Anaí Novoa

EDUCATION

- 2023 **Ph.D. Marine Biology** Scripps Institution of Oceanography, UC San Diego Dissertation title: *Latitudinal gradients in parasite diversity and load throughout entire species geographic ranges* Advisor: Dr. Ryan Hechinger
- 2015 **M.S. Marine Science** College of Arts and Sciences, University of San Diego Thesis title: *Examining bivalve community shifts over time in several estuaries in southern California and northern Baja California, MX* Advisors: Dr. Drew Talley and Dr. Theresa Sinicrope Talley
- 2012 **B.A. Biology** College of Creative Studies, UC Santa Barbara Advisor: Dr. Armand Kuris

APPOINTMENTS

2023- Scripps Summer Undergraduate Research Fellowship and Community Engagement, EquityPresent Diversity & Inclusion Program Coordinator

HONORS & AWARDS

- 2022-23 Scripps Community Engagement, Equity Diversity & Inclusion Fellowship (\$4,800)
- 2021-22 Scripps Outstanding Teaching Assistant Award (\$300)
- 2022 Southern California Society of Parasitologists Best Poster Presentation (\$150)
- 2022 American Society of Parasitologists Student Travel Grant (\$400)
- 2020-21 Inclusive Excellence Award Recipient for Marine Sciences, EDI Scripps Community Engagement Fellows
- 2021 Western Society of Naturalists Conference 2021 Best Talk
- 2021-22 Scripps Community Engagement, Equity Diversity & Inclusion Fellowship (\$4,800)
- 2021 American Society of Parasitologists Meritorious Student Paper Award (\$200)
- 2021 Western Society of Naturalists, Rafe Sagarin Fund for Innovative Ecology (\$2,500)
- 2021 Honorable Mention, Ford Foundation Fellowships Dissertation
- 2020-21 Scripps Community Engagement, Equity Diversity & Inclusion Fellowship (\$4,800)
- 2019 American Museum of Natural History, Lerner-Gray Marine Research Grant (\$3,492)
- 2019 Alternate- Honorable Mention, Ford Foundation Fellowships Predoctoral
- 2018 Scripps Department Graduate Student Excellence Travel Award (\$3,000)
- 2018 Honorable Mention, Ford Foundation Fellowships Predoctoral
- 2017-18 UCSD, San Diego Fellowship (\$37,019.18)
- 2017 Mia J. Tegner Award (\$1,321)
- 2017 Honorable Mention, Ford Foundation Fellowships Predoctoral
- 2016-17 UCSD, San Diego Fellowship (\$36,434.63)
- 2015 Association for the Sciences of Limnology and Oceanography Multicultural Program

- 2013 Society for Advancement of Chicanos and Native Americans in Science Travel Award
- 2013 Association for the Sciences of Limnology and Oceanography Multicultural Program
- 2012-13 University of San Diego, Dean's Graduate Merit Scholar (\$5,000)
- 2012 Association for the Sciences of Limnology and Oceanography Multicultural Program
- 2011 Selected to accept Presidential Award for Excellence in Science, Mathematics and Engineering Mentoring (PAESMEM) on behalf of Ocean Discovery Institute

PUBLICATIONS

- Baetge N, Behrenfeld MJ, Fox J, Halsey KH, Mojica KDA, Novoa A, Stephens BM and Carlson CA. 2021. The Seasonal Flux and Fate of Dissolved Organic Carbon Through Bacterioplankton in the Western North Atlantic. *Front. Microbiol.* 12:669883. doi: 10.3389/fmicb.2021.669883
- Novoa A, TS Talley, D Talley, J Crooks, N Reyns. 2016. Spatial and Temporal Examination of Bivalve Communities in Several Estuaries of Southern California and Northern Baja California, MX. <u>PLoS ONE 11(2): e0148220</u>. doi:10.1371/journal. pone.0148220

In Preparation:

- Novoa A, and RF Hechinger. A particularly strong role for trophically transmitted parasites and predation at the lower latitudes of species ranges. for *Proc. R. Soc. B.* Full draft.
- **Novoa A**, and RF Hechinger. Latitudinal gradients in parasite diversity of the striped shore crab, *Pachygrapsus crassipes*, throughout its two coastal habitats.

PRESENTATIONS

- **Novoa A,** and RF Hechinger. Latitudinal gradients in parasite diversity and load of the shore crab, *Pachygrapsus crassipes*, in its two coastal habitats. Western Society of Naturalists (WSN). 2022.
- Novoa A, and RF Hechinger. Latitudinal gradients in parasite diversity of the striped shore crab, *Pachygrapsus crassipes*, throughout its two coastal habitats. American Society of Parasitologists (ASP). 2022.
- **Novoa A,** and RF Hechinger. Do host populations consistently differ in their levels or types of parasitism throughout their geographic ranges? Southern California Society of Parasitologists (SCSP). 2022.
- **Novoa A**. Investigating the interplay between parasitism and host biogeography. Coastal Oceanography Seminar: Scripps Institution of Oceanography and Universidad Autónoma de Baja California. 2022.
- **Novoa A,** and RF Hechinger. Do host populations consistently differ in their levels or types of parasitism throughout their geographical ranges? Western Society of Naturalists (WSN). 2021.
- **Novoa A,** and RF Hechinger. Mapping parasitism onto host geographic ranges: Do host populations differ in their levels or types of parasitism between range edges and range centers? Scripps Student Symposium. 2021.
- **Novoa A,** and RF Hechinger. Mapping parasitism onto host geographic ranges: Do host populations differ in their levels or types of parasitism between range edges and range centers? American Society of Parasitologists (ASP). 2021.
- **Novoa A,** and RF Hechinger. Mapping parasitism onto host geographic ranges: Do host populations differ in their levels or types of parasites between range edges and range centers? Ecological Society of America (ESA). 2021.
- **Novoa A,** and RF Hechinger. Mapping parasitism onto host geographic ranges: Do host populations differ in their levels or types of parasitism between range edges and range centers? Southern

California Academy of Sciences (SCAS). 2021.

- Novoa A, Talley TS, Talley D, Crooks J. Assessing bivalve community shifts in several estuaries in southern California and Baja California, MX. Annual meeting of the Association for the Sciences of Limnology and Oceanography (ASLO), Granada, Spain. 2015.
- Novoa A, Talley TS, Talley D, Crooks J. Examining bivalve community shifts in several estuaries in southern California and northern Baja California, MX. Annual Meeting of the California Estuarine Research Society (CAERS), Bodega Bay, CA. 2014.
- Novoa A, Talley TS, Talley D. Examining bivalve community shifts in several bays in San Diego, California and northern Baja California, MX. Society for Advancement of Chicanos and Native Americans in Science (SACNAS), San Antonio, TX. 2013.
- Novoa A, Talley TS, Talley D. Assessing long-term changes in the mollusk community of a southern California salt marsh. Annual meeting of the Association for the Sciences of Limnology and Oceanography (ASLO), New Orleans, LA. 2013.
- Cruz D, El-Aton E, Figueroa A, Godinez C, Goodwin L, Nguyen T, Novoa A, Pisbe C, Ramirez J, Razon M, Talley TS, Tran D, Whitcraft C. How do dominant salt marsh plants influence benthic and nektonic faunal communities? Annual Meeting of the California Estuarine Research Society (CAERS), CSU Long Beach, CA. 2012.
- Novoa A, Tanner C, Levin L. Ocean acidification effects on *Strongylocentrotus purpuratus* larvae. Annual meeting of the Association for the Sciences of Limnology and Oceanography (ASLO), Salt Lake City, UT. 2012.

TEACHING

Instructor of Record

- 2021 SIO 132: Introduction to Marine Biology, UC San Diego
- 2016 Marine Science, University of San Diego TRiO Upward Bound

Guest Lectures/ Invited Presentations

- 2023 EOSC 435: Wetlands Ecology, University of San Diego
- 2023 SIO 3: Life in the Oceans, UC San Diego
- 2023 Inter-Sustainability Council, UC San Diego: Green Talks
- 2022 SIO 3: Life in the Oceans, UC San Diego
- 2022 SIO 139: Current Research in Marine Biology Colloquium, UC San Diego
- 2021 Aquatic Biogeochemistry Seminar- Universidad Autónoma de Baja California
- 2021 EOSC 435: Wetlands Ecology, University of San Diego
- 2020 EOSC 435: Wetlands Ecology, University of San Diego

Teaching Assistant

- Fall 2022 SIO 132: Introduction to Marine Biology
- Fall 2021 SIO 132: Introduction to Marine Biology
- Fall 2020 SIO 132: Introduction to Marine Biology
- Fall 2019 SIO 132: Introduction to Marine Biology
- Fall 2018 SIO 132: Introduction to Marine Biology

MENTORING

Formal Student Mentoring (2008- Present)

2022-23 Master of Advanced Studies in Marine Biodiversity and Conservation/ PhD Mentorship Program, Scripps Institution of Oceanography

Analisa Freitas- Mentored Scripps MAS student; helping her navigate graduate school,

networking, and making the most of her time at Scripps.

- 2022-23 Women of Color in Ecology, Evolutionary Biology (WOC in EEB) Peer Mentoring Program
- 2022-23 Women of Color in Ecology, Evolutionary Biology Mentoring Program
- 2021-22 **Ocean Discovery Institute** (ODI) Career Access Mentor Program Karla Giselle Alcaraz- Mentored ODI AmeriCorps fellow. Met with her weekly to help her navigate the graduate school system and graduate school application process.
- 2020-21 **Ocean Discovery Institute** Career Access Mentor Program Reyna Lopez Carrillo- Mentored ODI AmeriCorps fellow. Met with her weekly to help her navigate the graduate school system and graduate school application process.
- 2019-20 **Ocean Discovery Institute** Career Access Mentor Program Delia Barajas- Mentored ODI AmeriCorps fellow. Met with her bimonthly to help her navigate the community college system and 4-year University application process.
- 2018-19 **Ocean Discovery Institute** College Access Mentor Program Maria Gonzalez- Mentored Hoover High School student. Met with her weekly to guide her through college applications, financial aid, scholarships, and college selection process.
- 2008-12 **Peer Mentor** Developed peer-to-peer mentorship for ODI first generation college students at UCSB

RESEARCH MENTORING

- 2022 Undergraduate Research Kendra Lee
- 2020 Undergraduate Research Tyler Lo
- 2020 High School Student Linworth Experiential Program, Walkabout
- 2018-19 **SIO 199 Undergraduate Research** Anna Gumberg (2019 SIO Undergraduate Symposium Presentation)
- 2018-19 **SIO 199 Undergraduate Research** Yutian Fang (2019 SIO Undergrad Symposium Presentation)
- 2018-19 **Summer Undergraduate Research Mentoring** Jennifer Larissa Smith Saiza Universidad Autónoma de Baja California, Ensenada BC
- 2012-13 Summer Undergraduate Research Mentoring Rosa Calvario UC Santa Barbara (2013 SACNAS Presentation)

DIVERSITY, EQUITY, AND INCLUSION SERVICE AND SCHOLARSHIP DEI workshops and panels

- Oct 2023 NDiSTEM Conference, SACNAS session speaker "Empower ourselves and each other: Embracing our intersectional identities to strengthen connections within the STEM community"
- Aug 2022 Water Justice Exchange, University of San Diego As an Ocean Discovery Institute Ambassador helped co-lead the Ideation Collaborative tour and discussions
- Sep 2018 Graduate Student Speaker Future Faces of STEM: Maximizing Diversity by Cultivating Regional Support Networks, SACNAS San Diego Regional Conference
- 2018 **Graduate Student Panelist** spoke about my experiences and path during a Graduate Student Panel workshop for SEEDS (Strategies for Ecology Education, Diversity and Sustainability) participants

Departmental Service

2020- Scripps Community Engagement – Equity, Diversity & Inclusion Fellowship

- Present Lead and facilitate discussions around equity, diversity, and inclusion by providing learning opportunities for the Scripps community (e.g., Scripps Anti-Racism Reboot, Scripps Community Meetups), organize and provide support for the EDI initiatives: ACCESS Justice Initiative (Addressing Climate Change through Environmental Science and Social Justice), DEEP Connections Initiative (Developing Engagement through Existing Pipeline Connections)– this diversity and science lecture series highlights the scientific endeavors of minoritized scholars who are active advocates for EDI, Chat With a Scripps Scientist–this program seeks to demystify the graduate application and admissions process and support racially minoritized students from minority-serving institutions
- 2020-21 Graduate Student Representative Scripps Diversity Advisory Committee
- Apr 2021 Fellowship Panelist Scripps Student Fellowship Webinar, Impact of philanthropy on student education and research

PROFESSIONAL SERVICE

- Reviewer for: *Ecology*
- Aug 2023 **Ocean Resources Enhancement and Hatchery Program** (OREHP), Focus Group Member – Engaged in facilitated discussions to help develop a vision, criteria, and options for the experimental hatchery program within the overall framework provided by AB 1949.

UNIVERSITY SERVICE

- Apr 2022 **Summer Teaching Panelist** (for graduate students and postdocs preparing to teach as Summer Associate-Ins) *Lessons Learned and Q&A*
- Sep 2021 Experienced IA Panelist, New IA Symposium *Teaching in Trying Times and Learning from Experienced IAs*
- 2017 Alumni Scholarship Reader, University of San Diego Therese Whitcomb Scholarship
- 2013-14 Graduate Student Representative, USD Graduate Student Council

COMMUNITY OUTREACH AND SCIENCE ENGAGEMENT

- 2023-26 **Board of Directors**, Ocean Discovery Institute Ensure that ODI inspires the next generation of science leaders by creating learning experiences for young people traditionally excluded from science due to race, income status, and educational opportunity.
- 2023-26 Alumni Advisory Council, Ocean Discovery Institute Board of Directors liaison for the Alumni Advisory Council
- 2021-26 **Science Advisory Council,** Ocean Discovery Institute Provide scientific and professional perspective to Ocean Discovery staff regarding organizational strategy (e.g., program design, communications, events, recruitment, giving, volunteering)

Guest Presentations and Panels:

- Feb 2021 Graduate Student Panelist, Institute of the Americas, Mujeres en STEAM Webinar
- Nov 2020 Graduate Student Panelist, UCSD Society for Advancement of Chicanos and Native Americans in Science (SACNAS) Chapter, *Community College Workshop*
- Feb 2020 **Guest Presentation,** Xochicalco High School Tijuana, MX, "*Examinando la interacción entre parásitos y la biogeografía de sus huespedes*"
- 2018 **Guest Speaker**, Castle Park Middle School 3rd Annual Career Day

2016 Graduate Student Panelist, University of San Diego McNair Scholars

- 2016 **Guest Speaker**, *Subject Matters* at The Old Globe- following the *October Sky* performance, I discussed the parallels of my career to *October Sky*: pursuing a life in science despite pressures and hurdles presented in my environment
- 2016 **Keynote Speaker,** delivered the keynote address at the 2016 Scripps Institution of Oceanography Summer Undergraduate Research Orientation
- 2008- Guest Scientist and Student Ambassador, Ocean Discovery Institute Longstanding
- Present volunteer in events that expose youth to science; including wetland restorations, **mentoring** underrepresented high school students with college preparation, **guest scientist** during marine science fieldtrips for inner city elementary and middle schools in San Diego.

PROFESSIONAL DEVELOPMENT

- 2023 **II Encuentro de Investigación Islas del Golfo de California- BC,** Ponencias y mesa de diálogo
- 2021 **Recognition of Expertise in Equitable and Evidence-based Teaching,** Engaged Teaching and Learning Commons, UCSD
- 2021 **Introduction to College Teaching,** Engaged Teaching and Learning Commons, UCSD intensive 30-hour, seminar-style course that prepares graduate students and postdocs for a positive teaching experience as future faculty members by developing skills and expertise in evidence-based teaching practices that support student learning.
- 2021 Webinar: *From Equity Talk to Equity Walk: Expanding Practitioner Knowledge for Racial Justice in Higher Education* facilitated by Dr. Estela Mara Bensimon
- 2021 Webinar: *Evidence Based Pedagogy for Neurodiverse Classroom* facilitated by graduate teaching consultants from the UCSD Engaged Teaching Hub
- 2020 Webinar: Addressing Anti-Blackness facilitated by Shola Richards

PREVIOUS RESEARCH EXPERIENCE

- 2016- Graduate Researcher (PhD) Scripps Institution of Oceanography, UCSD, La Jolla, CA. My
- dissertation research investigates the interplay between parasitism and host biogeography. 2023 Using a hypothesis-driven framework—formulated by drawing upon basic principles of biogeography, ecological parasitology, and epidemiology— my research asks: 1) Do parasite infracommunities follow predictable patterns along latitudinal gradients? 2) Do distinct functional parasitic consumer strategies follow predictable patterns consistent with biogeographical and epidemiological theory? I address these questions by documenting spatial patterns of parasitism at the infracommunity level-expressed with different currencies and diversity metrics-throughout the entire geographical ranges of four fish and 20+ invertebrate species from three coastal habitats (estuary, rocky shore, sandy beach) along the Pacific coast of North America. In the summers of 2018 and 2019, I executed two major two-month-long field expeditions, collecting hosts from replicate populations in each of three major portions of their geographic ranges (southern edge, center, northern edge), sampling at 50+ localities, in three US states (California, Oregon, Washington) and two MX states (both Pacific and Gulf of California sides of Baja California and Baja California Sur). Advisor: Dr. Ryan Hechinger.

Oct-Dec Junior Specialist NASA NAAMES (North Atlantic Aerosols & Marine Ecosystems Study)

2015 *Earth Venture Suborbital Mission 1.* NASA program North Atlantic Aerosols and Marine Ecosystems Study (NAAMES) cruise. Collected dissolved organic matter (DOM) samples and conducted microbial experiments. Advisor: Dr. Craig Carlson

Apr-May Field technician UCSB Ecology, Evolution, & Marine Biology, Santa Barbara, CA.

- 2015 CLIVAR Repeat Hydrography cruise. Collected dissolved organic matter (DOM) samples. Advisor: Dr. Craig Carlson
- 2012-15 **Graduate Researcher (MS)** *University of San Diego, San Diego, CA.* Used historical and contemporary sampling to investigate the spatial and temporal changes in bivalve communities of southern California and northern Baja California. Co-Advisors: Dr. Drew Talley, Dr. Theresa Sinicrope Talley

Summer Graduate Researcher Ocean Discovery Institute, Bahía de Los Ángeles, Baja California

2012 *MX*. Conducted a quantitative biodiversity assessment in a Baja California wetland. Mentored high school students during the project. Advisor: Dr. Theresa Sinicrope Talley

Summer Undergraduate Researcher SURF/ STARS program, Scripps Institution of Oceanography,

- 2011 San Diego, CA. Examined the growth and survivability of sea urchin, *Strongylocentrotus purpuratus* larvae in response to anthropogenic ocean acidification. Advisor: Dr. Lisa Levin
- 2010-11 **Undergraduate Researcher** *UCSB Ecology, Evolution, & Marine Biology, Santa Barbara, CA.* Focused on the evolutionary ecology of seeds and reproductive characteristics in *Clarkia* plants. Analyzed leaf dimensions between self-breeders and cross-breeders, and their biomass density. Advisor: Dr. Susan Mazer

Summer Undergraduate Researcher Ocean Discovery Institute, Bahía de Los Ángeles, Baja

2009 *California MX*. Examined the energy transfer between shore-drift to inland, continuing the work of the late Dr. Gary Polis'- over 25-year longitudinal study. Advisor: Dr. Drew Talley

Summer Undergraduate Researcher Multicultural Students At Sea Together (MAST), Hampton,

2008 *Virginia*. Studied the oxygen depletion of the Chesapeake Bay while learning about marine policy and heritage of Chesapeake Bay. Advisor: Dr. Benjamin Cuker

2007- Undergraduate Researcher UCSB Ecology, Evolution, & Marine Biology, Santa Barbara,

- 2012 *CA*. Collected and processed dissolved organic matter (DOM) samples to examine the roles marine microbes play in carbon cycling. Advisor: Dr. Craig Carlson
- Summer
 2007
 Undergraduate Researcher ASU Ecology, Evolution, & Environmental Sciences, Bahia de 2007
 Los Angeles MX. Investigated potential anthropogenic impacts (i.e., human disturbance) on local sea lion populations and the effects on their migration patterns in the islands of Bahia de Los Angeles. Advisor: Dr. Julie K. Young