

Daniel William Amato
University of Hawai'i at Mānoa
1143 16th Ave Honolulu, Hawai'i 96816

Phone: (808) 561-1742

website: DanielWAmato.com

e-mail: dwamato@hawaii.edu

EDUCATION

Ph.D in botany, GPA 4.0, marine track, University of Hawai'i at Mānoa	2015
M.S. in botany, GPA 4.0, marine track, University of Hawai'i at Mānoa	2009
B.S. in biology, GPA 3.6, chemistry minor, University of Vermont	2004
Courses in marine science, University of Otago, New Zealand	2003
Courses in marine science, University of Sydney, Australia	2002

EXPERIENCE

Environmental Scientist II, EnviroServices and Training Center, Honolulu, Hawaii. 9/16 – present
Stormwater quality and BMP consultant for the Hawaii Department of Transportation (DOT) Harbors Division and Airports Division. Provides 3rd party stormwater BMP inspections of tenants and construction projects. Responsible for submitting permits and stormwater related pollution prevention plans for private businesses. Provides stormwater and illicit discharge detection and elimination training to state employees and DOT tenants.

Project Leader, Water Resources Research Center, University of Hawai'i at Mānoa. 6/15 – present
Project title: Identifying future hotspots for algal blooms: A multi-dimensional analysis evaluating impacts of potential land-based sources of pollution on the health of American Samoa's coasts. Responsible for the design and implementation of an interdisciplinary study on Tutuila, American Samoa. This 3-year study relies on measurements of water quality, algal tissue chemistry, land use, and DNA-based analyses of coral, biofilm, and water microbes to compare the health of nearshore reefs relative to adjacent land use. Duties include field-team management, data collection, analysis, publication of results, and communication of management recommendations to the American Samoa Environmental Protection Agency.

Research Assistant, Sea Grant College Program, University of Hawai'i at Mānoa. 3/12 – 5/15
Project title: Connecting Land Use to Submarine Discharge Loads and Coral Reef Health within the Coastal Zones of Maui. Developed a method to identify potential sources of nitrogen to Hawaii's coastal waters using algae. Responsible for the design, execution, analysis, and publication of biological and geochemical experiments on Maui that examined the connectivity between watersheds and nearshore reefs.

US EPA STAR Research Fellow, United States Environmental Protection Agency. 8/11 –12/14
Project title: Effects of Submarine Groundwater Discharge as a Vector for Sewage Effluent on Hawaiian Coral Reefs. Responsibilities included all aspects of doctoral research.

- Teaching Assistant**, College of Natural Sciences, University of Hawai‘i at Mānoa. Lead instructor for multiple sections of undergraduate laboratory-based classes: Biology 171L, Biology 172L, Botany 201L, and Botany 480L. 8/08 – 5/15
- Project Leader**, Kai Makana, Mokauea Island Fishpond Restoration, Honolulu, Hawai‘i. 6/06 – 12/12
Responsible for the ecological restoration and resource management of a traditional Hawaiian fishpond. Coordinated the removal of invasive species and pond maintenance using thousands of students and community members. Conducted experiments growing native algae in the pond with students. Developed and tested an educational curriculum in marine ecology and water quality for middle and high school students.
- Research Assistant**, Water Resources Research Center, University of Hawai‘i at Mānoa. 12/05 – 12/08
Designed and conducted the first laboratory study that measured the physiological response of macroalgae to simulated submarine groundwater discharge. Developed novel methods for the quantification of branch development in algae.

PUBLICATIONS

- Amato DW, Bishop JM, Glenn CR, Dulai H, and CM Smith (2016). Impact of Submarine Groundwater Discharge on Marine Water Quality and Reef Biota of Maui. PLoS ONE 11(11): e0165825. doi:10.1371/journal.pone.0165825
- Bishop JM, Glenn CR, Amato DW, and H Dulai (2015). Effect of land use and groundwater flow path on submarine groundwater discharge nutrient flux. Journal of Hydrology: Regional Studies
- Amato DW (2015). Ecophysiological responses of macroalgae to submarine groundwater discharge in Hawai‘i. PhD dissertation. University of Hawai‘i at Mānoa, Honolulu, Hawai‘i
- Duarte TK, Pongkijvorasin S, Roumasset J, Amato DW, and K Burnett (2010). Optimal management of a Hawaiian coastal aquifer with nearshore marine ecological interactions. Water Resources Research 46, W11545
- Amato DW (2009). Physiological effects of simulated submarine groundwater discharge on the Hawaiian endemic edible alga *Gracilaria coronopifolia*. MS thesis. University of Hawai‘i at Mānoa
- Amato DW, Smith CM, and TK Duarte (in review at Coral Reefs). Submarine groundwater discharge modifies photosynthesis, growth, and morphology for two species of *Gracilaria* (Rhodophyta).
- Amato DW, Dulai H, Whittier RB, Smith CM, and CR Glenn (in prep). Wastewater in the watershed: A multi-tracer study of sewage-derived nitrogen in coastal waters of O‘ahu, Hawai‘i. Intended for submission to Environmental Science and Pollution Research
- Amato DW, and RB Whittier (in prep). Algal bioassays detect modeled loading of wastewater-derived nitrogen in coastal waters of O‘ahu, Hawai‘i. Intended for submission to Ecohydrology

PRESENTATIONS

Assessment of land-based sources of pollution on coral reefs of Tutuila, American Samoa. Presentation given to the American Samoa Environmental Protection Agency, Tutuila, American Samoa, August 22nd, 2016. (oral presentation)

Algal bioassays show land-based, anthropogenic nitrogen is delivered to reef biota by groundwater in Hawai'i and American Samoa. 13th International Coral Reef Symposium, Honolulu, Hawai'i, June 22nd, 2016. (oral presentation)

Is submarine groundwater discharge a chronic threat to Maui's nearshore reefs? Presentation given to the Maui Nui Marine Resource Council, Kihei, Maui, May 2nd, 2016. (oral presentation)

The impact of coastal groundwater quality on Hawaiian reefs and nearshore waters. 2016 Pacific Water Conference, Honolulu Hawai'i, February 4th, 2016. (oral presentation)

Detecting hot spots for algal blooms in shallow waters of American Samoa. Second Conference on Water Resource Sustainability Issues on Tropical Islands. Honolulu, Hawai'i, December 2nd, 2015. (poster)

Tracking land-based N to Hawaiian coral reefs: Is submarine groundwater discharge a chronic threat to water quality and reef health? 52nd Annual Meeting of the Association for Tropical Biology and Conservation, Honolulu, Hawai'i, July 13th, 2015. (oral presentation)

Impacts of land-use on coastal water quality and reef health on O'ahu and Maui. Presentation given to the United States Environmental Protection Agency, Honolulu, Hawai'i, September 19th, 2014. (oral presentation)

Using algal bioassays and GIS to detect wastewater derived nitrogen in coastal waters of Hawaii. 2nd Annual Joint Government Water Conference, University of Hawaii at Mānoa, August 12th, 2014. (oral presentation)

Testing a connection between land use, groundwater, and coastal nutrient loading on Maui. 39th Annual Albert L. Tester Symposium Honolulu, Hawai'i, March 13th, 2014. (oral presentation)

Using marine algae as bioindicators of anthropogenic nutrient pollution Hawaiian coastal waters. 2014 Ocean Sciences Meeting, Honolulu, Hawai'i, February 25th, 2014. (poster)

Poop in Paradise: Detecting anthropogenic pollution in Hawaiian coastal waters. Hanauma Bay Education Center, Honolulu, Hawai'i, November 21st, 2013. (oral presentation)

Using marine algae as a bioindicator of land-use impacts and coastal pollution in Hawai'i. 38th Annual Albert L. Tester Symposium Honolulu, Hawai'i, April 18th, 2013. (oral presentation)

Submarine groundwater discharge increases marine macroalgal photosynthesis. Water Resource Sustainability Issues on Tropical Islands Conference, Honolulu Hawai'i, November 16th, 2011. (oral presentation)

Submarine groundwater discharge: A potential resource for coastal marine ecosystems. 35th Annual Albert L. Tester Symposium Honolulu, Hawai'i, March 18th, 2010. (oral presentation, honorable mention)

Physiological effects of simulated submarine groundwater discharge on the Hawaiian endemic edible

alga *Gracilaria coronopifolia*. The American Society of Plant Biologists and the Phycological Society of America Joint Annual Meeting, Honolulu, Hawai'i, July 19th, 2009. (poster)

Physiological effects of submarine groundwater discharge on the Hawaiian marine alga *Gracilaria coronopifolia*. 11th International Coral Reef Symposium, Fort Lauderdale, Florida, July 9th, 2008. (poster)

TECHNICAL QUALIFICATIONS

Scientific SCUBA diver, rescue diver, master diver, nitrox certified diver, and current first aid/CPR. Proficient in R, ArcGIS, GPS, PAM-fluorometry, SuperSting resistivity imaging, underwater photography, benthic community analyses, pigment spectrometry, radon and radium measurement, water sampling, multi-meter measurements, microbial community assessments of water and biofilm, coral sampling, statistical analysis, and small watercraft operation.

VOLUNTEER WORK

Surfrider Foundation: O'ahu Chapter. Assists the Blue Water Task Force with water monitoring
Polynesian Voyaging Society. Assists with educational outreach, vessel restoration, crew training