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Curriculum Vitae

Sean T. Beckwith, Ph.D. student, Physical Oceanography

Education

2016 M.S. Geological Oceanography, University of South Florida College of Marine Science, Saint Petersburg, FL. Thesis: Abundance of *Archaias angulatus* on the West Florida Coast Indicates the Influence of Carbonate Alkalinity over Salinity. Advisor: Pamela Hallock Muller

2002 B.S. Environmental Science, University of Florida, Gainesville, FL

Relevant Work and Research Experience

2019-present Graduate student researcher, CMS Ocean Technology Group. Apply corrections to glider mission data to produce figures and mapped data sets for scientific applications. Also assist in deployment, recovery and piloting of autonomous underwater gliders.

2017-2020 Science communicator, USF College of Marine Science (CMS). Communicate scientific work of CMS researchers using multimedia (Adobe Creative Suite) and written articles targeted to a general audience. Participate in cruises, dive ops and conferences.

2015-2016 Volunteer, USGS St. Petersburg Coastal and Marine Center. Performed spectrometric measurements of total alkalinity and coulometric measurements of dissolved inorganic carbon in the CO2 System Laboratory (Dr. Kimberly Yates). Modified TA method for freshwater influenced carbonate system chemistry.

2014-2016 Student researcher, USF College of Marine Science. Operated small research vessels to collect sediment and water samples. Measured carbonate system seawater variables using spectrometry, spectrophotometry, and coulometry. Sorted and picked foraminifera to identify symbiont bearing specimens and to recognize dissolution characteristics. Mapped species distribution and oceanographic characteristics using a GIS. Statistically analyzed CO_2 system end-members and spatial distribution of foraminifera.

2007-2008 Beckwith Electric Research member, Beckwith Electric Co., Inc., Largo, FL. Research work compared ULF/ELF signals detected by an underground antenna to voltage-over-time graphs to locate concurrent indicators of earthquake precursors in pursuit of an earthquake early warning system.

2001 Laboratory assistant, paleoceanographic laboratory, Dr. Benjamin Flower, USF CMS. Sorted and labeled core samples for mass spectrometer analysis and identified microfossils for interpretation of glacial cycles.

2001 Assistant crew member, Florida Institute of Oceanography. Assisted scientists researching red tide on monthly cruises.

Refereed Publications

Amergian, K.E., Beckwith, S., Gfatter, C., Selden, C., and Hallock, P. (2022) Can areas of high alkalinity fresh-water discharge provide potential refugia for marine calcifying organisms? Journal of Foraminiferal Research, 52(1) accepted.

Beckwith ST, Byrne RH and Hallock P (2019) Riverine Calcium End-Members Improve Coastal Saturation State Calculations and Reveal Regionally Variable Calcification Potential. Front. Mar. Sci. 6:169. doi: 10.3389/fmars.2019.00169

Published Abstracts

AGU 2016	Refugia for Carbonate Producing Organisms in High Carbon Dioxide Environmental Conditions (Poster)
GSA 2016	Abundance of *Archaias angulatus* on the inner west Florida shelf suggests the influence of carbonate alkalinity over salinity (Oral)
GSA 2015	Distribution of *Archaias angulatus* on the inner west Florida shelf: substrata and water chemistry versus temperature (Poster)

Non-refereed Publications

Beckwith, S. (2021) Intelligent Robots Could Be the Best Choice to Mine the Deep Seafloor, ROVplanet, 27 (Q2/2021); 19-22.

Beckwith, Sean Thomas, "Abundance of *Archaias angulatus* on the West Florida Coast Indicates the Influence of Carbonate Alkalinity over Salinity" (2016). Graduate Theses and Dissertations.

Awards and Honors

2021	Young Fellowship Program Fund, University of South Florida College of Marine Science
2015	Joseph A. Cushman Award for Student Research, Cushman Foundation for Foraminiferal Research
2001	Presidential Recognition- student senator at the University of Florida
2001	Award for Silent Leadership within Theta Chi fraternity, University of Florida

Teaching and Mentoring Experience

2016	Laboratory mentor to undergraduate student from USFSP. Instructed mentee on methods for washing and picking sediment samples for foraminiferal research.
2011	Primary education assistant teacher, grades 3 – 12, International Calvary Academy, Yamato, Japan. Instructed multiple grades in English, literature, math, and sciences.
2009-2011	Foreign Language Instructor, Gaba Corporation, Tokyo, Japan. Taught English to students ages 5 to senior citizen focusing on individual needs.
2005-2007	Assistant Language Teacher and cultural liaison, Yamagata City Board of Education, Yamagata, Japan. Sole foreign teacher in a junior high school of 900 students and 50+ teachers. Team-taught five English classes per day and mentored students.
2003-2005	Foreign Language Teacher, Aeon Language Corporation, Yamagata, Japan. Taught conversational English to students ages 3 to senior citizen.

Community Engagement and Volunteer Experience

- Judge, junior chemistry division: 2017 State Science and Engineering Fair of Florida
- GSA 2015, 2016 Technical session coordinator
- Treasurer of the Japan Exchange and Teaching Alumni Association, Florida Chapter 2016-19
- St. Petersburg Science Festival floating volunteer and videographer, 2017-19
- 2020 Underwater Minerals Conference assistant and science communicator
- 2022-23 Student representative on the USF College of Marine Science Safety Committee