

CURRICULUM VITAE

Kathryn Patterson Sutherland, Ph.D.
 Department of Biology
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ACADEMIC HISTORY

Name	Kathryn Patterson Sutherland
Present rank	Assistant Professor
Tenure status	Non-tenured (tenure track)
Education	
Ph.D.	University of Georgia, Dept. of Marine Science, 2003 Major: Biological Oceanography Advisor: Dr. James W. Porter Dissertation: Etiology and histopathology of the white pox disease of the Caribbean elkhorn coral <i>Acropora palmata</i>
M.S.	University of Georgia, Institute of Ecology, 1997 Major: Conservation Ecology and Sustainable Development Advisor: Dr. James W. Porter Thesis: Community dynamics on a Floridian coral reef: comparison of video, line transect, and photographic monitoring methods
B.A.	Wellesley College, 1994 Major: Biological Sciences

Academic positions

- Assistant Professor. Dept. of Biology, Rollins College (August 2005 – present)
- Post-Doctoral Fellow. Dept. of Environmental Health Science and Institute of Ecology, University of Georgia (January 2003-August 2005). Advisor: Dr. Erin K. Lipp
- Instructor. Institute of Ecology, University of Georgia (January–June 2005)
- Instructor. Dept. of Environmental Health Science, University of Georgia (August –December 2004)

Other professional experience

- Pre-Doctoral Fellow. US Environmental Protection Agency, Science Training in Ecology Program (STEP), Gulf Ecology Division, Gulf Breeze, FL (October 2000–May 2002)
- Graduate Research Scientist. Coral Reef Monitoring Project. US Environmental Protection Agency and National Oceanic and Atmospheric Administration. Florida Marine Research Institute, Marathon, FL (May 1995-December 2003)
- Graduate Teaching Assistant. Dept. of Biological Sciences, University of Georgia (August 1994 - December 1995)

Post-graduate awards and recognition

- Sigma Xi Outstanding Ph.D. Dissertation Award. University of Georgia Chapter of Sigma Xi (2004). This competitive award is presented to one graduate each year for scientific research completed while at the University of Georgia.
- Graduate Student Excellence in Research Award. University of Georgia (2004). This competitive award is presented to one graduate student in the Life Sciences each year for research completed while at the University of Georgia.

Pre-graduate awards and recognition

- US EPA Science Training in Ecology (STEP) Fellowship. U.S. Environmental Protection Agency and University of West Florida, Gulf Breeze, FL (2000-2002)

TEACHING

Courses taught at Rollins College

Course #	Course Name (credit hours)	Terms taught	Enrolled
RCC 100	Endangered Earth (6 h)	Fall 06	15
BIO 105	Ecological Basis of Environmental Issues with lab (6 h)	Spring 06	24
BIO 120	General Biology I with lab (6 h)	Spring 06	24
BIO 121	General Biology II with lab (6 h)	Fall 06, 07	24
BIO 210	Introduction to Marine Science (4 h)	Spring 07	8
BIO 316	Ecology with lab (6 h)	Fall 05, 07, Spring 07	10-13
BIO 386F	Marine Biological Laboratory Central Pacific (2 h)	Winter 07	12
BIO 344	Biology Journal Club (2 h)	Fall 05	14

Invited lecturer

BIO 106 Human Impacts on Marine Ecosystems (Spring 07)

Independent study courses

BIO 499HD Honors Program Research (Spring 07)

BCH 499HD Honors Program Research (Spring 07)

Courses taught at University of Georgia

EHSC 3060 Introduction to Environmental Health Science (3 h) (Fall 2004)

EHSC 7060 Fundamentals of Environmental Health Science (invited lecture) (Spring 2005)

ECOL 1000 Ecological Basis of Environmental Issues with Lab (4 h) (Spring 2005)

BIOL 108 Principles of Biology II (Lab) (Fall 1995)

BIOL 103 Basics Concepts in Biology (Lab) (Fall 1994, Spring 1995)

Academic advising at Rollins College

Honors program supervisor	Biology: Tyler Kartzinel (06-07) Biochemistry/Molecular Biology: Brian Thomas (06-07)
Honors program committee	Biology: Chris Chafin (06-07) Sociology: Kim Hartman (06-07)
Senior research committee	Biology: Jenny Mesko (07-08), Isaac Chang (07-08) Environmental Studies: Kim Lucy (06-07)
Summer research	Biology: Trevor Luna (07), Victoria Watson (06), Sharon Villabona (06)

Academic advising at University of Georgia

Undergraduate research	Dept. of Environmental Health Science: Josh Smith (05), Katherine Colosimo (04-05)
High school summer research	College of Agricultural and Environmental Sciences Young Scholars Internship Program: Suleiman Ndiaye (04)

SCHOLARSHIP**A. PUBLICATIONS***Chapters in books, peer-reviewed (3 total)*

Porter, J.W., E.K. Lipp, **K.P. Sutherland**, and E. Mueller. 2007. The ecology of an infectious disease in the Florida Keys: From pathogen to politics." In: R.S. Ostfeld, F. Keesing, and V. Eviner (Eds.) *Ecology of Infectious Disease: Effects of Ecosystems on Disease and of Disease on Ecosystems*. Princeton University Press; Princeton, NJ. *In press*

Sutherland, K.P. and K.B. Ritchie. 2004. White pox disease of the Caribbean elkhorn coral *Acropora palmata*. In: Rosenberg, E. and Y. Loya (Eds.) *Coral Health and Disease*. Springer-Verlag, Heidelberg, Germany, pp. 289-297.

Porter, J.W., V., Kosmynin, **K.L. Patterson**, K.G. Porter, W.C. Jaap, J.L. Wheaton, K. Hackett, M. Lybolt, C.P. Tsokos, G. Yaney, D.M. Marcinek, J. Dotten, D. Eaken, M. Patterson, O.W. Meier, M. Brill, and P. Dustan. 2002. Detection of coral reef change by the Florida Keys Coral Reef Monitoring Project. In: Porter, J.W. and K.G. Porter (Eds.) *The Everglades, Florida Bay, and Coral Reefs of the Florida Keys*. CRC Press, Boca Raton, FL., pp. 749-769.

Articles in peer-reviewed journals (8 total)

Rogers, C.S., **K.P. Sutherland**, and J.W. Porter. 2005. Has white pox disease been affecting *Acropora palmata* for over 30 years? *Coral Reefs* 24: 194

Sutherland, K.P., J.W. Porter, and C. Torres. 2004. Disease and immunity in Caribbean and Indo-Pacific zooxanthellate corals. *Mar. Ecol. Prog. Ser.* 266: 273-302.

Harvell, D., R. Aronson, N. Baron, J. Connell, A. Dobson, S. Ellner, L. Gerber, K. Kim, A. Kuris, H. McCallum, K. Lafferty, B. McKay, J. Porter, M. Pascual, G. Smith, **K. Sutherland**, and J. Ward. 2004. The rising tide of ocean diseases: unsolved problems and research priorities. *Front. Ecol. Environ.* 7: 375-382.

Patterson, K.L., J.W. Porter, K.B. Ritchie, S.W. Polson, E. Mueller, E.C. Peters, D.L. Santavy, and G.W. Smith. 2002. The etiology of white pox, a lethal disease of the Caribbean elkhorn coral, *Acropora palmata*. *Proc. Natl. Acad. Sci. USA* 99:8725-8730.

Porter, J.W., P. Dustan, W.C. Jaap, J.L. Wheaton, **K.L. Patterson**, V. Kosmynin, O.W. Meier, M.E. Patterson, and M. Parsons. 2001. Patterns of spread of coral disease in the Florida Keys. *Hydrobiologia* 460: 1-24.

Santavy, D.L., E. Mueller, E.C. Peters, L. MacLaughlin, J.W. Porter, **K.L. Patterson**, and J. Campbell. 2001. Quantitative assessment of coral diseases in the Florida Keys: strategy and methodology. *Hydrobiologia* 460: 39-52.

Cervino, J.M., T.J. Goreau, R.L. Hayes, L. Kaufman, I. Nagelkerken, **K. Patterson**, J.W. Porter, G. W. Smith, and C. Quirolo. 1998. Coral Disease. *Science* 280: 499-501.

Goreau, T.J., J.Cervino, M. Goreau, R. Hayes, M. Hayes, L. Richardson, G. Smith, K. DeMeyer, I. Nagelkerken, J. Garzon-Ferreira, D. Gil, G. Garrison, E.H. Williams, L. Bunkley-Williams, C. Quirolo, **K. Patterson**, J.W. Porter, K. Porter. 1998. Rapid spread of diseases in Caribbean coral reefs. *Revista Biologia Tropical* 46: 157-171.

Technical Reports (2 total)

Jaap, W.C., J.W. Porter, J. Wheaton, C.R. Beaver, K. Hackett, M. Lybolt, M.K. Callahan, J. Kidney, S. Kupfner, C. Torres, and **K. Sutherland**. 2003. EPA/NOAA Coral Reef Evaluation and Monitoring Project Executive Summary. Florida Marine Research Institute; St. Petersburg, FL. 34 pp.

Eakin, D., J. Dotten, J. Wheaton, W. Jaap, J. Porter, P. Dustan, **K. Patterson**, M. Patterson, and M. Lybolt. 2002. Standard operating procedure for CRMP data collection and analysis. Florida Marine Research Institute; St. Petersburg, FL. 23 pp.

B. PRESENTATIONS AND SESSIONS CONVENED

Presentations at Meetings of Professional Societies

* indicates an invited presentation. † indicates a published abstract. Presenter is first author unless noted otherwise.

International and National Meetings (14 total)

*† **Sutherland, K.P.**, E.K. Lipp, and J.W. Porter. 2006. White pox disease of Caribbean elkhorn coral: source tracking for the pathogen in sewage and marine environments. American Association for the Advancement of Science, Annual Meeting, St. Louis, MO.

*† Lipp, E.K., **K.P. Sutherland**, and J.W. Porter. 2006. Investigations of *Serratia marcescens* as a white pox pathogen in the Florida Keys. 31st Annual Eastern Fish Health Workshop. Charleston, SC.

*† **Sutherland, K.P.**, E.K. Lipp, and J.W. Porter. 2005. Genomic profiling of *Serratia marcescens* from the Florida Keys: identifying the ecology and potential origin of the white pox coral pathogen. 18th Biennial Conference of the Estuarine Research Federation. Norfolk, VA.

* **Sutherland, K.P.** 2005. Ecology of the coral disease pathogen, *Serratia marcescens*, in the Florida Keys. 105th General Meeting of the American Society for Microbiology. Atlanta, GA.

- *[†] **Sutherland, K.P.** 2005. Prevalence and potential origin of the acroporid serratiosis pathogen in the Florida Keys. 30th Annual Eastern Fish Health Workshop. Shepherdstown, WV.
- * Porter, J.W., E.K. Lipp, **K.P. Sutherland**, and P. Rohani. 2005. The influence of coral disease on coral reef survival: a model system investigating the candidate endangered elkhorn coral species, *Acropora palmata*. 11th Cary Conference: Infectious Disease Ecology. Millbrook, NY.
- * **Sutherland, K.P.** 2004. White pox disease. Coral Disease and Health Consortium, 2nd Annual Coral Disease and Health Workshop. Madison, WI.
- [†] **Sutherland, K.P.** 2004. Etiology and histopathology of the white pox disease of the Caribbean elkhorn coral *Acropora palmata*. 10th International Coral Reef Symposium. Okinawa, Japan.
- [†] **Sutherland, K.P.**, E.C. Peters, and R. Rotjan. 2004. Histopathology of the white pox disease of the Caribbean elkhorn coral *Acropora palmata*. 29th Annual Eastern Fish Health Workshop. Atlantic Beach, NC.
- [†] **Sutherland, K.P.**, J.W. Porter, K.B. Ritchie, S.W. Polson, E. Mueller, E.C. Peters, D.L. Santavy, and G.W. Smith. 2003. The etiology of white pox, a lethal disease of the Caribbean elkhorn coral, *Acropora palmata*. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem, from Kissimmee to the Keys. Palm Harbor, FL.
- [†] Jaap, W.C., M.K. Callahan, K.E. Hackett, J. Kidney, M. Lybolt, S. Kupfner, J. Wheaton, J. Porter, and **K.L. Patterson**. 2003. Florida Keys National Marine Sanctuary Coral/Hardbottom Monitoring Project: Long-term status and trends. Joint Conference on the Science and Restoration of the Greater Everglades and Florida Bay Ecosystem, from Kissimmee to the Keys. Palm Harbor, FL.
- [†] Richards, S.A., **K.L. Patterson**, J.W. Porter, and M. Pascual. 2003. Predicting elkhorn coral dynamics throughout the Florida Keys. Ecological Society of America, Annual Meeting. Savannah, GA.
- [†] **Patterson, K.L.**, D.S. Santavy, J.G. Campbell, J.W. Porter, L.G. MacLaughlin, E. Mueller, and E.C. Peters. 1998. Coral diseases in the western Florida Keys, New Grounds, and the Dry Tortugas. The Society for Integrative and Comparative Biology, Annual Meeting. Boston, MA.
- [†] Dustan, P., W.C. Jaap, J.L. Wheaton, J.W. Porter, and **K.L. Patterson**. 1998. Long-term monitoring of coral reefs in the Florida Keys National Marine Sanctuary. The Society for Integrative and Comparative Biology, Annual Meeting. Boston, MA.

State and Regional Meetings (2 total)

- * **Sutherland, K.P.**, J.W. Porter, J.W. Turner, and E.K. Lipp. 2005. Prevalence of the coral pathogen *Serratia marcescens* in wastewater and marine environments of the Florida Keys. Regional Meeting of the American Society for Microbiology. St. Petersburg, FL.
- [†] **Patterson, K.L.**, S.W. Polson (presenter), J.W. Porter, and G.W. Smith. 2000. Metabolic characterization of bacterial communities associated with white pox disease of the scleractinian coral *Acropora palmata*. South Carolina Academy of Science, Annual Meeting. Clinton, SC.

Sessions Convened at International Meetings

Sea Sickness: Ocean Health and Infectious Disease. 2007. American Society for Microbiology 107th General Meeting, Toronto, Canada (one of only five division symposia [Division Q, Environmental and General Applied Microbiology])

Microbiology and Coral Disease: State of the Field. 2005. American Society for Microbiology 105th General Meeting, Atlanta, GA (one of only two division symposia [Division I, General Microbiology])

C. RESEARCH GRANTS

External Awards (2 total)

Sutherland, K.P. (Co-PI) with E.K. Lipp (PI-PD) and J.W. Porter. 2005. Genomic profiling of *Serratia marcescens* from the Florida Keys: identifying coral-pathogenic fingerprints and potential sources. Florida Department of Environmental Protection. 10/01/05-09/30/07. Award: \$58,377. (Non-competing extension of award below).

Sutherland, K.P. (Co-PI) with E.K. Lipp (PI-PD) and J.W. Porter. 2003. Genomic profiling of *Serratia marcescens* from the Florida Keys: identifying coral-pathogenic fingerprints and potential sources. Florida Department of Environmental Protection. 12/01/03-08/01/05. Award: \$99,984.

Rollins College Awards (3 total)

Sutherland, K.P. 2007. Genetic profiling of *Serratia marcescens*: tracking the source of a coral pathogen. Rollins College Critchfield Research Grant. 06/01/07-05/31/08. Award: \$4968.

Sutherland, K.P. and T. Luna. 2007. Genetic profiling for the origin of a coral pathogen in the Florida Keys. Rollins College Student-Faculty Summer Scholarship Program. 06/25/07-08/03/07. Award: \$3550.

Sutherland, K.P., V. Watson, and S. Villabona. 2006. Environmental screening for the origin and prevalence of the coral pathogen, *Serratia marcescens*, in the Florida Keys. Rollins College Student-Faculty Summer Scholarship Program. 06/19/06-07/28/06. Award: \$5600.

PUBLIC AND PROFESSIONAL SERVICE

Memberships in Professional Societies

American Society for Microbiology
 The International Society for Reef Studies
 Sigma Xi, The Scientific Research Society
 Coral Disease and Health Consortium, National Oceanic and Atmospheric Administration
 Southeast Branch of the American Society for Microbiology

Reviewer for Funding Agencies

2007 National Science Foundation (NSF), Biological Oceanography (2 proposals)
 2006 US Environmental Protection Agency (EPA), Region 4, Opportunities for Special Studies
 2005 National Oceanic and Atmospheric Association (NOAA), National Undersea Research Program (2 proposals)
 2004 National Science Foundation (NSF), Biological Research Collections

Reviewer for Professional Journals

<u>Journal</u>	<u># of manuscripts</u>
<i>Aquaculture</i>	1
<i>Diseases of Aquatic Organisms</i>	1
<i>Environmental Health Perspectives</i>	1
<i>Global Change Biology</i>	1
<i>Marine Ecology Progress Series</i>	3

Reviewer for Book Chapters

- 2006 *In Environmental Science: Measuring the State of the Earth*, W.H. Freeman Publishers
(2 chapters)
- 2005 *In Environmental Science: A Modern Approach*, W.H. Freeman Publishers

Reviewer for Manuscripts in Conference Proceedings

- 2004 Proceedings of the 10th International Coral Reef Symposium

Workshops

- Invited participant. *2nd Annual Coral Disease and Health Workshop* (2004). Coral Disease and Health Consortium, Madison, WI.
- Invited participant. *Ecology of Marine Diseases* (2002). National Center for Ecological Analysis and Synthesis (NCEAS), University of California, Santa Barbara, CA.

SERVICE TO ROLLINS COLLEGE**Rollins College**

- Student Life Committee (2007-2008)
Avian flu pandemic emergency response course development workshop (May 2007)

Department of Biology

- Program Coordinator for Marine Biology (2007-2008)
Marine Biology major development committee (2005-2006)

OTHER**Additional Training & Educational Opportunities**

- Alumnae-Faculty Expedition to the Galapagos Islands (2006). Rollins College.
- Edwin W. Pauley Program - Assessing the Health of Pacific Corals (2003). Hawaii Institute of Marine Biology, University of Hawaii, Honolulu, HI.
- Coral Tissue Slide Reading Workshop (1999). Registry of Tumors in Lower Animals, George Washington University, Washington, DC.
- Microbial Diversity (1998). Marine Biological Laboratory, Woods Hole, MA.
- Diseases of Corals and Other Reef Organisms (1997). Mote Marine Laboratory, Pigeon Key, FL
- Sea Education Association (SEA) (1992). Boston University, Woods Hole, MA.
- SCUBA certifications: PADI Open Water Diver (1990), Nitrox Diver (1996), US EPA Scientific Diver (1996).