) BIOL
James Sikes (2003 - 2004) Coral reef ecology (M.S.) BEES (transferred)
Safra Altman (2003 - 2004) Ecology of Invasive Species (Ph.D.) BEES (transferred)

University of Washington:
Kevin Turner (2006 – present). Ecology of the rocky subtidal zone (Ph.D.)
Robin Elahi (2006 - present). Recruitment proesses in the subtidal zone (Ph.D.)

POSTDOCTORAL RESEARCHERS :

Mark R. Patterson (1984 - 1985), Ph.D., Harvard University (MSC Postdoc, Northeastern))
Amy Johnson (1986 - 1988), Ph.D., University of California, Berkeley (MSC Postdoc)
Peter Edmunds (1989-1990), Ph.D. University. (MSC Postdoc)
Joaquim Garrabou (1998 - 2000), Ph.D., Universitat de Barcelona, Spain (UM Postdoc)
Karla Heidelberg (1999 - 2001), Ph.D., University of Maryland, College Park (UM Postdoc)
Hannah Steward (2007 - 2008), Ph.D., Uhiversity of California, Berkeley (FHL Postdoc)
Sarah Gilman (2005 - 2007), Ph.D. Stanford University (FHL Postdoc)
Svetlana Maslakova (2006 - 2007) Ph.D. George Washington University (FHL Postdoc)

COURSES TAUGHT

Harvard University (1977 - 1984):
Nature and Regulation of Marine Ecosystems, Spring 1977, 1980, Fall 1981, with J. McCarthy and R. Turner (Biology 255, G).
Invertebrate Zoology, Fall 1977, 1978, 1979, 1980, 1981, 1984, with H. Levi, 1982, 1983 with K. Boss (Biology 10a, U).
Population and Community Ecology, Spring 1978, 1979, 1980 (Biology 154, G) also 1982, 1984 with W. Bossert.
Benthic Marine Ecology, Spring 1979, 1981, 1983 (Biology 254, G).
Tropical Ecology, Fall 1978,1980, 1982,1984 with T. Givnish, O. Solbrig, P. Ashton (Biology 250, G), Harvard University and University of the Andes, Merida, Venezuela.
Selected Topics in Population and Community Ecology, Spring 1980, with R. Cook and T. Givnish (Biology 251, G).
Topics in Community Ecology, Fall, 1977 - 1985, each semester (Biology 343, G). Supervised research, 1978 - 1985 (Biology 90r, U). Supervised readings, undergraduate, 1977 - 1984 (Biology 91r,U).
Population Biology: Ecology (Biology 19, U). Spring 1982, 1983, 1984.
Introductory Ecology, Spring 1979, 1980, 1981, 1982, with B. L. Thorne, 1982, 1984, 1985, 1986, 1987, 1988 (Harvard Extension E19c, U)
Introductory Biology (for non-majors, U), Fall 1973, with S. Waltz, Dept. of Zoology, Univ. of Washington).
Advanced Population Biology, Fall 1981, with O. Solbrig, E. Pianka, J. Silva, S. Newell. University of Puerto Rico, Rio Piedras, P.R. (U, G).
Rocky Shore Ecology, 1982, with J. R. Lewis. Friday Harbor Laboratories, U. Washington (U,G).
Marine Biology, Summer 1983, 1984, with R. R. Olson and R. Woollacott. 1985, 1986, 1987, 1988, 1989,1990 with R. Etter., J.Choe Harvard (U)

Northeastern University 1983 - 1991:
Adaptations of Marine Organisms, Summer 1983, with D. Cheney and M. Patterson. Northeastern University, M. S. C. (U, G)
Benthic Marine Ecology, Summer 1985, 1986, 1987, with J. Witman. Northeastern ,(U, G)
Diving Research Methods, 1986, 1987, 1988, 1989 with R. Etter, G. Boden and J. Witman. Northeastern University, M. S. C. (U)
East/West Marine Biology Program, (Northeastern Univ., Univ. of Oregon joint program), Director 1985 - present. Lectures in courses: Coral Biology, Coastal Biology, Adaptations of Marine Organisms
Biology of Corals and Coral Reefs, 1987, 1988, 1989, 1992 with J. Witman, J. Veron, Northeastern Univ. M.S.C. (U, G) at Discovery Bay Marine Lab, Jamaica
Population Biology of Marine Organisms, winter 1987, with J. Witman, Northeastern Univ. (G)
Biomechanics, winter 1990, with M. Patterson, Discovery Bay Marine Lab Jamaica, (U-UG)
Ocean & Coastal Processes, spring 1990, 1991, with P. Rosen, Northeastern U., M.S.C. (U-UG)

University of Maryland (1992 - 2004) (G, graduate level, U, undergraduate):
Marine Ecology Seminar (MEES 608A). Fall 1992,1993, 1995, 2001 (G)
Benthic Ecology (MEES 698K) Fall 1993. (G), with K. Tenore, R. Newell (1/4 of 3 cr course)
Special Topics: Hydrodynamics and Benthic Ecology (MEES 698). Summer 1993. (G)
Biological Oceanography (ZOOL 375) (U) (3 cr.) Spring 1994 with J. White, Spring 1996 with D. Mann, Spring 1993,1995,1998, 2002 with M Palmer, Spring 2000 with J. Merrill
Marine Community Ecology (ZOOL 677, MEES 698A). (4 cr.)Spring 1995, 1997, 2000, 2003 (G)
Honors research.(ZOOL. 399H), each semester 1993-present (U), (ZOOL328Z). Fall 1994 (U)
Special Problems in Zoology.(ZOOL.319). Fall 1994 - present (U)
Special Problems (MEES 699). Spring, Fall 1994, Spring 1996 (G)
Honors Research (ZOOL 318h) (2 cr.) Fall/Spring 1995 (U)
Special Problems in Zoology (ZOOL 319) (2cr), Spring 1995 - Spr. 1997 (U)
Seminar: Larval Ecology (MEES 608A) (2cr.) (with D. Breitburg), Fall 1995 (G)
BEES Seminar (ZOOL 608E) (1 - 2 cr.) (with C. Fenster), Fall 1996, Spring 1997 (G)
Honors Seminar (ZOOL 308H) (1 cr.), Fall 1997, Spring 1998 (U)
Oceanography Laboratory (ZOOL 338R). (2 cr.) Spring 1998 - 2002 (U)
Marine Biology Research (Univ. Rhode Island, BBSR) (6 cr.) 2000 (U)

University of Washington (2005 - present) (G, graduate level, U, undergraduate):
Ecology Seminar (with J. Ruesink) 2006, 2007 (1 cr.) (G)
Marine Benthic Ecology Research Apprenticeship (with M. Dethier) (6 cr.) 2007 U)

NATIONAL/INTERNATIONAL MEETINGS ORGANIZED:

Population Biologists of New England, Harvard University (November 1977) with R. Cook, T. Givnish, B. L. Thorne
Benthic Ecology Meetings, Harvard University (March 1982) with R. Turner
Boston Harbor, Mass. Bay Conferences, with Mass. Bay Cons. (October 1985, 1986, 1987)
Centennial Meeting, Amer. Soc. Zoologists (December 1989, Co-host, Planning Committee Presentation)
8th International Coral Reef Symposium, Symposium organizer (for June 1996 meeting, Panama) with A. Genin. Special session on water flow effects on reefs.
American Society of Limnology and Oceanography. February 1999. Santa Fe, N.M., Organizer, with A. Genin., symposium on zooplanktivory in lakes and oceans.

PAPERS PRESENTED AT SCIENTIFIC MEETINGS (1996 - present):

American Society for Limnology and Oceanography. San Diego, CA. Feb. 1996
Scale Effects in Coral Reef Communities
8th International Coral Reef Symposium, Panama City, Panama, June 1996
Adaptive Responses to Water Flow: Morphology , Energetics and Distribution of Reef Corals (also co-author on three other papers for this meeting)
American Association of Underwater Scientists. Invited Keynote. Long-term research in the rocky subtidal zone (Mass. 1977 - 1997). November 1997
American Society for Limnology and Oceanography. San Diego, CA. Feb. 1998
Three presentations, with M. Mills, K. Heidelberg, T. Shyka presenters.
Heidelberg, K., K. P. Sebens and J.E. Purcell 1999. Zooplankton escape behavior from coral predators. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., Santa Fe, NM. Abstracts.p. 82
Sebens, K.P. 1999. Marine bioinvasions in the rocky subtidal zone (MA 1977 - 1998). First National Conference on Marine Bioinvasions, M.I.T., Cambridge, MA Proc. (in press).
Sebens, K. P. 1998. A model of coral zooplankton capture. Int. Society for Reef Studies, European Meeting, Perpignan, France. September 1998.
Sebens, K.P. 1999. Long term community studies in the subtidal zone. R.T. Paine Symposium. Do species matter? Washington
Heidelberg, K. and K. P. Sebens. 2001. Zooplankton distribution on coral reefs; implications for coral prey capture. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., Santa Fe, NM.
Sebens, K.P., J. Witting and C. Ferrier-Pages. 2001. Zooplankton capture by reef corals: effects on tissue and skeletal growth. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., Santa Fe, NM.
Sebens, K.P., J. Witting and C. Ferrier-Pages. 2001. Zooplankton capture by reef corals enhances tissue and skeletal growth. 30th Annual Marine Benthic Ecology Meetings, Durham N.H.

Agius, B.P. and K. P. Sebens 2001. Long-term studies of the Massachusetts rocky subtidal zone, 1978 - 2000. Amer. Soc. Limnol. Ocean. Aquatic Sciences Mtg., Santa Fe, NM.
Agius, B.P. and K. P. Sebens 2001. Multidecadal community ecology: research in the rocky subtidal zone of Massachusetts (1978 - 2000). 30th Annual Marine Benthic Ecology Meetings, Durham, N. H.
Badgley, B.D., F. Lipschultz, and K. P. Sebens. 2001. Nitrate uptake by a Bermudian scleractinian Coral, *Diploria strigosa*, under realistic environmental conditions. 30th Annual Marine Benthic Ecology Meetings, Durham, N. H.
Geraldi, N.R. and K. P. Sebens. 2001. Rocky subtidal community ecology: comparison of photographic and video sampling of benthic surfaces. 30th Annual Marine Benthic Ecology Meetings, Durham, N.H.
Sebens, K.P.2001. Long term population dynamics of nudibranch mollusks in New England. World Congress of Malacology. Vienna, Austria
Sebens, K.P. 2002. Size gradients in intertidal and subtidal marine invertebrates: the role of energetic and mechanical limits. SICB, Anaheim, CA
Sebens, K.P. 2002. Water flow , growth and energetics of corals in Belize. Benthic Ecology Meetings, Orlando, FL
Sebens, K.P.2003. Location, allocation, translocation: determinants of growth rate in corals. SICB, Toronto, Canada
Sebens, K.P. 2003. Environmental factors limiting tissue and skeletal growth in reef corals. Benthic Ecology Meetings, Groton, CT,
Goodbody,G. and K. P. Sebens 2003. Sea urchin demography, Benthic Ecology Mtg., Groton, CT
Sebens, K. P. 2004. ASLO, Honolulu HI. Environmental controls on tissue and skeletal growth in reef corals.
Sebens, K.P. and F. Lipschultz 2004. Int. Coral Reef Symposium, Okinawa. Water flow and its effects on coral nutrition across a broad range of reef habitats in Bermuda
Lipschultz, F. and K. P. Sebens. 2004 Int. Coral Reef Symposium, Okinawa. Kinetics of nutrient uptake in corals: bridging the gap between biology and engineering.
Carrington, E., B. Helmuth and K. P. Sebens. 2004. Int. Coral Reef Symposium, Okinawa. Coral energetics and temperature stress.
Sebens. K. P. 2005, 2006 WSN
Sebens, K.P. 2005, 2006 ASLO

INVITED SEMINARS (1999 - present)

Marine Bioinvasions Conference, M.I.T., Cambridge, MA 1999
Centre Scientifique de Monaco, Musee Oceanographique, Principaute de Monaco,1999
Centre d'Oceanographie de Marseille, Station Marine d'Endoume, Marseille,France, 1999
University of S. Carolina, Columbia SC 2000
University of Rhode Island, Kingston, RI 2001
Roger Williams University, R. I. 2001
University of Rhode Island Graduate School of Oceanography, Narragansett, RI 2001
University of Massachusetts, Dartmouth, 2002
Salve Regina University, Newport RI, 2002
University of Massachusetts, Boston, 2003, 2004
Northeastern University, Marine Science Ctr, Nahant, MA 2003
University of Washington, Seattle 2004. UW Friday Harbor Labs 2004
University of Washington, School of Aquatic and Fisheries Science 2006
University of California, Los Angeles, Biology 2006

SERVICE: UNIVERSITY (1999 - present) (BEES – Behavior,Ecology,Evolution,Systematics Graduate Program, ZOOL – Zoology, BIOL – Biology, MEES – Marine Estuarine Environmental Sciences Graduate Program)

Department Committees (Zoology/Biology):
Promotion and/or Review Committee for 12 Zool/Biol faculty UMCP (1992 - 2004)
Theoretical Ecologist Search Committee UMCP (2000 - 2001)
Facilities and Equipment Committee UMCP (2001 - 2002)
Graduate Admissions Committee UMCP (2002 - 2003)
Faculty Review Committee, UW (Biol) (2007-present)

University (UMCP/UMS) Committees:
BEES Committee Member (1993 - 2004)
MEES Ecology Area of Specialization Committee (1993 - 2004)
MEES Oceanography Area of Specialization Committee (1993 - 2004)
Diving Control Board, member, UMCP. (1998 - 2004)
Marine Biology/Beh.Ecol.Evol. SAC (curriculum committee) Chairperson (1999 - 2001)
MEES Program Advisory Committee, UMS (2001 - 2002), Chairperson
Appointment, Promotion, and Tenure Committee, UMCP (2001-2003) Chairperson
Dean, College of Science and Mathematics (various committee participation) UMass Boston (2003-2005)
Director, Friday Harbor Labs, UW, (meets with: faculty committee, advisory committee, Development Advisory Bd). (2005-present)

Graduate Student Dissertation/Thesis Advisory Committees (since 1999):
(ZOOL – Zoology, BIOL – Biology, MEES – Marine Estuarine Env. Sciences Program (UM))

Gary Smith (1993 - 2000) Ph.D., MEES
Elka Thomsen - Porter (1992 - 1999) Ph.D., MEES
Michael Dowgiallo (1993 - 2002) Ph.D., MEES
Mitchell Tart (1995 - 2001), Ph.D., ZOOL
Wm. Walton (1994 - 2002), Ph.D. MEES
Marcia Shofner (1993 - 2001), M. S. ZOOL
Jocelyn Kasow (1995 - 2000), Ph.D. MEES
Karen Nelson Baker (1995 - 2001), Ph.D. ZOOL
Ruth Kelty (1997 - 2000), Ph.D. MEES
Brad Cardinale (1997 - 2001) Ph.D. ZOOL
Sean Grace (1996 - 2004), Ph.D. Univ. of Rhode Island
Pamela Huggins (1997 - 2001), Ph.D. SUNY, Stony Brook, NY
Kenneth Anthony (1999), Ph.D. Univ. of Queensland, AU, external examiner
Allegra Small (1999 - 2001), M. S. Geology Department, UMCP
Aura M. Fajardo (2002-2004), Ph.D. Univ. of Rhode Island
Brad Agius (2002-2003), M.S., Northeastern University
Elizabeth Wheat (2006-present), Univ. of Washington
Katherine Fagan (2006-present), Univ.of Washington

HONORS UNDERGRADUATE ADVISEES (since 1999) (UMCP, theses):

Melissa Smith (1995 - 1999), Zoology
Marykate Golden (1998 - 2000), Biology
Nathan Geraldi (1999 2000), Biology
Keri O'Neill (2000 - 2002), Biology