

Daniel William Amato

2432 Halenoho Pl. Honolulu, Hawai'i

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

Principal Investigator , Surfrider Foundation, LLC, Project title: A rapid DNA-based test for on-site detection of <i>Enterococcus</i> in coastal waters of Hawai'i. Responsible for all aspects of this four-year project that aims to develop and test a LAMP based DNA method that rapidly quantifies fecal indicator bacteria in the field.	05/20 – present
Marine Research Specialist , Water Resources Research Center, University of Hawai'i. Project title: ACT 132- Initial biological characterization of cesspool wastewater in Hawaiian coastal regions. Co-manager of a large research team spanning four Hawaiian Islands. Duties include program planning, field team training and management, data curation and analysis, report writing and presentations.	02/19 – present
Environmental Scientist , Element Environmental, LLC, Aiea, Hawai'i. Responsible for proposals, field data collection, reporting, and invoicing on many international, federal, state, and local clients. Projects range from stormwater pollution programs, site remediation, industrial health, and marine ecology assessments.	11/17 – present
Post-doctoral Researcher , Water Resources Research Center, University of Hawai'i. 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.	6/15 – 02/19
Environmental Scientist , EnviroServices and Training Center, Honolulu, Hawai'i. Stormwater compliance consultant for the Hawaii Department of Transportation (DOT) Airports and Harbors. Responsible for implementing and tracking various pollution prevention programs. Duties include leading BMP inspections of industrial, commercial, and construction sites in addition to providing training seminars to DOT staff and tenants.	9/16 – 10/17
Research Assistant , Sea Grant College Program, University of Hawai'i at Mānoa. 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	3/12 – 5/15

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.

Research Technician, ECHO Lake Aquarium and Science Center, Burlington, Vermont. 08/03 – 05/04
Relationships between aquatic snails and density of invasive zebra mussels were investigated and reported as an honors thesis.

Research Technician, College of Medicine, University of Vermont. 08/01 – 05/02
Assisted Dr. Corey Teuscher on a study that identified quantitative trait loci (QTL), which govern phenotypic variation in a model for multiple sclerosis in mice.

VOLUNTEER WORK

Lead Coordinator, Blue Water Task Force, Surfrider Foundation- O'ahu Chapter. 01/20 – present
Core-volunteer and lead coordinator for the Blue Water Task Force. Duties include management of a >30-person volunteer citizen science team to collect and analyze bi-monthly water samples for fecal indicator bacteria at the University of Hawaii Kewalo Marine Laboratory.

PUBLICATIONS

Amato DW, Whittier RB, Dulai H, and CM Smith (2020). Algal bioassays detect modeled loading of wastewater-derived nitrogen in coastal waters of O'ahu, Hawai'i. *Marine Pollution Bulletin* 150, 110668, <https://doi.org/10.1016/j.marpolbul.2019.110668>

Shuler CK, Amato DW, Gibson V, Baker L, Olguin AN, Dulai H, Smith CM, and RA Alegado (2019). Assessment of terrigenous nutrient loading to coastal ecosystems along a human land-use gradient, Tutuila, American Samoa. *Hydrology* 6(1), 28 <https://doi.org/10.3390/hydrology6010018>

Amato DW, Smith CM, and TK Duarte (2018). Submarine groundwater discharge modifies photosynthesis, growth, and morphology for two contrasting species of *Gracilaria* (Rhodophyta). *Hydrology* 5(4), 65 <https://doi.org/10.3390/hydrology5040065>

Bishop JM, Glenn CR, Amato DW, and H Dulai (2017). Effect of land use and groundwater flow path on submarine groundwater discharge nutrient flux. *Journal of Hydrology: Regional Studies* 11:194-218 <https://doi.org/10.1016/j.ejrh.2015.10.008>

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. <https://doi:10.1371/journal.pone.0165825>

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, <https://doi.org/10.1029/2010WR009094>

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, Honolulu, Hawai'i

PRESENTATIONS

Sewage impacts on Hawaii's coastlines: past, present and future. Public webinar presentation given to Maui Nui Marine Resource Council, Maalaea, Hawaii Pacific Water Conference, Honolulu Hawai'i, October 7th, 2020. (oral presentation)

Is Groundwater pollution a chronic threat to Hawaii's coastal resources? Public presentation given for the Department of Health to the public in Waimanalo, Oahu, Hawaii, July 26th, 2018 (oral presentation)

The impact of coastal groundwater quality on Hawaiian reefs. Public presentation given to Maui Nui Marine Resource Council, Maalaea, Hawaii, October 4th, 2017. (oral presentation)

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, GIS, AutoCad, GPS, PAM-fluorometry, XRF, SuperSting resistivity imaging, underwater photography, benthic community analyses, pigment spectrometry, radon and radium measurement, water and soil sampling, multi-meter measurements, microbial community assessments of water and biofilm, coral sampling, statistical analysis, drone operation, small watercraft operation and first aid/CPR..