

VITAE

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POSITION: Director Marine Laboratory, Sanibel-Captiva
Conservation Foundation
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EDUCATION

<u>University</u>	<u>Major</u>	<u>Dates</u>	<u>Degree</u>
Humboldt State University	Biology	1997	B.S.
University of Oregon	Biology	2003	Ph.D.

AWARDS

2002. University of Oregon Doctoral Research Fellowship, Dept. of Biology Nominee.
2002. American Society for Limnology and Oceanography student poster award, Victoria, B.C.
1998-2001. NOAA Graduate Research Fellow, South Slough National Estuarine Research Reserve
1996. NSF Research Experience for Undergraduates (REU) Fellow

PROFESSIONAL EXPERIENCE

<u>Dates (yrs.)</u>	<u>Position</u>	<u>Employer/Affiliation</u>
2011-present	Director	SCCF Marine Laboratory
2007-2011	Research Scientist	SCCF Marine Laboratory
2006-2007	Interim Director	SCCF Marine Laboratory
2003-2006	Research Scientist	SCCF Marine Laboratory
2008-present	Affiliate Member	Coastal Watershed Institute, FGCU
2005-present	Adjunct Graduate Faculty	Florida Gulf Coast University
2005-present	Courtesy Faculty	Florida Gulf Coast University

GRANT RELATED RESEARCH

<u>Granting Agency</u>	<u>Title</u>	<u>Amount</u>
TAMU	Continued development of a region-wide observing system, PI: Jochens	\$ 40,000
WCIND/Lee County	Real-time weather information for Lee County Boaters	\$ 79,338
Texas A&M Res. Fnd	Assistance for a new 'local data node' and workshop, Co-PI, PI: Rybak	\$ 25,064
USFWS	Landscape Scale Assessment of WQ	\$ 65,693
GOMF/EPA	Enhancement of mangrove shorelines in Clam Bayou, FL	\$ 43,367
NSF	Comprehensive Planning for a Marine Research Laboratory, PI: Coen	\$ 18,825
NaCO /NOAA	Restoration of critical marine habitats (mangrove, SAV, oysters)	\$ 70,500
USFWS	Landscape Scale Assessment of WQ, PI: Coen	\$ 42,172
FL SeaGrant	Reopening a Tidal Pass, Co-PIs: Coen, Bartleson, Rybak	\$ 6,593
City of Sanibel	Bioavailable nutrients and macroalgae, Co-PI, PI: Loh, FGCU	\$152,000
City of Sanibel	Hydroacoustic survey of macroalgae, Co-PI, Coen	\$ 93,000
SFWMD	Optical Properties to Predict Light Levels and Thresholds	\$ 25,000
CHNEP	Identification of microbes critical to the enhancement of seagrass restoration	\$ 18,458
Seagrass Recovery	Methods manual for <i>Vallisneria americana</i> restoration	\$ 15,000

WCIND	Restoration of propeller scars in Charlotte Harbor	\$ 10,000
SFWMD	Impact and Response to Lake Okeechobee Discharges, Co-PI Alberte, FGCU	\$100,000

PUBLICATIONS

- Coen, L.D., **E.C. Milbrandt**, in press. A Brief History of the Sanibel-Captiva Conservation Foundation (SCCF)'s Marine Laboratory, Sanibel, Florida: Not to be Confused with Doc Ford's Sanibel Biological Supply Company. Gulf of Mexico Science.
- Milbrandt, E.C.**, P.G. Coble, R.M. Comny, A.J. Martignette, J. Siwicke, 2010. Evidence for the production of marine fluorescence dissolved organic matter in coastal environments and a possible mechanism for formation and dispersion. *Limnology and Oceanography* 55:2037-2051.
- Harris, R.J., **E.C. Milbrandt**, B. Brovard, E. Everham, 2010. The effects of reduced tidal flushing on mangrove structure and function across a disturbance gradient. *Estuaries and Coasts* 33(5): 1176-1185.
- Milbrandt, E.C.** 2009. The effects of root zone manipulations on turtle grass (*Thalassia testudinum*) transplants. *Florida Scientist* 72: 406-419.
- Milbrandt, E.C.**, J.M. Greenawalt, P.D. Sokoloff, 2008, Short-term indicators of seagrass transplant stress in response to rhizosphere and bacterial community disruption. *Botanica Marina* 51: 103-111.
- Milbrandt, E.C.**, J.T. Evans, 2007, Hydrological restoration and ecological response in an impounded mangrove lagoon. *Ecosystem Restoration and Creation Conference Proceedings*.
- Milbrandt, E.C.**, J.M. Greenawalt, P.D. Sokoloff, S.A. Bortone, 2006, Impact and response of southwest Florida mangroves to the 2004 hurricane season, *Estuaries and Coasts* 29(6A): 979-984.
- Proffitt, C.E., **E.C. Milbrandt**, S.E. Travis, 2006, Reproduction and recruitment of *Rhizophora mangle* (Red Mangroves) in Charlotte Harbor following hurricane Charley, *Estuaries and Coasts* 29(6A): 972-978.
- Milbrandt, E.C.** and M.L. Tinsley, 2006, The role of saltwort (*Batis maritima*) on mangrove forest succession, *Hydrobiologia* 568: 369-377.
- Milbrandt, E.C.**, 2005, Bacteria communities as an indicator of estuarine and sediment conditions, in Bortone, S.A., *Estuarine Indicators*, CRC Press, Boca Raton, 2004.
- Milbrandt, E.C.**, 2003, Microbial Ecology of South Slough: community composition of bacteria and patterns of occurrence, Ph. D. dissertation, University of Oregon.
- Milbrandt, E.C.**, 2003, Genetic Diversity of Bacteria in Restored and Mature Estuarine Wetland Sediments, Report to Sanctuary and Reserves Division, National Oceanic and Atmospheric Association, 18 pp.
- Milbrandt, E.C.**, 2002, Communities of bacteria as a metric for gauging restoration success, *Earth Systems Monitor* 12(2): 5-8.
- Nadeau, T-N., **E.C. Milbrandt**, and R.W. Castenholz, 2001. Phylogeny of Antarctic oscillatorian Cyanobacteria. *Journal of Phycology* 37:650-654.

PRESENTATIONS

- Milbrandt, E.C., L.D. Coen, R. Bartleson, M. Parsons, K. Provost. 2011. A Two Year Assessment of Macroalgal Population Dynamics, Distribution and Habitat Characterization around Southwest FL Barrier Islands, with Special Attention to Past Macroalgal Bloom Events. Charlotte Harbor National Estuary Program Summit, Punta Gorda, FL.
- Milbrandt, E.C., S. Lartz, M. Thompson, L.D. Coen. 2011. Shoreline Enhancement of Clam Bayou in Southwest Florida: Combining Mangrove, Oyster reef and Seagrass Restoration. Charlotte Harbor National Estuary Program Summit, Punta Gorda, FL.
- Coen, L.D., Milbrandt, E.C., M. Thompson, H. Downing, S. Lartz. 2011. Restoration of marine habitats in Clam Bayou, a hydrologically restored estuary. Benthic Ecology Meeting, DISL, Mobile, AL.
- Milbrandt, E.C., L.D. Coen, R. Bartleson, A. Rybak, S. Lartz. 2010. Restoration of critical habitats in SW Florida. Restore America's Estuaries, Galveston, TX.

Milbrandt, E.C., L.D. Coen, R. Grizzle, G. Foster, M. Parsons, B. Klement, A. Rybak. 2009. Determining the habitats and locations for attached and drifting macroalgae in southwest Florida. Coastal and Estuarine Research Federation, Portland, OR.

Coen L.D., Milbrandt, E.C., A. Martignette, J. Siwicke, A. Rybak, R. Bartleson, M. Thompson. 2009. Monitoring and research of coastal habitats with RECON: River, Estuary, and Coastal Observing Network. Coastal Estuarine Research Federation, Portland, OR.

Milbrandt, E.C., A.J. Martignette, A.R. Rybak, SCCF's River, Estuary and Coastal Observing Network (RECON) and related water quality research. Everglades Geological Society, Fort Myers, FL.

Milbrandt, E.C., L. Coen, R. Bartleson, A. Rybak. 2009. SCCF's River, Estuary and Coastal Observing Network (RECON) and synergies with water quality and SAV research. Charlotte Harbor National Estuary Program Science Forum, FL.

Milbrandt, E.C., J. Siwicke, 2008, The use of optical properties to predict SAV growth in the Caloosahatchee Estuary. South Florida Water Management District, West Palm Beach, Florida.

Martignette, A.J., Milbrandt, E.C., J. Siwicke, L. Coen, 2008, Improving Seagrass and Ecosystem Management with High Resolution Water Quality Instrumentation. Everglades Coalition Conference, Captiva, Florida.

Milbrandt, E.C., J. Greenawalt-Boswell, P. Sokoloff, 2007, Seagrass transplant success linked to sediment bacterial communities. Benedict Symposium, Naples, Florida.

Milbrandt, E.C., J. Greenawalt-Boswell, P. Sokoloff, 2007. Seagrass transplant success linked to sediment bacterial community composition. Estuarine Research Federation, Providence, Rhode Island.

Milbrandt, E.C., A.J. Martignette, J. Siwicke, R. Zimmerman, 2007, Improving Seagrass and Ecosystem Management with High Resolution Water Quality Instrumentation. Estuarine Research Federation, Providence, Rhode Island.

Milbrandt, E.C. (invited), 2007, Response of mangrove populations to global climate change in a human altered landscape. International Association of Marine Science Libraries and Information Sites. Sarasota, Florida.

Milbrandt, E.C., K. Cressman, J. Siwicke, R. Alberte, 2007, Land use, cDOM and light attenuation along the river-estuary-ocean interface. Conference on colored dissolved organic matter, Punta Gorda, Florida.

Milbrandt, E.C., K. Cressman, J. Siwicke, R. Alberte, 2007, Seagrass stress responses resulting from Lake Okeechobee releases and watershed inputs to the Caloosahatchee River-Estuary, American Society for Limnology and Oceanography, Santa Fe, New Mexico.

Milbrandt, E.C., J.T. Evans, 2006, Hydrological restoration and ecological response in an impounded mangrove lagoon. Ecosystem Restoration and Creation Conference, Plant City, Florida

Milbrandt, E.C., K. Cressman, J. Siwicke, R. Alberte, 2006, Effects of Lake Okeechobee Releases on the Caloosahatchee Estuary, Greater Everglades Ecosystem Restoration Conference, Orlando, Florida.

Milbrandt, Greenawalt-Boswell, P. Sokoloff, S. Bortone, 2005, Impact and response of SW Florida hurricanes on mangrove forests, Estuarine Research Federation, Norfolk, Virginia.

Milbrandt, E.C., 2005, The influence of sediment microbial communities on *Thalassia testudinum* transplants: implications for seagrass restoration, Mote Charlotte Harbor, Sarasota, Florida.

Milbrandt, E.C., 2005, Factors influencing bacteria community structure in a mangrove-lined estuary, Charlotte Harbor Summit, Punta Gorda, Florida

Milbrandt, E.C. (invited), 2004, Changes in mangrove forests after Hurricane Charley, Wetland Ecology Branch, USGS, Lafayette, Louisiana.

Milbrandt, E.C. (2004), 2004, Multiple Stressors and effects on mangrove and seagrass communities, Society for Ecotoxicology and Chemistry, Portland Oregon.

Milbrandt, E.C., 2004, Sediment microbial communities to assess restoration success in mangrove and seagrass habitats, 1st National Conference on Ecosystem Restoration, Lake Buena Vista, Florida.

Milbrandt, E.C., 2004, Bacterial phylotypes, community structure, and variability in Pacific Northwest mudflats, American Society for Limnology and Oceanography, Savannah, Georgia.

Milbrandt, E.C. (invited), 2004, Microbial Ecology of South Slough: community composition of bacteria and patterns of occurrence, University of Florida, Gainesville, Florida.

Milbrandt, E.C., 2003, Microbial Ecology of South Slough: community composition of bacteria and patterns of occurrence, Oregon Institute of Marine Biology, Charleston, Oregon.

Milbrandt, E.C., 2003, Genetic diversity of bacteria in restored and mature estuarine sediments. American Society of Limnology and Oceanography, Salt Lake City, Utah.

Milbrandt, E.C., 2002, Spatial variability and community composition patterns of Bacteria in South Slough Estuary, OR, USA, American Society of Limnology and Oceanography, Victoria, B.C., Canada.

Milbrandt, E.C., 2001, Estimation of Bacteria diversity and community composition at a restoration site and three reference sites in South Slough NERR, American Society for Microbiology, Orlando, Florida.

Milbrandt, E.C., 1997, Phase density of the intertidal red alga *Mazzaella splendens*. Senior Thesis, Humboldt State University.

Milbrandt, E.C., 1996, Sequence and phylogeny of the RUBISCO gene from *Poteroiochromonas malhamensis*. Humboldt State University, Arcata, California.

Milbrandt, 1996, Isolation and cloning of the RUBISCO gene from *Poteroiochromonas malhamensis*. University of Wisconsin-Milwaukee, Milwaukee, Wisconsin.

REVIEWING ACTIVITIES

Estuaries and Coasts

Journal of Environmental Management

Limnology & Oceanography

Wetland Ecology and Management

Florida Scientist

Botanica marina

NERR Graduate Fellowship reviewer, FY09

Florida Gulf Coast University, Thesis reviews

Charlotte Harbor National Estuary Program, Research and Restoration Partners Grant Reviewer, FY08

Fishery Research Program Proposal Reviewer for the Great Lakes Fishery Commission, FY08

Louisiana Experimental Program to Stimulate Competitive Research (EPSCoR), FY07, FY06

Department of Energy Office of Science Graduate Fellowship program, FY10

Environmental Protection Agency External Reviewer (Gulf Breeze, FL), 2011

Texas Sea Grant External Reviewer, 2011

GRADUATE COMMITTEES

Brad Smith, 2008, Masters of Science, Florida Gulf Coast University

Rachel Harris, 2008, Masters of Science, Florida Gulf Coast University

Chris Lechowicz, in progress, Masters of Science, Florida Gulf Coast University

Falon Cartwright, in progress, Masters of Science, Florida Gulf Coast University

Susan Denham, in progress, Masters of Science, Florida Gulf Coast University

PROFESSIONAL RELATED ACTIVITIES

Chief Scientist on Florida Institute of Oceanography vessel R/V Bellows for a one-day offshore cruise. Led CTD cast, 500 um plankton net tow, ponar sediment samples, and otter trawl. Instructed upper-level oceanography undergraduates and graduate students in techniques, natural history and oceanography of Southwest Florida.

Member of Florida Seagrass Lee County Extension's Advisory Committee with fishing guides, local resource managers and other researchers.

Participated in a workshop on, "Adaptive Management of Estuarine Resources in Anticipation of Climate Change" held at the Restore America's Estuaries conference in Galveston, TX

Chief Scientist on FGCU vessel *SeaHawk* for multi-institution project investigating abundances and distribution of macroalgae, plus collecting samples for other investigators.

Invited as lead author for the benthic offshore sub-model for MARES in SW Florida (Marine and Estuarine Goal Setting for South Florida)

Conducted a national search to fill Research Associate position

Conducted a national search to fill Marine Laboratory Director position

ISUS Quality Assurance Technical Report, Lead Author

Contributed to the Northern Everglades Research and Protection Plan

Alternate member of the CHNEP Technical Advisory Committee

Participant and presenter at SW Florida Seagrass Working Group meetings

Grant Development (submit 4-6 pre-proposals, 1-2 full proposals per year)

Lectures (present 8-10 to lay audiences, 4-6 to technical audiences)

Newsletter Articles (provide 10-12 short essays on marine science)

Website Development (provide written materials and pictures)

Member of the Coastal and Estuaries Research Federation

RESEARCH INTERESTS

Seagrass microbe interactions

Light, optics, and submerged aquatic vegetation

Production of DOM in coastal areas and possible mechanisms for formation

Mangrove ecology and restoration, interactions with shellfish and SAV