

# SARAH P. BERNHARDT

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## EDUCATION

- **Doctor of Philosophy, Urban and Regional Science, Texas A&M University, December 2010**
- **Master of Science, Zoology, Texas A&M University, December 2000**
- **Bachelor of Philosophy, Interdisciplinary Studies, Miami University, May 1997**  
Concentration in tropical marine ecology; Geology minor, University Honors, Cum Laude
- **Additional coursework.** Wright State University, 1994-2000.

## PROFESSIONAL INTERESTS

Environmental planning, marine protected areas planning, and coastal planning. Additional research interests include dispute resolution in planning, public participation in planning, public participation in NEPA process, sustainable development of coastal communities, and the management of coastal and marine protected areas using the tools of planning, education, scientific research and public participation. Bridging policy and planning with environmental sciences and natural resource management.

## TEACHING & PROFESSIONAL EXPERIENCE

### Texas A&M University, Department of Landscape Architecture & Urban Planning

- 2006-2010 **Dissertation Research**  
Creation of a coastal and marine protected areas specific management plan evaluation protocol based on evaluation of the urban planning and marine protected areas literature. Consultation with Florida state and federal protected areas agencies on the development of the protocol, including interviews with Florida Keys National Marine sanctuary and Florida CAMA staff and headquarters directors.  
Quantitative evaluation of 40 management plans including FKNMS, three National Estuarine Research Reserves and over 30 Aquatic Preserves.  
Utilization of US Census data, NOAA land cover data and other data sources to create a GIS database for statistical analysis of hypotheses.
- 2008 **Research Assistant** - Hazard Reduction and Recovery Center  
Worked with Dr. W. Peacock to budget, organize and facilitate the NSF funded 2008 workshop for leading scholars and experts on the social dimensions of natural hazards to lay the conceptual foundation for a future Natural Hazard Vulnerability and Resiliency Observatory Network.
- 2004 - 2008 **Guest Lecturer and Facilitator**— For Dr. S. Brody's courses in Dispute Resolution in Planning, Coastal and Marine Protected Areas, and Environmental Planning Administration.
- 2006 - 2007 **Research Assistant**- Department of Landscape Architecture and Urban Planning  
Worked with Dr. S. Brody on the administration of a NSF funded flood response survey of coastal jurisdictions' flood planners and administrators in Florida and Texas.
- 2004 - 2006 **Research Fellow**- Sustainable Coastal Margins Program  
Provided research support for the Environmental Planning and Sustainability Research Unit (EPSRU), supervisor Dr. S. Brody.  
Developed content for EPSRU website.  
Worked on Texas flood planning research project developing survey, evaluating the best subject pool and preparing the survey for Institutional Review Board approval.  
Provided support services for two hurricane survey research projects, including mail outs and calling survey volunteers.

### Flower Garden Banks National Marine Sanctuary, NOAA

- 2001 - 2004 **Education & Outreach Media Specialist**  
Support all aspects of sanctuary education and outreach needs including budgeting and coordinating annual Gulf of Mexico Foundation sponsored K-12 educator workshops,

developing aquarium exhibits in concert with Audubon Aquarium of the Americas, design, layout and editing of quarterly newsletter, represent sanctuary at conferences, conventions and meetings of education and dive groups. Co-coordinated 2001 Texas Student Ocean Conference. Supervision of volunteers, interns and delegation of responsibilities. Shipboard educator for 2003 NOAA Oceanic Exploration research cruise to northwestern Gulf of Mexico deep reefs. Provided NOAA Scientific Diver support on research cruises.

- 2001 **Research Support Services**  
Ecological monitoring of east Stetson Bank. Analysis of digitized photographs collected at permanent stations between 1993 and 2000. Identified corals, sponges and algae to lowest possible taxonomic level using visible morphological characteristics.
- 1998 - 2000 **Research Associate (as part of Master of Science Degree)**  
Modified and enhanced existing coral reef monitoring techniques for use in a predominantly sponge and fire coral community, Stetson Bank. Identified corals, sponges and algae to lowest possible taxonomic level using visible morphological characteristics, and confirmed visual identifications with *in situ* collection of specimens. Co-coordinated 1998 and 1999 monitoring cruises, participated as part of scientific team for 2000 cruises.

#### Texas A&M University, Department of Biology

- 2000 **Instructor**- Embryology laboratory, Zoology 344  
Co-authored lab exercises, prepared and presented lectures  
Co-authored and obtained grant to equip lab with computers and digital cameras compatible with compound and dissecting microscopes for both lab exercises and histological preparations.
- 1999 **Instructor**- Ecology laboratory, Biology 322  
Presented lectures and led field trips to local areas of ecological interest.  
Demonstrated a variety of ecological sampling techniques.
- 1998 - 1999 **Instructor**- Freshman Biology Lab I, Biology 124  
Presented lectures and facilitated laboratory exercises focusing on ecology, anatomy, taxonomy.

#### Miami University

- 1995-1997 **Project Dragonfly, Internship in journal development**  
Collaborated and actively sought new material for publication within innovative interdisciplinary children's inquiry-based science magazine incorporating children into ongoing scientific research.
- 1994-1997 **Julia Rothermel Science Center, Peer Science Tutor**  
School of Interdisciplinary Studies. Aided fellow undergraduates with science assignments.

#### PUBLICATIONS & REPORTS

- *Bernhardt, S.P.* 2010. Evaluating Florida's coastal protected areas: A model for coastal management plan evaluation. Ph.D. Dissertation. Department of Landscape Architecture and Urban Planning, Texas A&M University.
- *Brody, S.D., Kang, J.E., and Bernhardt, S.* 2010. Identifying Factors Influencing Flood mitigation at the Local Level in Texas and Florida: the Role of Organizational Capacity. *Natural Hazards* 52:167–184.
- *Brody, S.D., Zahran, S., Highfield, W.E., Bernhardt, S.P., and Vedlitz, A.* 2009. Policy Learning for Flood Mitigation: A Longitudinal Assessment of the Community Rating System in Florida. *Risk Analysis* 29(6): 912-929.
- *Brody, S.D., Bernhardt, S.P., Zahran, S., and Kang, J.E.* 2009. Evaluating Local Flood Mitigation Strategies in Texas and Florida. *Built Environment*, 35(4): 492-515.
- *Brody, S.D., Zahran, S., Bernhardt, S.P., and Kang, J.E.* 2008. Evaluating Local Flood Mitigation Strategies in Texas and Florida. *Hazard Reduction and Recovery Center, Technical Report 08-03R*. Texas A&M University, College Station, Texas.
- *Brody, S.D., Davis, S.E., Highfield, W.E., and Bernhardt, S.P.* 2008. A Spatial-Temporal Analysis of Section

404 Wetland Permitting in Texas and Florida: Thirteen Years of Impact Along the Coast. *Wetlands* 28(1): 107-116.

- Brody, S.D., Zahran, S., Highfield, W.E., Bernhardt, S., and Vedlitz, A.. Policy Learning for Flood Mitigation: A Longitudinal Assessment of the Community Rating System in Florida. *Hazard Reduction and Recovery Center, Technical Report 07-01R*. Texas A&M University, College Station, Texas.
- Brody, S.D., Grover, H., Bernhardt, S., Tang, Z., Whitaker, B. and Spence, C. 2006. Identifying Potential Conflict Associated with Oil and Gas Exploration in Texas State Coastal Waters: A Multi-Criteria Spatial Analysis. *Environmental Management* 38(4): 597-617.
- *Down Under, Out Yonder: Workshops for Educators*. 2002, 2003 and 2004 Summary Reports. Prepared by S. Bernhardt. (FGBNMS/NOAA)
- Bernhardt, Sarah. *Hammerhead Chronicles (Reef Rendezvous): News from the Flower Garden Banks National Marine Sanctuary*. Editor, copy writer, design and layout. 2001-2003.
- Flower Garden Banks Exhibit at the Audubon Aquarium of the Americas. September 2002. (Internal sanctuary report, FGBNMS/NOAA). Prepared by S. Bernhardt.
- *Down Under, Out Yonder: Workshops for Educators*. 2001 Summary Report. March 2002. Prepared by S. Bernhardt. (FGBNMS/NOAA)
- Islands in the Stream Student Ocean Conference "Here Today, Here Tomorrow: A Geographic Focus on Marine Conservation", November 29-30, 2001, Corpus Christi, Texas. Prepared by S. Bernhardt. (Summary report, FGBNMS/NOAA).
- Bernhardt, S.P. and Griffing, L. R. 2001. An evaluation of image analysis at benthic sites based on color segmentation. *Bulletin of Marine Science*, 69 (2): 639-653.
- Bernhardt, S.P. 2000. Photographic monitoring of benthic biota at Stetson Bank, Gulf of Mexico. Thesis. Department of Biology, Texas A&M University, College Station, Texas.
- Bernhardt, S.P. and Griffing, L. R. 1999. Image analysis of changes in percent cover at Stetson Bank, FGBNMS. *Poster presentation*. NCRI International Coral Reef Monitoring, Assessment and Management Conference. April 1999. Fort Lauderdale, Florida.
- Bernhardt, S.P. 1997. Epiphyte colonization in an artificial Caribbean seagrass bed: A model for conservation biology. Senior Honors Thesis, School of Interdisciplinary Studies, Miami University, Oxford, Ohio.

## SERVICE

### Texas A&M University

- 2004-2006 Aggie Women in Leadership – Mentor to 3 female undergraduate science students
- Fall 2005 Urban and Regional Sciences Student Organization (URSSO) – Treasurer

### Miami University

- 1994-1997 **Pfeffer Western Environmental Education Program (PWEEP)**, President (1995-1997). Coordinated student volunteers and led theme-based hikes and environmental activities for elementary school groups.

## AWARDS & SCHOLARSHIPS

### Texas A&M University

- 2006-2007 Department Head Prize, Department of Landscape Architecture and Urban Planning
- 2006-2007 Aggie Spirit Collegiate LP Scholarship
- 2005-2006 Texas Aggie Grad Scholarship
- 2005-2006 Aggie Spirit Collegiate LP Scholarship
- 2004-2006 Research Fellowship, Sustainable Coastal Margins Program
- 1998-2000 Seaspaces Scholarship, Houston Underwater Club
- 1998 T. Wimprine Memorial Scholarship, Gulf Reef Environmental Action Team (GREAT)
- 1997-1998 Regent's Fellowship
- 1997-1998 Dean's Scholarship, Department of Biology

## Professional Awards

- 2002-2003 Outstanding Marine Education by an Informal Educator, Texas Marine Educator's Association
- 2003 Delighting the Customer Award, RSIS' NOAA, Office of Marine Sanctuaries Team, excellent ratings in customer service, cost control, timeliness and program management

## ADDITIONAL SKILLS & EXPERIENCES

- *Graduate Level Coursework:*  
Planning Theory and History, Environmental Planning Administration, Public Participation in Conservation Policy, Coastal and Marine Protected Areas Planning, GIS in Landscape and Urban Planning, Dispute Resolution in Planning, Research Methods, Theory of Logistical Regression, Logistical Regression Models, Theory of Non-Parametric Methods, Statistics in Research I, Statistics in Research II, International and U.S. Marine Policy, Invertebrate Zoology, Crustacean Zoology, Analysis of Benthic Communities, Coastal Zone Management, Modern Carbonate Deposition, Tropical Marine Ecology, Principles of Microscopy and Video Image Analysis.
- *Computer Skills:*  
Macintosh and Windows O/S, Microsoft Excel, Word, Power Point, and Access, STATA, SPSS, ArcGIS, Adobe Photoshop, Adobe PageMaker, Adobe Illustrator, Adobe InDesign, NIH Image, ImageJ, StatView, Minitab, Adobe Premiere, Macromedia Director.
- *SCUBA Certifications:*  
SSI Rescue, PADI Open Water, Advanced Open Water, Dive Master, Assistant Instructor, Medic First Aid Instructor, Open Water SCUBA Instructor, Nitrox, NOAA Scientific Diver
- *Research skills:*  
Social science survey methodology and implementation, basic GIS mapping and analysis, advanced statistical analysis, scientific diving (SCUBA), invertebrate and crustacean taxonomy/ID, sponge identification and spicule preparation, ecological survey techniques, underwater census techniques: transects, point counts, AGRRA protocol, REEF fish counts, photography & videography, digital image analysis, macro and microscopic techniques and methodologies, benthic cores.
- Reef Environmental Education Foundation (REEF) Fish ID Course Instructor, January 2002.
- SCUBA Instructor. 2001. Aquanauts Diving, West Bay, Grand Cayman, BWI.
- Science Fair Judge. February 2000. College Station Junior High, College Station, Texas.
- Bioblitz 1999, 2000. College Station, Texas. Organized and lead interactive discovery hikes for the community: children's and invertebrate sampling hikes.
- Sierra Club Grassroots Organizing Training Weekend. Summer 1998. Brazos Valley Chapter Sierra Club, TX.
- Dormitory Resident Assistant, Miami University, 1994-1995
- Current CPR certifications.
- *Foreign language:*  
French - basic reading and communication skills, Spanish - beginner
- *International Travel:*  
Bahamas, Cayman Islands, Mexico, Canada, Indonesia, Japan, Australia, Tanzania, Zanzibar, Italy, France, Norway, Netherlands, Costa Rica

## CONFERENCES, SYMPOSIA & MEETINGS ATTENDED

- November 2006 Association of Collegiate Schools of Planning, Fort Worth, Texas
- April 2005 Texas Bays and Estuaries Meeting in Port Aransas, Texas - *Presenter*
- July 2003 How to Develop a Training Program, Austin, Texas, National Seminars Group
- March 2003 How to Design Newsletters, Brochures, Proposals and More, Austin, Texas, National Seminars Group
- January 2003 Time Management and Organization Skills Workshop, Houston, Texas, National Seminars Group
- November 2002 National Marine Sanctuary Program Education Team Annual Meeting, New Orleans, Louisiana
- November 2002 Conference for the Advancement of Science Teaching, El Paso, Texas – *Exhibitor &*

- Presenter*
- March 2002 Science, Technology and YOUth Symposium, Texas A&M University, College Station, Texas - *Presenter*
  - February 2002 A Sustainable Gulf of Mexico: Research, Technology and Observations 1950 to 2050; Texas A&M University Anniversary Celebration Symposium, College Station, Texas
  - February 2002 Hands-on Marine Science, Winter workshop, Texas Marine Educators Association, Port Aransas, Texas
  - February 2002 Informal Science Education Association, Sea World, San Antonio, Texas
  - 2001 - 2004 Numerous presentations to civic, school, dive club, boat show and other organizations as a representative of the Flower Garden Banks National Marine Sanctuary.
  - October 2001 Women's Leadership Conference, Austin, Texas, National Seminars Group
  - November 2001 Conference for the Advancement of Science Teaching, Austin, Texas - *Exhibitor*
  - April 1999 NCRI International Coral Reef Monitoring, Assessment and Management Conference, Fort Lauderdale, Florida – *Presenter*
  - Summer 1998 Sharing Our Gulf, Texas Sea Grant Conference, College Station, Texas
  - March 1998 Texas Coastal Issues Conference, Galveston, Texas
  - Spring 1996 Annual Benthic Ecology Meeting, Columbia, South Carolina

#### PROFESSIONAL AFFILIATIONS

- 2001 – 2004 Texas Marine Educator's Association
- 2001 – 2004 National Marine Educator's Association
- 2001 – 2004 North American Association for Environmental Education
- 2000 – 2008 Professional Association of Dive Instructors
- 1999 – 2004 International Society for Reef Studies
- 1998 – 2000 Ecological Society of America

#### REFERENCES FOR SARAH P. BERNHARDT

- Dr. Samuel D. Brody, Professor, George P. Mitchell '40 Chair in Sustainable Coasts, Director, Center for Texas Beaches and Shores, Department of Marine Sciences at Galveston, Department of Landscape Architecture & Urban Planning at College Station, Texas A&M University, Ocean and Coastal Studies Building, Building 3029 room # 366, 200 Seawolf Parkway, Galveston, Texas 77553, (409) 740-4939, sbrody@tamu.edu
- Dr. Walter Peacock, Director, Hazard Reduction and Recovery Center, Department of Landscape Architecture & Urban Planning, Texas A&M University, College Station, TX 77840, (979) 845-7853, peacock@tamu.edu
- Shelley DuPuy, Education & Outreach Coordinator, Flower Garden Banks National Marine Sanctuary, Flower Garden Banks National Marine Sanctuary, 4700 Avenue U, Building 216, Galveston, TX 77551, (409) 621-5151, shelley.dupuy@noaa.gov
- Dr. Mary K. Wicksten, Department of Biology, MS 3258, Texas A&M University, College Station, TX 77843-3258, (979) 845-3388, wicksten@mail.bio.tamu.edu
- Dr. Lawrence Griffing, Department of Biology, Texas A&M University, College Station, TX 77843, (979) 845-6493, griffing@tamu.edu
- Dr. Hays Cummins, Professor, Western Program, Miami University, Oxford, OH 45056, (513) 529-1338, cumminrh@muohio.edu
- Dr. Chris Myers, Editor in Chief of Dragonfly magazine, Miami University, Oxford, OH 45056, (513) 529-5664, myersca@muohio.edu