

# VERONICA PADILLA VRIESMAN

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## EDUCATION

- 2022            Ph.D. in Earth and Planetary Sciences, UC Davis (*finishing Spring 2022*)  
                  Dissertation: Bivalve biomineralization in a changing climate: investigating marine mussel calcification patterns over seasons to millennia  
  
                  Co-advisors: Dr. Sandy Carlson and Dr. Tessa Hill
- 2017            B.A. in Geology (double-majored in Spanish)  
                  Colgate University, Hamilton, NY  
                  *Magna cum laude*  
                  Thesis advisor: Dr. Martin Wong

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## ACADEMIC APPOINTMENTS

- 2019 - present        NSF Graduate Research Fellow
- Fall 2020            Co-Instructor of Record, *The Oceans and Climate*, UC Davis
- Summer 2019        Visiting Researcher, California Academy of Sciences
- Spring 2019         Graduate Research Consultant, School of Education, UC Davis
- 2017 - 2022         Graduate Research Assistant, UC Davis
- 2017 - 2019         Graduate Teaching Assistant, UC Davis

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## TEACHING

- Fall 2020            Co-Instructor of Record, Course Developer: *The Oceans and Climate – Biogenic Carbonate*, UC Davis
- Winter 2019         Lab Instructor, *History of Life*, UC Davis
- Fall 2018            Teaching Intern, Earth Science, Vacaville High School
- Summer 2018        Lead Teaching Assistant, *Biological Oceanography*, Bodega Marine Lab
- Winter 2018         Teaching Assistant, *The Earth*, UC Davis

Fall 2017                      Teaching Assistant, *The Earth*, UC Davis

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## PUBLISHED PAPERS

- Vriesman, V.P.**, Carlson, S.J., Hill, T.M. (2022): Investigating controls of shell growth features in a foundation bivalve species: seasonal trends and decadal changes in the California mussel. *Biogeosciences*: 329-346, <https://doi.org/10.5194/bg-19-329-2022>.
- Vermeij, G.J., Banker, R.M.W., Capece, L.R., Sachiko Hernandez, E., Salley, S.O., **Padilla Vriesman, V.**, Wortham, B. (2018): The coastal North Pacific: origins and history of a dominant marine biota. *Journal of Biogeography*: 1-18, <https://doi.org/10.1111/jbi.13471>.
- Vriesman, V.P.** (2017): The tectonic evolution of a deeply exhumed arc section: a petrological study of the emplacement of the Sierra de Salinas schist. *Proceedings of the Annual Keck Research Symposium in Geology*.

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## IN-PROGRESS PUBLICATIONS

- Vriesman, V.P.**, Palmer, H.M., Bean, J.R., Banker, R.M.W., Carlson, S.J., Hill, T.M. (in prep): Coastal climate variability and seasonality recorded by an intertidal mussel species: insights from 9000 years of stable isotope data from *Mytilus californianus*.
- Vriesman, V.P.**, Carlson, S.J., Hill, T.M. (in prep): A 120-year record of biomineralization patterns in a foundation bivalve species.
- Palmer, H.M., **Padilla Vriesman, V.**, Livsey, C.M., Fish, C.R., Hill, T.M. (in review): Holocene climate and oceanography of the coastal Western United States and California Current System. *Clim. Past*, <https://doi.org/10.5194/cp-2021-109>.
- Palmer, H.M., **Padilla Vriesman, V.**, Banker, R.M.W., Bean, J.R. (in review): A database of Holocene nearshore marine mollusc shell geochemistry from the Northeast Pacific. *Earth Syst. Sci. Data*, <https://doi.org/10.5194/essd-2021-301>.

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## FELLOWSHIPS AND GRANTS

- 2021    Cordell Durrell Award (\$1,500)
- 2020    Geological Society of America Graduate Student Research Grant (\$2,500)
- 2020    Cordell Durrell Award (\$1,400)
- 2019    Cordell Durrell Award (\$1,500)
- 2019    National Science Foundation Graduate Research Fellowship (\$102,000)

2019 Mildred E. Mathias UC Natural Reserves Grant (\$1,000)

2018 Cordell Durrell Award (\$1,000)

2018 Thomas W. Todd Scholarship (\$1,000)

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## AWARDS AND HONORS

2021 Chancellor's Achievement Award for Diversity and Community, UC Davis

2021 Graduate Student Association Travel Award, UC Davis

2021 Earth Educators' Rendezvous Student Stipend

2018 Ford Fellowship Honorable Mention and Alternate Awardee

2017 Academic Excellence, Department of Romance Languages, Colgate University

2016 Max Shacknai Center for Outreach and Education Award, Colgate University

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## PRESENTATIONS (\*denotes undergraduate student)

**Padilla Vriesman, V.**, Palmer, H.M., Bean, J.R., Banker, R.M.W. Coastal climate variability and seasonality recorded by an intertidal mussel species: insights from 9000 years of stable isotope data from *Mytilus californianus*. Planned for Ocean Sciences Meeting, 2022. [Talk]

**Padilla Vriesman, V.**, Carlson, S.J., Hill, T.M. Examining decadal scale changes in a foundation bivalve species. GSA Connects, 2021. [Talk]

\*Carrasco, L., **Padilla Vriesman, V.** Examining long-term changes in shell morphology and mineralogy of the California mussel. SACNAS National Diversity in STEM Virtual Conference, 2021. [Poster]

**Padilla Vriesman, V.**, Carlson, S.J., Hill, T.M., \*García, L. Interpreting growth band patterns in the California mussel for use as an environmental and biological archive. GSA Connects Online, 2020. [Poster]

**Padilla Vriesman, V.**, Sumner, D.Y., Rudolph, M., Rousseau, M., Oskin, M., \*Micheletti, A., Livsey, C.M., Hwang, L., \*Dellinger, R., Chidester, B. Curtailing institutional racism in an Earth and Planetary Sciences Department. GSA Connects Online, 2020. [Poster]

**Padilla Vriesman, V.**, Palmer, H.M., Bean, J.R., Banker, R.M.W., Carlson, S.J., Hill, T.M. Evaluating chemical changes in a culturally significant intertidal marine calcifier

throughout the Holocene. SACNAS National Diversity in STEM Virtual Conference, 2020. [Poster]

**Padilla Vriesman, V.**, Hill, T.M., Carlson, S.J. Exploring the paleoceanographic utility of intertidal mussels using paired geochemical and microstructural proxies. Ocean Sciences Meeting, 2020. [Poster]

Garcia, C., Palmer, H.M., **Padilla Vriesman, V.**, Hill, T.M., Roopnarine, P.D., Angel, M., Pearson, L.K. New data from old cores: supplementing the paleoceanographic sedimentary archive with museum collections. Ocean Sciences Meeting, 2020. [Poster]

**Padilla Vriesman, V.**, Palmer, H.M., Banker, R.M.W., Bean, J.R. Synthesizing geochemical data from archaeological shells to construct long-term, seasonal archives of nearshore environments. AGU Fall Meeting, 2019. [Poster]

Palmer, H.M., Hill, T.M., **Padilla Vriesman, V.**, Livsey, C.M., Fish, C. A review of Holocene climate and oceanography of the Western United States and Northeast Pacific. AGU Fall Meeting, 2019. [Poster]

**Padilla Vriesman, V.** Examining Holocene environmental variability using archaeological archives. NorCal Paleo Conference, 2019. [Talk]

**Padilla Vriesman, V.** Brachiopod responses to environmental variability: resilience and vulnerability in the face of anthropogenic change. Coastal and Marine Sciences Institute Research Symposium, 2018. [Talk]

Palmer, H.M., Hill, T.M., **Padilla Vriesman, V.**, Bean, J.R. Southern California oceanographic and ecological change through the Holocene. SACNAS National Diversity in STEM Conference, 2018. [Poster]

**Padilla Vriesman, V.** A petrological study of the emplacement of the Sierra de Salinas' schist. Geology Departmental Seminar, Colgate University, 2017. [Talk]

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## INVITED TALKS

**Vriesman, V.P.** Reading between the lines: biological and environmental insights from shell growth features, Geology Departmental Seminar, Colgate University, planned for March 2022.

**Padilla Vriesman, V.** Accessing archaeological archives to reconstruct the nearshore environment. Coastal and Marine Sciences Institute Research Symposium, 2019.

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## MENTORING

### Undergraduate Research Mentoring

Lupe Carrasco (Santa Rosa Junior College and NSF REU student, 2021)

Leslie Garcia (UC Davis geology major, 2019 - present)

Pemba Lhaki Sherpa (Santa Rosa Junior College student, 2020)

### Professional Mentoring

Lupita Bravo (UC Davis geology major and McNair scholar, 2022)

Yahaira Álvarez-Gandia (2020)

Veronica Guerra (UC Davis geology major, 2019)

### Graduate Peer Mentoring

Nora Soto Contreras (2019 - 2020)

### Mentoring Programs and Service

Founder and Director, UC Davis AWG Mentoring Program

Founder and Director, Geology Mentoring and Inclusive Support (GeoMInS)

Mentor, Científico Latino Mentoring Program

Mentor, Santa Rosa Junior College – Bodega Marine Laboratory Mentoring Program

Author, *Mentoring BIPOC in a University Setting*, available at

<[https://docs.google.com/document/d/1AMMjEBjdEoZDy\\_snfgavMPfRnr7RC\\_ApxcRL1Bzkelnc/edit?usp=sharing](https://docs.google.com/document/d/1AMMjEBjdEoZDy_snfgavMPfRnr7RC_ApxcRL1Bzkelnc/edit?usp=sharing)>

Co-author, *Recommendation for Promoting Equitable Mentoring in the Department of Earth and Planetary Sciences*, available at

<[https://eps.ucdavis.edu/sites/g/files/dgvnsk2851/files/inline-files/ARACRecommendation\\_AntiracistMentoring.pdf](https://eps.ucdavis.edu/sites/g/files/dgvnsk2851/files/inline-files/ARACRecommendation_AntiracistMentoring.pdf)>

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## SERVICE AND OUTREACH

2021 Founder, Association for Women Geoscientists Gear-Lending Program

2020 - 2021 President, Association for Women Geoscientists UC Davis Student Chapter

2021 Panelist, Coastal and Marine Sciences Institute Graduate School Session

2020 Graduate Student Member, Anti-Racism Action Committee, UC Davis

2019 - 2020 Departmental Seminar Coordinator, Earth and Planetary Sciences Dept.

- 2019 - 2020 Graduate Representative to the Faculty, Earth and Planetary Sciences Dept.  
 2018 - 2020 Communications Director, AWG UC Davis Student Chapter  
 2018, 2019 Volunteer, Biodiversity Museum Day, UC Davis  
 2018, 2019 Volunteer, Paleoclimate Exhibit on Picnic Day, UC Davis  
 2018, 2019 Organizer, De-Mystifying Grad School Program, UC Davis  
 2017 - 2018 Educational Officer, Latin American Student Organization

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## PROFESSIONAL DEVELOPMENT

- 2021 National Center for Faculty Development & Diversity: Faculty Bootcamp  
 2021 Earth Educators' Rendezvous: Preparing for an Academic Career Workshop  
 2021 Unlocking the Inspiring Aspects of Teaching Certification  
 2019 Translating Your Science: Science Communication Workshop  
 2018 CalTeach/MAST Teaching Science Course and Internship  
 2017 Methods of Teaching Geology Course, UC Davis

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## RESEARCH EXPERIENCE

- Field *R/V Centennial* research cruise at UW Friday Harbor Laboratories, *R/V Mussel Point* research cruise at UC Davis Bodega Marine Laboratory, intertidal field experiment at Bodega Marine Reserve, field assistant for ecological study of *Zostera marina* at Tomales Bay, California, structural geology fieldwork in Big Sur and Sierra de Salinas, California
- Laboratory Laser ablation mass spectrometer at the UC Davis Interdisciplinary Center for Inductively-Coupled Plasma Mass Spectrometry, SEM/EBSD at the University of Minnesota Characterization Facility, Macalester College Thin Section Laboratory, Microscopy and EBSD Labs at Colgate University
- Museum UNOCAL sediment core collections in the Department of Invertebrate Zoology and Geology, California Academy of Sciences

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## SPECIAL SKILLS

- Technical LA-ICP-MS, optical microscopy, SEM/EBSD, thin section preparation, ImageJ (imaging analysis software), PAST (Paleo Stats Software), Mesquite (phylogeny software), Adobe Illustrator, coding (RStudio), intertidal field work, small research vessel experience, museum collections
- Language Bilingual (fluent in Spanish)