

# CURRICULUM VITA

## 14 OCTOBER 2015

### LINDA E. DUGUAY

Research Associate Professor of Biology

#### I. PERSONAL DATA

Citizenship: USA  
Office Address: University of Southern California  
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Director, USC Sea Grant Program  
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#### II. EDUCATION

- 1979 Ph.D., University of Miami, Rosenstiel School of Marine and Atmospheric Sciences, Miami, FL. Biological Oceanography, "Calcium metabolism and photosynthetic carbon fixation in benthic Foraminifera symbiotic with microalgae."
- 1973 M.S., University of Miami, Rosenstiel School of Marine and Atmospheric Sciences, Miami, FL. Biological Oceanography, "Ecology of the ctenophore *Mnemiopsis mccradyi* Mayer, in Biscayne Bay, Florida."
- 1968 A.B., University of Rhode Island, Kingston, RI. Biology.

#### III. PROFESSIONAL BACKGROUND

- 2010 –present Research Program Manager, NSF Science and Technology Center - Center for Dark Energy Biosphere Investigations: C-DEBI.
- 2000-present Research Associate Professor, Department of Biological Sciences, University of Southern California, Los Angeles, CA

1999-present	Director of Research (2009 to present), Deputy Director of the Wrigley Institute for Environmental Studies (1999-2009), University of Southern California, Los Angeles, CA
1999-present	Director of the Sea Grant Institutional Program, University of Southern California, Los Angeles, CA
2001- 2008	Executive Director for the Tyler Prize, USC, Los Angeles, CA
2000 – 2002	Director of the Environmental Studies Program, University of Southern California, Los Angeles, CA
1998 - 1999	Program Manager for Arctic Natural Sciences (oversee all Biology, Physical, Chemical and Biological Ocean Science, and Atmospheric Sciences Proposals), Arctic Science Section, Office of Polar Programs, National Science Foundation, Arlington, VA
1996 - 1998	Program Manager for Science Planning, Advanced Projects, and International Coordination, Antarctic Science Section, Office of Polar Programs, National Science Foundation, Arlington, VA
1994 - 1995	Special Programs Manager, Office of Polar Programs, on detail from the Biological Oceanography Program, Geosciences Directorate, National Science Foundation, Arlington, VA
1991 - 1996	Associate Program Director, Permanent, Biological Oceanography Program, Geosciences Directorate, National Science Foundation, Arlington, VA
1990 - 1991	Associate Program Director, Visiting Scientist, Biological Oceanography Program, Geosciences Directorate, National Science Foundation, Washington, DC
1989 - 1999	Research Assistant Professor, The University of Maryland, Chesapeake Biological Laboratory, Solomons, MD
1987 - 1989	Senior Research Associate, The University of Maryland, Chesapeake Biological Laboratory, Solomons, MD
1987 - 1988	Visiting lecturer, St. Mary's College of Maryland, St. Mary's City, MD.
1982 - 1987	Research Assistant Professor, Marine Sciences Research Center, State University of New York, Stony Brook, NY.

1982 - 1983	Assistant Professor, Natural Sciences, Southampton College, Southampton, NY. (Sabbatical replacement position)
1980 - 1982	Consultant to Taxonomic Associates, Gainesville, FL.
1980 - 1982	Adjunct Assistant Professor, Marine Sciences Research Center, State University of New York, Stony Brook, NY.
1978 - 1979	Koczy Fellow in Marine Sciences. RSMAS, University of Miami. Miami, FL.
1975 - 1978	Graduate Research and Teaching Assistant, RSMAS, University of Miami. Miami, FL.
1973 - 1974	Research Assistant, Brown University, Providence, RI.
1969 - 1973	Research Assistant (1972-1973) and Maytag Fellow (1969-1972) RSMAS, University of Miami. Miami, FL.
1968 - 1969	Research Biologist, Colgate Palmolive Research and Development Center, Piscataway, NJ.
1967 - 1968	Undergraduate Research Assistant, University of Rhode Island, Kingston, RI.
1967 - 1968	Undergraduate Teaching Assistant, Introductory Zoology, University of Rhode Island. Kingston, RI.
1967	Summer Student Trainee, Biology Division of Oak Ridge National Laboratory, Oak Ridge, TN.

#### **IV. RESEARCH**

##### **A. Areas of Professional Expertise**

Biological Oceanography. Biological Sciences. General Oceanography. Physiological ecology of marine invertebrates. Zooplankton ecology and physiology- particularly of gelatinous forms. Nutrient cycling within aquatic systems. Algal-invertebrate symbioses (particularly with Foraminifera). Effects of dredging and dredge spoils on benthic populations. Beach health and water quality issues in California.

##### **B. Publications**

## **Papers in Refereed Journals**

### **In Revision:**

**Duguay, L** and S. Cook. 2016. The role of Professional Societies in Student and Early Career Professional Development: Resources and Innovative Programs for Graduate Students in Ocean Sciences. TOS - Oceanography. Special Issue. March 2016.

### **Published:**

deCharon, Annette, **L Duguay**, J. McDonnell, C. Peach, C. Companion, C. Herren, P. Harcourt, T. Repa, C. Ferraro, P. Kwon, S. Lichtenwalner, E. Simms, and L. Whitley. 2013. Concept Mapping Workshops: Helping Graduate Students Better Communicate Their Science. TOS – Oceanography. 26 (1): 98–105

Smith, Lesley K., M. Barber, **L. Duguay**, L. Whitley. 2012. Using the Ocean Literacy Principles to Connect Inland Audiences to the Global Oceans, Current (The Journal of Marine Education). Vol. 28 (2): 2-7.

Noda, G., L. Chilton, M. Friedman, **L. Duguay**, 2011. Outreach to Future Undergrads: Mentoring that Makes a Difference. Limnology and Oceanography Bulletin. 20: (3): 74-76

McDonnell, J., Banta, G., Chen, B., Cook, S., **Duguay, L.**, Mesner, N., Sharp, G., Smith, L., Stairs, W., Sponberg, S. 2009. Education and Public Outreach in the Aquatic Sciences: A View from the Field. Limnology and Oceanography Bulletin. 18(3): 62-63

Knap, A., Dewailly E., Furgal, E., Galvin, J., Baden, D., Bowen, R. E. , Depledge, M., **Duguay, L.**, Fleming, L. E. , Ford, T., Moser, F., Owen, R., Suk. W., Unluata, U., 2002. Indicators of Ocean Health and Human Health: Developing a Research and Monitoring Framework. Environmental Health Perspectives (EHS). 110 (9):839-845.

Zehr, J. P., M. Wyman, V. Miller, **L. Duguay** and D. G. Capone. 1993. Modification of the Fe protein of nitrogenases in natural populations of *Trichodesmium thiebautii*. Appl. Environ. Micro: 669-676.

Capone, D.G., S. Dunham, S.G. Horrigan, and **L.E. Duguay**. 1992. Microbial nitrogen transformations in unconsolidated coral reef sediments. Mar. Ecol. Prog. Ser. 80:75-88.

Monteleone, D.M. and **L.E. Duguay**. 1988. Laboratory studies of predation by the ctenophore *Mnemiopsis leidyi* on eggs and yolk-sac larvae of bay anchovy *Anchoa mitchilli*. J. Plank. Res. 10:359-372.

**Duguay, L.E.** 1983. Comparative laboratory and field studies on Ca<sup>++</sup> deposition and carbon fixation in benthic foraminifera associated with algal endosymbionts. J. Foraminiferal Research. 13:252-261.

**Duguay, L.** and D.L. Taylor. 1978. Primary production and calcification by the soritid Foraminiferan, *Archais angulatus* (Fichtel and Moll). J. Protozool. 25:356-361.

Reeve, M.R. and L. (**Duguay**) Baker. 1975. Production of two planktonic carnivores (Chaetognath and Ctenophore) in South Florida inshore waters. Fishery Bull. 73:238-248.

Baker, L. (**Duguay**) and M.R. Reeve. 1974. Laboratory culture of the lobate ctenophore *Mnemiopsis mccradyi* with notes on feeding and fecundity. Mar. Biol. 26:52-62.

## 2. Books or Chapters

**Duguay, L.E.**, D.M. Monteleone and C.E. Quaglietta. 1989. Abundance and distribution of zooplankton and ichthyoplankton in Great South Bay, New York, during the Brown Tide outbreaks of 1985 and 1986. In: Lecture Notes on Coastal and Estuarine Studies: Novel Phytoplankton Bloom-Causes and Impacts of Recurrent Brown Tides, Ed. by E.M. Cosper.

Taylor, D.L. and **L.E. Duguay**. 1980. Ca<sup>++</sup> deposition, re-mobilization and re-deposition in foraminifera and corals associated with algal endosymbionts. In, Endocytobiology, Endosymbiosis and Cell Biology, W. Schwemmler, H. E. A. Schenck, Vol. 1. Walter de Gruyter & Co., New York.

Taylor, D.L. and **L.E. Duguay**. 1980. Significance of Symbionts in Foraminifera. McGraw Hill 1980 Yearbook of Science and Technology, McGraw Hill, Inc. N. Y. pp. 196-197.

## 3. Published Abstracts

Kennison, R. L., Kwon, P., Harcourt, P., Whitley, L., Noda, G., Chilton, L., Duguay, L., Fong, P., Tuddenham, P., Bishop, T., **2012**. COSEE-WEST OCEAN OBSERVING INSTITUTE: USING ONLINE DATA IN THE CLASSROOM. Ocean Sciences Meeting, Salt Lake City, UT, Poster presentation 2/20/2012, Session #:036, Poster ID: B0670

Smith, L. K., Lynds, S., Buhr, S. M., Duguay, L., Harcourt, P., Kwon, P., **2012**. COSEE WEST – COLORADO COLLABORATIVE: USING SCIENTISTS' RESEARCH INTEREST TO DRIVE TEACHER PROFESSIONAL DEVELOPMENT WORKSHOPS Ocean Sciences Meeting, Salt Lake City, UT, Oral presentation 2/20/2012, Session #:073.

Duguay L. E. and P. Kwon. 2010. Ocean Sciences Meeting. Portland, Oregon. 23-26 February. Session ED24A-02, *COSEE-West Ocean Observing System (OOS) Workshops (Invited)*.

Noda Gwen, and Duguay, Linda. 2010. *Building Bridges Between Ocean Scientists, Educators and Students*. Symposia, Bridging Science and Society. AAAS Annual Meeting. 18-22 February 2010. San Diego, California. P 48.

Duguay, L. E., Franks, S., Hamner, P., Hamner, W., Kwon, P., Lemus, J., Michaels, T., Moll, R., Peach, C., Sullivan, D., Whitley, L. 2006. *Centers for Ocean Science Excellence in Education (COSEE) a National and Regional Model for Engaging Ocean Scientists and Educators in Collaborative Activities*, California and the Worlds Oceans (CWO)'06 in Long Beach, California, September 2006.

Michaels, A.F., Capone, D. G., Duguay, L. E., Caron, D. A., Berelson, W. *Training for Leadership in Marine Science*. AGU, ASLO, TOS. Meeting in Honolulu, Hawaii. February 2006.

Duguay, L.E., C. Shoemaker, S. Smith, D. Jacobson, and E. Russek-Cohen. 1996. *A long Term Study of the Benthic Assemblages of the Hart Miller Island Dredge Containment Facility in Mid-Chesapeake Bay*, ASLO/AGU Ocean Science Meeting. San Diego, CA. February 1996.

Duguay, L.E. and D.M. Monteleone. 1994. *Population Dynamics and Abundance of Ctenophores in a shallow coastal temperate estuary*. ICES Symposium on Zooplankton Production. Plymouth Marine Laboratory, Plymouth, England. August 1994.

Duguay, L.E., D.M. Monteleone and C.E. Quaglietta. 1988. *Impact of the "brown tide" on zooplankton and ichthyoplankton abundance and distribution in Great South Bay in 1985 and 1986*. Abstr. Cont. on Novel Phytoplankton Blooms: Causes and Impacts of Recurrent brown Tides and Other Unusual Blooms. October, 1988. Stony Brook, N.Y.

Monteleone, D. M. and L.E. Duguay. 1988. Laboratory predation studies by the ctenophore, *Mnemiopsis leidyi* on the Bay anchovy, *Anchoa mitchilli* Abstr. Atlantic Estuarine Research Society (AERS) Conference, October, 1988. Solomons, Maryland.

Monteleone, D. M. and Linda E. Duguay. 1987. Laboratory studies of predation by the ctenophore *Mnemiopsis leidyi* on eggs and yolk-sac larvae of the bay anchovy *Anchoa mitchilli*. Abstr. 11th Annual Larval Fish Conference of the American Fisheries Society. June, Houghton, Mich.

Duguay, L.E., D.M. Monteleone, and C.E. Quaglietta. 1986. Population dynamics and predatory impact of ctenophores in Great South Bay, NY. Abstr. For Joint Meeting of Amer. Soc. of Limnology and Oceanography and the Phycol. Society of America, Kingston R. I.

Capone, D.G., S.G. Dunham, S.G. Horrigan, J.M. O'Neil, and L.E. Duguay. 1986. Microbial Nitrogen Cycling in Coral Reef Sediments. EOS 67(44): 997. AGU/ASLOWinter 86 meeting in San Francisco, Calif.

Duguay L.E. and G.R. Lopez. 1984. Disruption of pelletized sediments by shallow water benthic Foraminifera. Abstr. 47th Annual Meeting of Limnology and Oceanography, Vancouver, British Columbia.

Duguay, L. 1979. Comparative Laboratory and field studies of two foraminiferal-algal associations. Abstr. 42nd Annual Meeting of American Society of Limnology and Oceanography, Stony Brook, N.Y.

Aftring, R.P., D.G. Capone, L.E. Duguay, J. Fell, I.M. Master, and B.F. Taylor. 1978. Assessment of microbial fouling in an OTEC study near St. Croix. Abstr. 5th Ocean Thermal Energy Conversion (OTEC) Conference. Miami, Florida.

Duguay, L.E. and D.L. Taylor. 1978. Primary production and Calcification by the Soritid Foraminiferan *Archais angulatus* (Fichtel and Moll) 41st Annual Meeting of American Society of Limnology and Oceanography. Victoria, British Columbia.

Baker, L. (Duguay) and M.R. Reeve. 1972. The laboratory culture reproduction, and predatory effects of the plankton carnivore, *Mnemiopsis mccradyi* (Ctenophora) in an inshore sub-tropical environment. Abstr. Special Meeting American Society of Limnology and Oceanography, University of Minnesota, Minneapolis, Minnesota.

Solis, C.M., L.E. Duguay, R.C. Kestenbaum and W.J. King. 1969. Deposit formation from rat calculus diets in vitro. Abstr. 7th Annual Meeting of the International Association for Dental Research and the North American Division of IADR, Houston, Texas.

#### **4. Technical Reports**

Duguay, Linda E., and many other authors, 2011 COSEE Decadal Report to the National Science Foundation. May 2011. A compilation of the Accomplishments of the COSEE Centers and COSEE Network: 2002 – 2011, prepared for the COSEE

Decadal Review Committee meeting July 2011. Available at <http://www.nsf.gov/geo/oce/programs/cosee/decadal-review/index.jsp>.

Duguay, L.E., 1989 - 1999. Seventh through Sixteenth Annual Data Report of Benthic Studies. On, The Continuing State Assessment of the Environmental Impacts of the Operation of the Hart and Miller Islands Containment Facility. Final Report submitted to: Department of Natural Resources, Tidewater Administration, Annapolis, Maryland for the Maryland Port Administration, Baltimore, Maryland.

Duguay, L.E., 1989 – 1999. Seventh through Sixteenth Annual Interpretive Report of Benthic Studies. On, The Continuing State Assessment of the Environmental Impacts of the Operation of the Hart and Miller Islands Containment Facility. Final Report submitted to: Department of Natural Resources, Tidewater Administration, Annapolis, Maryland for the Maryland Port Administration, Baltimore, Maryland.

Duguay, L.E., G. Muller-Parker, S. Cibik, J. Love, J. Sanders, and D.G. Capone. 1989. Effects of Nutrient Enrichment and Isolation on Nitrogen and Phosphorous Uptake by Planktonic Microorganisms in Patuxent River Microcosms. A final report submitted to Maryland Department of the Environment.

Marvin, M., J.M. O'Neil, L.E. Duguay and D.G. Capone 1989. The effects of Aeration on Living Resources, Algal Biomass and Ecosystem Metabolism in St. Leonard Creek. Maryland Department of the Environment.

Duguay, L.E., K.R. Tenore and H.T. Pfitzenmeyer. 1988. Sixth Annual Data Report of Benthic Studies. On, The Continuing State Assessment of the Environmental Impacts of the Operation of the Hart and Miller Islands Containment Facility. Final Report submitted to: Department of Natural Resources, Tidewater Administration, and Annapolis, Maryland for the Maryland Port Administration, Baltimore, Maryland.

Duguay, L.E., K.R. Tenore and H.T. Pfitzenmeyer. 1988. Sixth Annual Interpretive Report of Benthic Studies. On, The Continuing State Assessment of the Environmental Impacts of the Operation of the Hart and Miller Islands Containment Facility. Final Report submitted to: Department of Natural Resources, Tidewater Administration, and Annapolis, Maryland for the Maryland Port Administration, Baltimore, Maryland.

Capone, D.G., G. Muller-Parker, L.E. Duguay, and J. Love. 1988. Effects of Nutrient Enrichment and Insolation on Nitrogen and Phosphorous Uptake by Planktonic Microorganisms in Patuxent River Microcosms. A report submitted to Maryland Department of the Environment.

Aftring, A.P., D.G. Capone, L.E. Duguay, J. Fell, I.M. Master, B.F. Taylor. 1978. Biofouling and site characterization studies. Final Report for the U. S. Dept. of Energy. U.C.-64, PNL 2739.

#### **IV. Contracts and Grants –**

##### **1. Pending to Duguay as PI –**

NOAA – Knauss Fellowship applications Class of 2016– Fellowship for: Yareli Sanchez, pending interviews in November. @\$52,500. / Fellow. Feb.1, 2016 to Jan 30, 2017.

##### **2. Contracts and Grants – Awarded to Duguay as PI (Bold are active 2014-2015)**

**NOAA – Knauss Fellowship applications Class of 2015– Fellowships for: Bridget Seegers, Luke Feinberg and Katherine Westfall, pending interviews in November. @\$52,500. / Fellow. Feb.1, 2015 to Jan 30, 2016.**

**NOAA – National Sea Grant Office (NSGO). Core Funding for USC Sea Grant Program - The Urban Ocean. FY; 2014 --2018 @ \$1,200,000/year as of 2014. 33% increase in core funding starting in 2014. 45% effort for Duguay Grant Program.**

**California Natural Resources Agency, (RASGAP), USC Sea Grant, State Funding for USC Sea Grant Program – The Urban Ocean , FY 2014 – FY 2016. \$43,000. /year. All funds for sponsored research.**

**NOAA Grant Extension and Technology Transfer Competition.**

**Support for: Olin, P. and M. Drawbridge’s project. Technology Transfer of Self Cleaning Rearing Tanks to the United State to Improve Microbial Control and Larval Survivorship”. \$295,487. for 2 years. @ October 2014 to October 2016**

**NOAA – Knauss Fellowship applications Class of 2014– Fellowships for: Lisa Fong, Justine Kimball, Laura Windecker and Kiya Gornik. @\$52,500. / Fellow. Feb.1, 2014 to Jan 30, 2015.**

NOAA Knauss Policy Fellowships for 2013 awarded to Emily Smail, Annie Ji Yih Yau, Kelsey Jacobsen, Katherine Nixon and Brittany King. Feb 1, 2013 to Jan 30, 2014. \$52,500/ Fellow.

NOAA Knauss Policy Fellowships for 2012 awarded to Micah Efron and Michela Clemence. Feb. 1, 2012 to Jan 30, 2014. \$49,000/Fellow.

NOAA - Sea Grant Climate Adaptation 2011: City of Los Angeles. CA Sea-: Level Rise Planning for an Urban Mertopolis. January 2012 to July 2013. \$119,385.

Boeing Corporation.Support for Teacher Workshops. PI. 2 awards of \$25,000 a year for 2 years. Jan 2011 to Dec 2011 and Jan 2012 to Dec 2012.

**California Coastal Conservancy. Ocean Protection Council & California Sea Grant Partnership for: Ocean & Coastal Research. June 13, 2011 to June 30, 2015. \$280,000. In support of research projects and administrative costs.**

California Math Science Partnership (CAMSP) with Inner City Education Foundation (ICEF). Los Angeles Charter School Science Partnership. PI. January 2010 to July 2013. \$115,000 for 3 years.

National Science Foundation (NSF), Ocean Sciences Division, “Collaborative Research: Linking Researcher and Graduate Students through COSEE Tools and Services, PI. 65,500 for 2 years. No Cost status, starting 15 September 2009 to August 2013.

NOAA, National Sea Grant Office (NSGO). USC Sea Grant Program, Core Funding for USC Sea Grant Program - The Urban Ocean. FY; 2008 -2013 @ \$940,000/year and 45% effort.

California Natural Resources Agency, (RASGAP), USC Sea Grant, State Funding for USC Sea Grant Program – The Urban Ocean , FY 2008 – FY 2013. \$43,000/year. All funds for sponsored research.

National Science Foundation (NSF), Ocean Sciences Division, Center of Ocean Sciences Excellence in Education, COSEE-West Collaborative. Current PI with A.F. Michaels, Judy Dino Lemus, Co-PI's with Bill Hamner and Peggy Fong of UCLA, Peter Tuddenham and Tina O’Kane Bishop, College of Exploration. \$500,000.00/year for 5 years, starting @ 1 September 2007 – Current No Cost through August 2013. .

National Science Foundation (NSF), Ocean Sciences Division, Research Experiences for Undergraduates (REU) Site: Geobiology – Marine Science at the Interface between the Life and Earth Sciences. PI with Co-PI A.F. Michaels. \$65,000/year for 3 years beginning 1 March 2006.

National Science Foundation (NSF), Ocean Sciences Division, Research Experiences for Undergraduates (REU) Site: Geobiology – Marine Science at the Interface between the Life and Earth Sciences, Co-PI with A. F. Michaels, \$50,560/year for 3 years beginning 1 Februray 2003.

National Science Foundation (NSF), Ocean Sciences Division, Center of Ocean Sciences Excellence in Education, Co-PI with A.F. Michaels and Bill and Peggy Hamner of UCLA, \$500,000.00/year for 5 years, starting @ 1 September 2002.

CALFED Bay Delta Program, through Association of Bay Area Governments (ABAG), PI for Strategic Directed Study Element Proposals and Ports and Harbor Specialist funding. @ \$300,000.00/year beginning Sep 2002 - May 2005.

NOAA. National Ocean Service (NOS). PI, Funding for a Ports and Harbor Specialist, Dr. James Fawcett, at University of Southern California. \$400,000 for 4 years, with 100,000/year. September 1, 2002 to August 31, 2006.

California Ocean Protection Council, Ocean Protection Council and California Sea Grant Partnership for the Ocean to USC Sea Grant Program, FY 2006 – FY 2011. @ \$200,000. / Year in support of selected research projects.

NOAA, National Sea Grant Office (NSGO). USC Sea Grant Program, Core Funding for USC Sea Grant Program - The Urban Ocean. FY 2000-2013, PI. ~ \$818,000/year, in 2006, and \$918,000 2007-2008, 25% effort;

California Natural Resources Agency, (RASGAP), USC Sea Grant, State Funding for USC Sea Grant Program – The Urban Ocean , FY 2000 – FY 2012. \$43,000. /year. All funds for sponsored research.

Maryland Department of Natural Resources, Water Resources Administration and Maryland Department of the Environment. The continuing state assessment of the environmental impacts of construction and operation of the Hart and Miller Islands containment facility. Benthic Studies, Dec. 1987 - Apr. 1999, Sixth through Sixteenth years. (\$50,000 to \$95,000/year over the 10 year period). (Principal Investigator).

USGS: Water Resources Research Program. Inorganic nitrogen and phosphorous dynamics in the water column of the Patuxent River. Sept. 1988 - Sept. 1990. \$174,995. (Co- Principal Investigator)

Maryland Department of Natural Resources. Assessment of the environmental impacts of dredging fossil oyster shell on the associated benthic community in the Upper Chesapeake Bay. Jan.1988-April 1989. \$53,493. (Principal Investigator)

Maryland Department of the Environment. The effects of aeration on living resources, algal biomass and ecosystem metabolism in St. Leonard Creek. May, 1988 - May, 1989. \$129,765. (Co-Principal Investigator)

N.Y. State Sea Grant. NOAA. Production and survival of the planktonic larval stage of the hard clam, *Mercenaria mercenaria*, in Great South Bay, with emphasis on

predation by the ctenophore, *Mnemiopsis leidyi*. Oct. 1984-Dec. 1987. \$58,000. (Principal Investigator)

NSF Grant from Biological Oceanography with G. R. Lopez. Ingestion and absorption of natural sedimentary foods by deposit-feeders. May 1985 - May 1987. \$138,000. (Co-Principal Investigator)

NSF Grant from Biological Oceanography with G. R. Lopez. The effects of sediment-microbe associations on deposit-feeding strategies. Jan. 1983 - Nov. 1984. \$135,000. (Co-Principal Investigator)

Grant in Aid from Sigma Xi: "Nutrition and Growth of two Species of Shallow Water Benthic Foraminifera of the Genus *Elphidium* from Long Island Sound. March 1982.

## **VI. Teaching and Training**

### **1. Courses Taught**

Senior Graduate Seminar in Environmental Sciences, ENST 590. University of Southern California, Los Angeles, CA, Spring 2001.

General Ecology, St. Mary's College of Maryland, St. Mary's City, MD, Fall 1987.

Marine Biochemistry, Graduate level, co-instructor with Dr. D.G. Capone, SUNY at Stony Brook, 1986.

Summer Workshop in Coastal Oceanography, SUNY Stony Brook, NY. Continuing education course (CED) for science teachers, contributor on Biological aspects, summer 1984 & 1985, complete course summer 1986.

Marine Microbiology, undergraduate and graduate level, Contributing lecturer on microalgae, SUNY at Stony Brook, 1984-1985.

Plant Biology (Fall and Spring), Phycology (Fall), Marine Plankton (Spring), undergraduate level, Southampton College, sabbatical replacement for Dr. L. B. Liddle, 1982-1983.

Plankton Ecology, graduate level seminar, co-instructor with Dr. P. Lapennas, SUNY at Stony Brook, 1981.

General Biological Oceanography, graduate teaching assistant, University of Miami, 1978.

Marine Aquaria Set-up and Introductory Marine Science for elementary students, Saturday morning enrichment classes, Miami Museum of Science, 1970-1971.

Parasitology Laboratory, undergraduate teaching assistant, University of Rhode Island, 1967-1968

Introductory Zoology Laboratory, undergraduate teaching assistant, University of Rhode Island, 1966-1967.

## **2. Graduate Students Supervised as Major Advisor - Degrees Conferred**

Mike Brittsan, M.S. in Marine, Estuarine and Environmental Studies (MEES). 1989 University of Maryland, College Park, MD. "Growth of *Laminaria longicruris* de-la Pylaie under various simulated environmental conditions in the Smithsonian Sub-Arctic Microcosm Exhibit.

Doreen Monteleone, Ph.D. in Marine Science, 1988, SUNY, Stony Brook, NY. "Abundance and distribution of larval fish in Great South Bay, NY." (Robert Cowan final after I had moved to Maryland)

Clare Quaglietta, M.S. in Marine Science, 1987, SUNY, Stony Brook, NY. "Predation by *Mnemiopsis leidyi* on hard clam larvae and other natural zooplankton in Great South Bay, NY."

## **VII. Symposia Organized/Chaired for Professional Meetings**

Chaired with Co-chairs, Michelle Wood and Douglas Capone a special research session, on "Urban Coastal Systems in a Changing Climate Chair, ASLO Meeting Granada, Spain, February 22-27, 2015.

Co-Chaired with Bob Chen (Chair) and Adrienne Sponberg, an education oriented session on "Aquatic Science Education and Outreach: Expanding International Science Literacy", ASLO Meeting Granada Spain, February 22-27, 2015.

Co-Chair with Gretchen Hofmann, Anne de Vernal, Debora Iglesias-Rodriguez, and Douglas Capone. Special Session, 047 Natural and anthropogenic changes in Coastal Ecosystems and their impact on human welfare, Ocean Sciences Meeting, Honolulu Hawaii, February 23-28, 2014.

Co-Chair with Laura Murray, Special Session, Research and the Classroom: Connections between Scientists and Educators, CERF Meeting, San Diego, CA, November 3-7, 2014.

Co- Chair with Liesl Hotaling, Special Session, S26 Improved Broader Impacts – Enhanced Scientific Impacts, ASLO Meeting, San Juan, Puerto Rico. February 2011

Co-Chair with Doug Capone, Special Session, Urban Aquatic Systems in a Changing Climate, ASLO Meeting, San Juan, Puerto Rico. February 13 – 18, 2011.

Chair. Special Session. *Urban Coasts*. Ocean Sciences Meeting. Portland, Oregon. Feb. 23-26, 2010

Co-Chair with Russell Moll, Fredrika Moser, and Rachel Waters. Special Session on *Research to Applications*. 2010. Ocean Sciences Meeting. Portland, Oregon. Feb. 23-26, 2010

Co-Chair with S. Cook and Blanche Meeson, Special Session, Collaborative Partnerships in Ocean Education, at 2008 Ocean Sciences Meeting sponsored by ASLO, AGU, TOS and ERF, Orlando, Florida, March 2008.

Chair, Special Session, *Education and Outreach Programs promoting Ocean Education Opportunities for all Californians*, at California and the Worlds Oceans (CWO)'06 in Long Beach, California, September 2006.

Co-Chair with S. Cook and C. S. Weiler, Special Session, *The Right Stuff: Graduate and Postgraduate Training for Interdisciplinary Research Careers*, ASLO, AGU, TOS, Ocean Sciences Meeting, 2006, Honolulu Hawaii.

Co-Chair with Russell Moll, Special Session, *The Urban Coast: A Growing Worldwide Trend*, ASLO meeting in Santiago de la Compostela, Spain, June 2005.

Chair, Special Session, Public Education and Outreach, California and the World Ocean (CWO)'02, Santa Barbara, October 2002.

Co-Chair with P. Hamner, Special Session, on Broader impacts at Annual ASLO/ AGU Ocean Science meeting, Honolulu 2004 and winter ASLO meeting, Salt Lake City 2005.

Co-Chair for American Geophysical Union (AGU) American Society of Limnology and Oceanography (ASLO), Ocean Sciences Meeting, San Diego, CA Feb 1998, San Antonio, TX, Jan 2000 and in Honolulu, Hawaii, Feb 2002.

Organizing Committee Member for 1989 Benthic Ecology Meeting in Solomons, Maryland. March, 1989.

## **VIII. Active Memberships in Professional Societies**

American Geophysical Union – (Biological Oceanography Secretary of the Ocean Sciences Section. 1999 – 2002, 2002 Meetings committee, Chair of the OS nominations committee 2002, 2005, 2006)

Association for the Sciences of Limnology and Oceanography – **Elected as President Elect, 2014 2016, President, 2015- 2018, Past President, 2018-2020.** Meetings committee (1999- 2005) and Education committee member 2005, 2006.

Estuarine Research Federation

National Marine Educators Association

National Sea Grant Association

## **IX. Awards**

Cabrillo Marine Aquarium Susan Lawrenz-Miller Award for Education to COSEE-West. May 2009.

NSF, Director's Award for Collaborative Integration for work on the Biocomplexity Steering Group. 2000.

NSF General Workforce System Outstanding Performance Award. 1995, 1996, 1998, 1999.

NSF Antarctic Service Certificate and US Navy Antarctic Service Medal and Certificate for Service to the United States Antarctic Program 1995.

C.V. Starr Fellowship with D.G. Capone for the Bermuda Biological Laboratory, Summer 1987. \$1500.

Koczy Fellowship in Marine Sciences. RSMAS, University of Miami, 1976 and 1977.

R. G. Bader Student Research Fund Award. RSMAS, University of Miami, 1976 and 1977.

Maytag Fellowship. RSMAS, University of Miami, 1969 - 1972.

Rhode Island State Scholarship. 1964 - 1967.

## **X. National Science Foundation (NSF) - Special Committees as NSF manager**

1998 - 1999 Biocomplexity Working Group I  
 1997 - 1998 Knowledge and Distributed Intelligence (KDI) Working Group I  
 1996 - 1999 LEXEN Working Group I – III  
 1995 - 1996 NSF Management Steering Committee  
 1995 - 1998 NSF representative to EPA interagency committee for the Toxics Substances Act (TSCA)  
 1994-1996 Outreach Program for the Office of Legislative and Public Affairs: Review papers for Virginia Junior Science Academy and 1995 - 1996 Participate in NSF call a scientist program for National Science and Technology (NST) week  
 1994 Women's History Month Planning Committee  
 1994 Take our Daughters to work Committee for Geosciences

## XI. Research/Education visits at Field Laboratories/ Scientific Cruises

National Sun Yat-sen University invited guest lecture, **“The USC Sea Grant Program - the Urban Ocean - Integrating Research, Advisory Services/Outreach and Education**. I also visited with the President of National Taiwan Ocean University (colleagues in the USC Sea Grant Marine Transportation Program). October 26 to November 3, 2015.

King Abdul University of Saudi Arabia (KAUST) invited lecture **“The USC Sea Grant Program and (COSEE-West) Centers for Ocean Science Education Excellence: models for integrating current science research into education and outreach programs”**. KAUST on 20 March 2014. Hosted visit 17 to 24 March 2014.

Korean Sea Grant workshop at the Ocean EXPO in Yeosu, Korea, June 17-23, 2012. I was one of 4 representatives from US Sea Grant program supported by NOAA to attend the workshop and I presented an invited talk **“Ocean Education: The COSEE model”**.

US COSEE- China workshop, invited member of the NSF 15 member team, to present and invited talk on, **“Overview of the COSEE Program”** (March 8-13, 2010)

University of Queensland, Brisbane, Australia visitor with Department of Botany and tour of Lizard Island and One Tree Island research facilities, Fall 2000.

NSF Office of Polar Programs (OPP), Science Representative to South Pole Station, Antarctica, Jan. 1998.

NSF OPP Science Representative to McMurdo Station, Antarctica, Oct. 1995.

NSF OPP Representative to Palmer Station, Antarctica, Jan-Feb 1995 and cruise on RV Polar Duke to reach the station and observe Palmer LTER activities.

RV Iselin. Two cruises to the Caribbean to study nitrogen fixation in *Trichodesmium*. Fall 1989 and Spring 1991.

Bermuda Biological Station, Ferry Reach Bermuda, August 1987.

Australian Institute of Marine Sciences, Townsville, Queensland, Australia, Nov. 1985.

University of Puerto Rico, Marine Sciences Center, LaPaguera, Puerto Rico, Nov. 1983.

Hydrolab Mission 80-3. April 1980, Faile Marine Center, St.Croix, U.S. Virgin Islands.

YFN 1126 (Navy barge on contract to Tracor Marine). Sept. 1977, St. Croix, U.S. Virgin Islands.

Discovery Bay Marine Lab. July-August 1976, Discovery Bay, Jamaica.

R/V Calanus. Four cruises to the Bahamas. 1976, 1977, 1978, 1983.

Mount Desert Island Biological Laboratory. Summer 1974, Salisbury Cove, Maine.

Lerner Marine Laboratory, April 1974, Bimini, Bahamas.