

# MARY LOU COULSTON, Ph.D.

## FIELDS OF SPECIALIZATION

Mary Lou Coulston was president and owner of Ocean Systems Research, Inc. started in 1982. She is now president and owner of Ocean Systems Laboratory, Inc., a Virgin Islands Corporation continuing and extending the work of Ocean Systems Research. She serves as the laboratory management consultant and supervisor of analysis. Mary Lou Coulston in April 2003 opened a new water-testing laboratory on St. Thomas, USVI.

Dr. Coulston is also experienced in the development and implementation of water quality monitoring programs working with Bioimpact, Inc. on numerous contracts. Recently Dr. Coulston has undertaken programs in wetland restoration and construction working with Bioimpact on wetland projects and with Aqua-Tech Farm on the propagation and grow-out of wetland plants for restoration, constructed wetlands and water quality improvement of wastewater and storm water runoff.

## CONTACT INFORMATION

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## EDUCATION

Ph.D. (1972)	University of Kansas, Systematics and Ecology, Lawrence, Kansas
M.S. (1968)	University of Puerto Rico, Biology, Rio Piedras, Puerto Rico
B.S. (1962)	State University of New York, Biology, Albany, New York

## PROFESSIONAL CONSULTING EXPERIENCE

- *Supervisor Environmental Monitoring WAPA Electrical Cable Crossing St. Thomas, St. John and Little St. James for Bioimpact, Inc. (2004)*
- *Participant in Environmental Monitoring WAPA Water and Electrical Cable Crossing. (2003)*
- *Water Quality Monitoring for Enighed Pond Construction: Bioimpact (2003-04)*
- *Water Quality Monitoring of Crown Bay Marine Terminal: Bioimpact (2003-04)*
- *Coral Reef Transplant for Enighed Pond and Crown Bay for Bioimpact. (2002-03)*
- *Water Quality Monitoring for Gallows Bay and Frederiksted Pier for Bioimpact. (2002)*
- *Coral Reef Transplant for St. Thomas sewer discharge pipe construction for Bioimpact. (2000-01)*
- *Water Quality Monitoring for St. Thomas Harbor Dredging Project. Sediment Analysis. (2000)*
- *Water Quality Monitoring Program for Global Crossing Cable Facilities and for MAC and SAC cables, Frederiksted, St. Croix, Subcontractor to Bioimpact. (2000)*
- *Asbestos and Lead sampling for Luis E. Brown Demolition project. Subcontractor to McGuire Group of St. Croix and collaborating with Bioimpact, Inc.*
- *State of South Carolina in Collaboration with National Resources Conservation Services. Design and production of plants for Experimental Constructed Wetlands. (1999-present)*
- *Phase I Environmental Site Assessments according to E 1527-97 ASTM Standards: Southgate Pond Property on St. Croix for St. Croix Environmental Association, Danish Manor Hotel, Christiansted, Queen Madeleine Condominiums, Christiansted, Rooftops Building at Est. Friedenthal, Gallows Bay Warehouse, Gallows Bay, Est. Mt. Welcome*
- *Water Quality Monitoring for AT&T Cable Facility, F'sted, St. Croix. Sub to Bioimpact. (1995)*
- *VI Government, Department of Public Works. Sewage Treatment Plant, Testing. BOD5, Total Suspended Solids and Fecal Coliform. 1994-present)*
- *VI Port Authority. Water Quality Monitoring during the construction of the Frederiksted Pier. Subcontractor to Bioimpact. (1992-1994)*
- *Government of the Virgin Islands, Department of Planning and Natural Resources. Fecal coliform analysis for recreational waters of St. Croix, in 2003 added Enterococci analysis. (1990-present)*
- *V.I. Water and Power Authority. Benthic Monitoring Study for TPDES Permit. Joint-Venture with Bioimpact. (1992)*

- *Ocean Systems Research, Inc.* Water Testing Laboratory. Post-Hurricane Hugo drinking water testing program. Centers for Disease Control, Atlanta, for U.S. Public Health Service and the U.S. Environmental Protection Agency. (1990)
- *Water Quality Analyses for Schooner Bay Dredging Project.* Subcontract to Bioimpact. (1990-91)
- *Ocean Systems Research, Inc.* Under contract to Island Resources Foundation, Inc., St. Thomas and the V.I. Port Authority: 1. Water Quality Monitoring Project, Third Port, St. Croix; 2. V.I. Seagrass Transplant Project, Third Port, St. Croix, V.I. 3. Red Point Sewer Outfall 301(h) Waiver Application, St. Thomas, V.I. (1987-1990)
- *Ocean Systems Research, Inc.* Under contract to Island Resources Foundation, Inc., St. Thomas and Ivor Jackson Associates of Antigua: Environmental Assessment of Dredge Spoil Storage for St. John's Deep Water Harbour, Antigua. (1987-1988)
- *Department of Parks and Recreation, State of California.* Establishing guidelines for the Lobos State Reserve, a marine underwater park in Carmel, California. (1974)

## **EMPLOYMENT**

- 1996 to present. Ocean Systems Laboratory, Lab. management consultant and supervisor.
- 1992 to present. Environmental Testing and Evaluation, Inc. Owner and Operator of an Environmental Consulting Firm licensed to do business in the U.S. Virgin Islands.
- 3-82 to 1996. Ocean Systems Research, Inc. Laboratory Director for water quality and environmental biology laboratory. 5128 Mt. Welcome, Christiansted, St. Croix, USVI 00820. Ecologist and Analyst. (EPA certification 8-87).
- 1-91 to present. Aqua-Tech Farm. Greenhouse and nursery operations for the production of wetlands plants. 462 Juniper Street, Neeses, South Carolina 29107. Ecologist.
- 10-1-90 to 6-31-91. University of the Virgin Islands. Coordinator and Extension Specialist for V.I. Marine Advisory Service, UPR Sea Grant College Program.
- 9-1-88 to 6-31-90. University of the Virgin Islands. Coordinator, Environmental Research Center, Caribbean Research Institute. Research Associate Professor. Coordinator Sea Grant Program and V.I. Ecological Research Station on St. John. Research: Salt River Submarine Canyon Environmental Monitoring Study and Bacteriological Studies to Evaluate the Safety of Recreational Waters in the V.I.

- 3-9-88 to 8-26-88. AQUARIUS Program (NOAA's Undersea Research Program) administered by West Indies Laboratory of Fairleigh Dickinson University. Mission Coordinator. Aquanaut and Chief Scientist on Mission 89-3 while employed at the University of the Virgin Islands.
- 6-86 to 2-87. Bioimpact, P.O. Box 132, Kingshill, St. Croix, V.I. Staff ecologist. Environmental assessment for coastal development.
- 11-83 to 10-86. HYDROLAB (NOAA's Undersea Research Program) administered by West Indies Laboratory of Fairleigh Dickinson University. Science Coordinator / Administrative Assistant. Research: Assessment of conch, *Strombus gigas*, population in Salt River Canyon. Aquanaut on Mission 84-14.
- 8-83 to 11-83. College of the Virgin Islands. St. Croix Campus. Part-time Instructor. General Chemistry.
- 10-82 to 10-83. Antilles Consolidated School System. U.S. Naval Station, Roosevelt Roads, Puerto Rico. Substitute Jr. / Sr.. High School Teacher in the Sciences.
- 8-72 to 7-76. University of California at Berkeley. Department of Zoology. Berkeley, California. Assistant Professor.
- 6-74 to 8-74. National Marine Fisheries Service, Northeast Fisheries Center, Woods Hole. Visiting Biologist. Funded by Manned Undersea Science and Technology (MUS&T / NOAA). Study of population ecology and genetics of the American lobster, *Homarus americanus*.
- 3-70 to 12-71. University of Chicago, Department of Biology. Senior Research Assistant. Field studies on St. John, USVI.
- 6-68 to 8-68. University of Puerto Rico, Institute of Marine Science, Mayaguez, Puerto Rico. Research Assistant.

#### **PROFESSIONAL REGISTRATIONS, LICENSES, CERTIFICATIONS, COURSES, ETC.**

- 1995 National Wetland Science Training; Certified Wetland Delineator
- 1995 Constructed Wetlands Workshop, Fort Valley State College
- 1995 Constructed Wetlands Workshop, Penn. State College of Agriculture
- 1993 Comply with EPA's New Storm water Permits, SC Environ. Training Center
- 1993 Blood Borne Pathogens - Train the Trainer, SC Environ. Training Center
- 1992 Metals Laboratory, SC Environ. Training Center
- 1992 Chemistry of Hazardous Materials, SC Environ. Training Center
- 1992 Intermediate Wastewater Analysis, SC Environ. Training Center
- 1992 Laboratory Parameters, SC Environ. Training Center

- 1989 NOAA Aquanaut Certification Mission 89-3 participation.
- 1988 EPA/DPNR Certification as a water quality analyst.
- 1987 USCG Ocean Operator, 100 ton, 50 mile offshore, Sail Auxiliary.
- 1986. PADI Advance Diver Certification by Amy Dempsey.
- 1984 NOAA Aquanaut Certification Mission 84-14 participation.
- 1977 Amateur Radio General License KV4KD.
- 1975 Prin. & Prac. of Celestial Navigation Cert. Naval ROTC UC Berkeley.
- 1974 NAUI Diver Certification #320010.
- 1974 Advanced Research Diver Training Course. U. of Michigan by Lee Somers.
- 1972 University of California Diver Certification #209 by Lloyd Austin.
- 1972 Elected to Sigma Xi, Berkeley Chapter
- 1968 High School Science Teacher Permanent Certification, New York.
- 1964 YMCA Diver Certification by Walt Hendrix, Sr.