

GERICK S. BERGSMA

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SUMMARY OF QUALIFICATIONS

- PhD in Ecology, Evolution and Marine Biology and BS in Zoology, with research experience in ecology, marine science, zoology, wildlife biology, and natural history.
- Fifteen years of experience teaching at the university level, including course and curriculum development.
- Six years of experience leading undergraduate research and internship programs with an emphasis on high-impact practices for underserved populations at a Hispanic Serving Institution.
- Extensive experiences advising and mentoring undergraduate research in ecology and natural history.
- Experience collecting and preserving biological specimens and managing museum collections.

EDUCATION

University of California, Santa Barbara

MA/PhD, Ecology, Evolution and Marine Biology: GPA 4.0/4.0 2009

University of Washington, Seattle

BS, Zoology: GPA 3.5/4.0 2000

Colegio Adventista de Sagunto, Spain / Walla Walla University, WA

Advanced program in Spanish language and culture: GPA 4.0/4.0 1999

TEACHING & UNDERGRADUATE DEVELOPMENT

California State University, Monterey Bay, Seaside, CA 2010-2020

Lecturer, School of Natural Sciences

Instructor of record for over 75 course sections in Biology (BIO), Environmental Science (ENVS), and Marine Science (MSCI); updated curriculum in ecology and introductory biology; created new courses in ornithology, zoology specimen preparation, wildlife research, and professional development; created curriculum and led workshops and seminars for the Science Internship Program (SIP); and advise students seeking and conducting external internships and undergraduate research. Courses taught:

- BIO 196, Biology Introductory Research Practicum: Wildlife Research (Sp 2017-2020)
- BIO 211 L, Ecology, Evolution, Biodiversity, & Plants Lab (Fa 2015-2016, Sp 2020)
- BIO 211 D, Discussion for Ecology, Evolution, Biodiversity, & Plants (Fa 2019)
- BIO 240 & 240 L, Ecology, Evolution & Biodiversity (Fa, Sp 2011-2012)
- BIO 292, Professional Development for Biologists (Fa, Sp 2015-2020)
- BIO 301, Research & Technical Writing in Biology (Sp 2020)
- BIO 340 & 340 L, Ecology (Fa 2010-2011; Fa, Sp 2014-2020)
- BIO/MSCI 345 & 345 L, Marine Biology (Fa, Sp 2011-2012)
- BIO 356, Zoology Specimen Preparation (Wi 2018-2020)
- BIO 362, Field Ornithology (Su 2015-2020)
- BIO 493, Biology Test-based Capstone (Sp 2015-2017)
- BIO/ENVS/ENSTU/MSCI 394 & 494, Science Internship (Fa, Sp 2014-2020)
- ENVS 300, Reading, Writing & Critical Thinking in Environmental Science (Sp 2011)
- MSCI 340, Marine Ecology (Fa 2016, 2018, 2019)
- MSCI 545, Marine Ecological Systems (Sp 2018-2019)
- Science Internship Program Professional Development Workshops and Seminars (2015-2020)

Recurring guest lectures for Adventures in Marine Science (MSCI 185), Marine Ecology (MSCI 340), Advanced Marine Science & Policy (MSCI 645), and Scientific Writing (ENVS 502)

Summer Curriculum Associate & Faculty Mentor, Undergraduate Research Opportunities Center

Established and co-lead the UROC Summer Research Program, an REU-like program that serves CSUMB undergraduates conducting undergraduate research; developed curriculum for instructional components of the Monterey Bay Regional Ocean Sciences REU program; created and lead academic workshops and seminars; supervise and mentor undergraduate researchers. Instructional activities include:

Undergraduate Research Mentor (2016-2020)
UROC Academic Development Workshops and Seminars (2013-2020)
RSCH 294/394, UROC Summer Undergraduate Research Program (Su 2014-2018)
Monterey Bay Regional Ocean Science Research Experience for Undergraduates (REU) (Su 2014-2018)

Programs Coordinator/Research Associate, Undergraduate Research Opportunities Center

Coordinated and led academic and undergraduate research activities for the UROC Scholars program, UROC Researchers program, CSUMB McNair Scholars Program, and CSUMB Louis Stokes Alliances for Minority Participation Program; managed partnerships and solicited undergraduate research opportunities with regional research institutions; managed hiring and logistical support for undergraduate researchers; developed curriculum and delivered 4-semester series of academic research and grad prep seminars (RSCH); created written and online resources for undergraduate academic and professional development; collaboratively developed faculty and graduate student mentor training program for researchers at CSUMB and partner institutions. Courses taught:

Interim Research Associate and Student Advisor (Su 2019, Sp 2020)
RSCH 200, Undergraduate Research I (Sp 2013-2014)
RSCH 300, Undergraduate Research II (Fa 2013-2014)
RSCH 301, Undergraduate Research III (Sp 2013-2014)
RSCH 400, Undergraduate Research IV (Fa 2013-2014)

University of California, Santa Barbara

2004-2009

Teaching Assistant, Ecology, Evolution & Marine Biology

Instructor for a 2-quarter field and lab based ecological research course, and teaching assistant for introductory biology and graduate biostatistics courses. Courses taught:

EEMB 2 L, Laboratory Investigations of Life, Curriculum Development (2008-2009)
EEMB 3 L, Introduction to the Diversity of Life (Sp 2008)
EEMB 120 AL, Field and Laboratory Studies in Ecology I (Fa 2004-2008)
EEMB 120 BL, Field and Laboratory Studies in Ecology II (Wi 2005-2009)
EEMB 276, Advanced Biostatistics (Sp 2005-2006)

Instructor, Acadia Institute of Oceanography, Seal Harbor, ME

2003

Instructional Staff

Taught intensive residential summer oceanography program for college-bound high school students. Modules included introductory lectures coupled with field and laboratory exercises. Modules taught:

Invertebrate Zoology, Ichthyology, Marine Ecology, and Geophysics (Su 2003)
Invertebrate Zoology and Coral Reef Ecology (Fa 2003 field program in Jamaica)

BIOLOGICAL RESEARCH & CONSERVATION

Curator of Biological Collections, California State University, Monterey Bay, Seaside, CA

2014-2020

Collecting, specimen preparation, digitization, and management of biological teaching collection
Solicited and managed over \$200,000 in gifts and in-kind donations to expand and house collection

Field Observer, Sea Otter Research & Conservation, Monterey Bay Aquarium, Monterey, CA Sea otter tracking, population monitoring and behavioral observations	2009-2011
Researcher, Ecology, Evolution & Marine Biology, University of California, Santa Barbara Community effects of epibionts on corals (Advisor: Sally Holbrook)	2003-2009
Biologist, Moorea Coral Reef Long-term Ecological Research Program, French Polynesia Benthic surveys monitoring marine protected areas in Moorea (in collaboration with CRIOBE)	2007-2008
Visiting Researcher, National Museum of Marine Biology & Aquarium, Che Cheng, Taiwan Biogeography of symbiont-induced changes in coral morphology (Host: Tony Fan)	2007
Research Assistant, Ecology, Evolution & Marine Biology, University of California, Santa Barbara Realized dispersal patterns of planktonic larvae in marine protected areas	2004-2006
Volunteer Ranger, Koror State Department of Conservation & Law Enforcement, Koror, Palau Fish habitat associations, mud clam monitoring and marine protected area delineation and patrols	2003
Biological Technician, University of Montana, Missoula, MT Avian migratory stop-over ecology along the San Pedro Wildlife Corridor, AZ (PI: David Cerasale)	2003
Intern, PRBO Conservation Science, Palomarin Field Station, Bolinas, CA Avian population monitoring and educational outreach	2002
Biological Technician, UW College of Forest Resources, Seattle, WA Avian ecology in variable density thinning regimes (PI: David Manuwal)	2002
Research Technician, UW Olympic Natural Resources Center, Forks, WA Habitat utilization by passerine nest predators (PI: John Marzluff)	2001
SURF Fellow, Scripps Institution of Oceanography, La Jolla, CA Comparative anatomy of endothermic sharks (PI: Jeffrey Graham)	2000
Research Apprentice, UW Friday Harbor Laboratories, Friday Harbor, WA Intertidal invertebrate diversity of the San Juan Islands (PI: Alan Kohn)	1999
Research Assistant, Burke Museum of Natural History, Seattle, WA Canalicular and osteonic arrangement in vertebrate bone (PI: John Rensberger)	1997

GEOPHYSICAL & OCEANOGRAPHIC RESEARCH

Research Aide, Pacific Northwest Seismograph Network, Seattle, WA Seismic monitoring and media relations in Washington and Oregon	1997-2001
Volunteer, United States Geological Survey, Seattle, WA Seismic Hazard Investigation in the Puget Sound (PI: Tom Brocher)	1998-2000
SARI Fellow, UCSB Marine Science Institute, Santa Barbara, CA Foraminiferal test magnesium isotope proxy for paleoceanographic temperature (PI: David Lea)	1998
Research Fellow, NASA Washington Space Grant Consortium, Seattle, WA Geodetic Survey of Crustal Deformation in Western Washington (PI: Anthony Qamar)	1997

EDUCATIONAL OUTREACH & SCIENCE COMMUNICATION

Instructor, Let's Go Outdoors! Program, Monterey Peninsula Regional Parks District, CA	2019-2020
Volunteer, Science Instruction, Forest Grove Elementary School, PGUSD, Pacific Grove, CA	2017-2020
Contributing Photographer, Wildscreen Exchange, Bristol, UK	2018-2019
Contributing Photographer, SeaWeb Marine Photobank, Washington, DC	2008-2012

Student Oceanography Club Mentor, Monterey Bay Aquarium, Monterey, CA	2009-2011
Tidepool School Docent, Hollister Ranch Conservancy, Santa Barbara, CA	2005-2009
Classroom Scientist, NCEAS Kids Do Ecology program, Santa Barbara, CA	2005-2009
Contributor, Moorea Coral Reef LTER Education and Outreach, Santa Barbara, CA	2007-2009
Volunteer, Burke Museum of Natural History, Seattle, WA	1997-2000
Outreach Volunteer, Birch Aquarium, La Jolla, CA	2000

PROFESSIONAL & COMMUNITY SERVICE

Member, CSUMB Institutional Animal Care and Use Committee, Seaside, CA	2018-2020
SORAC Outreach Committee Member, Monterey Bay Aquarium, Monterey, CA	2010-2012
Graduate Student Representative, Moorea Coral Reef NSF LTER Site, French Polynesia	2007-2008
Volunteer, UC Cooperative Extension 4-H Agua Pura Program, Santa Barbara, CA	2007
PNSN Representative, FEMA/City of Seattle Project Impact, Seattle, WA	1998-2002
Volunteer Mason/Interpreter, PSAA/Maranatha Volunteers International	1998-2002
Public Relations Officer, UW Habitat for Humanity, Seattle, WA	1996-2000
President, UW American Red Cross University Leaders Program, Seattle, WA	1996-2000
Small Business Advisor, Institute for Hazard Mitigation Planning and Research, Seattle, WA	1999-2000

PUBLICATIONS

- Bergsma GS (2012) Epibiotic mutualists alter coral susceptibility and response to biotic disturbance through cascading trait-mediated indirect interactions. *Coral Reefs*. 31(2): 461-469. DOI: 10.1007/s00338-011-0861-0
- Bergsma GS (2012) Coral mutualists enhance fish abundance and diversity through trait-mediated facilitation cascade. *Marine Ecology Progress Series*. 451: 151-161. DOI: 10.3354/meps09615
- Bergsma GS & Martinez CM (2011) Mutualist-induced morphological changes enhance growth and survival of corals. *Marine Biology*. 158(10): 2267-2277. DOI: 10.1007/s00227-011-1731-6
- Bergsma GS (2010) Moorea Coral Reef LTER: Coral reef sand flat sampling sand infaunal surveys. [Published Data] knb-lter-mcr.5001.7 (<http://metacat.lternet.edu/knb/metacat/knb-lter-mcr.5001.7/lter>)
- Bergsma GS (2009) Tube-dwelling coral symbionts induce significant morphological change in Montipora. *Symbiosis*. 49: 143-150. DOI: 10.1007/s13199-009-0047-5
- Bergsma GS (2009) *Ecological effects of finger-forming coral symbionts*. Ph.D. Dissertation. Ecology, Evolution and Marine Biology, University of California, Santa Barbara. 131pp. ISBN: 9781109608151

INVITED RESEARCH TALKS AND SEMINARS

- Bergsma GS, "Interpreting Avian Adaptations." Invited volunteer training seminars for the Pacific Grove Museum of Natural History, Sep-Oct. 2019.
- Bergsma GS, "Untangling biological interactions to understand how a species affects its community." Invited talk for the CSUMB School of Natural Sciences Seminar Series, Nov. 2016.
- Bergsma GS, "Untangling biological interactions to understand how one species affects a reef community." Invited talk for the Moss Landing Marine Laboratories Seminar Series, Jan. 2013.
- Bergsma GS, "An amphipod's place: discovering how one species affects a coral reef." Invited talk for the Monterey Bay Aquarium Lunchtime Seminar Series, May 2010.

- Bergsma GS, "Interaction Cascades: a case study in how direct and indirect effects of a coral mutualist propagate through a reef," Invited talk for the UCSB Ecology, Evolution and Marine Biology Seminar Series, Nov. 2009.
- Bergsma GS, "Community Cascades: a case study in how direct and indirect effects propagate through a system," Invited talk for the UW Friday Harbor Laboratories Seminar Series, Nov. 2007.
- Bergsma GS, "Effects of Mutualistic Tube-dwelling Amphipods on Corals," Invited talk at the Taiwan National Museum of Marine Biology and Aquarium, Feb. 2007.
- Bergsma GS, "Comparison of Tube-dwelling Symbiotic Amphipods of Moorea and Taiwan," Seminar given at the NMMBA Polyp Lab Meeting, Feb. 2007.

CONFERENCE PRESENTATIONS

- Munro-Kennedy SG* and Bergsma GS, "SARS-COV-2 and *Larus Occidentalis*: How the coronavirus pandemic has affected western gull foraging behavior in Monterey Bay," Talk presented at the Western Society of Naturalists Annual Meeting, Nov. 2020
- Fuentes MC* and Bergsma, GS, "Coral symbionts mediate the effect of sedimentation on corals," Talk presented at the Western Society of Naturalists Annual Meeting, Nov. 2020
- Bergsma GS, Duggan J, Silveus J, and Thomas T, "Encouraging undergraduate confidence and participation in research through lower-division course-based undergraduate research experiences (CUREs)," Talk presented at the Association of College and University Biology Educators Annual Conference, Oct. 2019
- Bergsma GS, "Leveraging natural history teaching collections to maximize student learning opportunities," Poster presented at the Association of College and University Biology Educators Annual Conference, Oct. 2019
- Reyes Gallegos E* and Bergsma GS, "The relationship between arthropod communities and the presence of lichen in oak woodlands," Poster presented at the Entomological Society of America Pacific Branch Annual Meeting, Apr. 2019
- Gautreaux ST* and Bergsma GS, "The Effect of Lichen Cover on Avian Communities and Foraging in Oak Woodlands," Poster presented at The Wildlife Society California Central Coast Annual Wildlife Symposium, Nov. 2018
- Vizina RM*, Bergsma GS, "Comparison of the Ecological Communities that Reside in High Lichen vs. Low Lichen Oak Woodlands," Poster presented at the Society for Integrative and Comparative Biology Annual Meeting, Jan. 2018
- Bergsma GS, "With a little help from the little guy: symbiosis on the coral reef," Talk presented at the National Association of Interpreters Certified Interpretive Guide Training Workshop, Mar. 2010
- Bergsma GS, "Comparison of the impacts of echinoderms on foundation species in temperate and tropical reefs," Poster presented at the International Temperate Reef Symposium, Jan. 2009
- Bergsma GS, "The effect of symbiont induced structure on crown-of-thorns prey choice," Talk presented at the MCR LTER All Investigator Meeting, Nov. 2008
- Bergsma GS, "*Montipora* as fish habitat in Moorea: quality of corals as fish refuge," Poster presented at the MCR LTER Graduate Student Meeting, Nov. 2008
- Bergsma GS, "Tubicolous coral symbionts induce morphological change and enhance growth in *Montipora*," Poster presented at the International Coral Reef Symposium, Jul. 2008
- Bergsma GS, "Mutualist induced coral structure provides habitat for reef fish," Talk presented at the Western Society of Naturalists Annual Meeting, Nov. 2007

Gowan JC*, Bergsma GS and Brooks AJ, "Secondary effects of *Acanthaster planci* predation on survival of resident damselfish," Poster presented at the WSN Annual Meeting, Nov. 2007 (Best Poster Award)

Bergsma GS, "Mutualistic tube-dwelling amphipods protect coral from predators," Talk presented at the Western Society of Naturalists Annual Meeting, Nov. 2006 (Mia Tegner Award)

Bergsma GS, "Mutualistic tube-dwelling amphipods enhance growth in corals," Talk presented at the MCR LTER Scientist Meeting, Nov. 2006

Bergsma GS, "Coral mutualist induced morphological defense from echinoid predators," Poster presented at the NSF LTER Annual Scientists Meeting, Sep. 2006

Bergsma GS, "Ecological significance of tube-dwelling amphipods," Talk presented at the MCR LTER Scientist Meeting, Dec. 2005

Bergsma GS, "Comparison of afferent branchial arteries of three sharks," Talk presented at the Scripps Institution of Oceanography Undergraduate Research Conference, Aug. 2000

Steele WP and Bergsma GS, "Rapid alert for Cascadia earthquakes," Poster presented at the Seismological Society of America Annual Meeting, Apr. 1999

Bergsma GS and Von Langen P, "Culturing planktonic foraminifera in order to better understand climate change," Talk presented at the UCSB SARI Research Colloquia, Aug. 1998

Bergsma GS and Qamar A, "Data acquisition for the Pacific Northwest Geodetic Array," Poster presented at the NASA Space Grant Consortium Annual Meeting, Sep. 1997

*indicates undergraduate author

HONORS & AWARDS

UC Santa Barbara Graduate Research Mentorship Program Fellow • UCSB Affiliates Nancy Brown Environmental Dissertation Award • UC Santa Barbara Science and Engineering Research Grant • Ecology, Evolution, and Marine Biology Graduate Research Grant • Western Society of Naturalists Mia Tegner Award • Worster Award for Undergraduate Mentoring • NASA Jenkins Predoctoral Fellowship Alternate Fellow • NSF Graduate Research Fellowship Honorable Mentions (3) • Nejat B. Ezal Marine Sciences Fellow • UC Santa Barbara Doctoral Scholars Fellow • Bonderman Honors Travel Fellow • UW Friday Harbor Laboratories Blinks Research Fellowship (declined) • Mary Gates Endowment Leadership Award • S. Sterling Munro Foundation Public Service Award • University of Washington President's Scholar • Walla Walla College Spirit of Excellence Leadership and Scholarship Awards • National Council for Teachers of English Achievement Award in Writing

ADDITIONAL SKILLS & TRAINING

Fluency speaking English and Spanish • National Association of Interpreters Certified Interpretive Guide • PADI Advanced Open Water Diving Certification • AAUS Research Diving Certification (60 ft) • Permis Mer Côtière (French small vessel coastal navigation license)