

SHELBY ANNE RINEHART

Joint Doctoral Program in Ecology; San Diego State University
Graduate Group in Ecology; University of California Davis
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EDUCATION

Ph.D. Ecology, 2013- Present

GPA: 3.82/4.0 (SDSU); 3.94/4.0 (UCD)

Dissertation: Impact of predator traits on the relative strength of trophic interactions

Major Professor: Jeremy Long and Donald Strong; Committee: Edwin Grosholz, and Geerat Vermeij

San Diego State University, CA
University of California, Davis, CA

B.S. Biological Sciences, 2009-2013

GPA: 3.93/4.0; Summa Cum Laude

Thesis: Overwintering strategies of bloom-forming algal species in Narragansett Bay, RI

Advisors: Carol Thornber and Evan Preisser

University of Rhode Island, RI

Study Abroad, 2012

GPA: 3.7/4.0

University of Edinburgh, Scotland

PUBLICATIONS

In Review or In Preparation

Rinehart, S., S.C. Schroeter, and J. D. Long. Predation risk from actively hunting predators reduces the density of a narrow habitat domain prey. *In Review*. Journal: *Ecology*

Rinehart, S., and J.D. Long. Prey identity mediates omnivore habitat selection and performance. *In Prep*. Target Journal: *Ecology*

Rinehart, S., and J.D. Long. Plant-provided foods do not alter omnivore suppression of prey populations. *In Prep*. Target Journal: *Environmental Entomology*

Rinehart, S., C. Knight, and J.D. Long. Range-expanding predator alters the behavior and distribution of a native prey. *In Prep*. Target Journal: *MEPS*

Guidone, M., **S. Rinehart**, T. Schollmeier and C. Thornber. Competition between two morphologically similar bloom-forming *Ulva* species in Narragansett Bay, RI. *In Prep*. Target Journal: *MEPS*

Published or In Press

Meyerson, L.A., J.T Cronin, G.P. Bhattarai, H. Brix, C. Lambertini, M. Lucanova, **S. Rinehart**, J. Suda, and P. Pysek. 2016. Do ploidy level and nuclear genome size and latitude of origin modify the expression of *Phragmites australis* traits and interactions with herbivores? *Biological Invasions*. 18:2531.

Oczkowski, A., C. Thornber, E.E. Markham, R. Rossi, A. Ziegler, and **S. Rinehart**. 2014. Testing sample stability using four storage methods and the macroalgae *Ulva* and *Gracilaria*. *Limnology and Oceanography Methods*. 13 (1) 9-14

Rinehart, S., M. Guidone, A. Ziegler, T. Schollmeier, and C. Thornber. 2014. Overwintering strategies of bloom-forming *Ulva* species in Narragansett Bay, RI. *Botanica Marina* 57 (4) 337-341

RESEARCH EXPERIENCE

- Dissertation Research**, 2013-present **San Diego State University, CA**
Mentor: Jeremy Long
Develop projects to address the role of predators (e.g. ladybeetles and crabs) on the structure and function of southern California salt marsh communities.
- Visiting Researcher**, 2017 **University of Gothenburg, Sweden**
Collaborators: Emma Berdan, Henrik Pavia, and Jeremy Long
Conducted laboratory studies assessing the effects of fly larvae on the decomposition rate of macroalgal wrack and the transfer of nitrogen from marine to terrestrial ecosystems. Tested effects of wave exposure on consumer pressure in rocky intertidal communities.
- Visiting Researcher**, 2016-2017 **University of Oslo, Norway**
Collaborators: Erik Sperfeld and Dag O. Hessen
Assessed the combined effects of phytoplankton food quality (i.e. C: P), media calcium concentration, and predation risk on the expression of induced morphological defenses and the elemental stoichiometry of *Daphnia pulex*
- Research Assistant**, 2013-2014 **San Diego State University, CA**
Mentor: Jeremy Long
Maintained laboratory mesocosm experiments assessing the impacts of tidal inundation on plant-herbivore interactions. Developed and conducted a marsh-wide survey of cordgrass recovery and soil properties.
- Research Assistant**, 2009-2013 **University of Rhode Island, RI**
Mentors: Carol Thornber, Michele Guidone, and Christine Newton Ramsey
Developed a multi-year project to assess the overwintering strategies of bloom-forming macroalgae. Managed monthly macroalgae surveys at seven sites in Narragansett Bay, RI.
- Field Assistant**, 2013 **University of Rhode Island, RI**
Mentor: Jason Kolbe
Participated in field studies assessing the impacts of anthropogenic light pollution on Anolis lizard foraging behavior.
- NSF REU**, 2012 **University of Rhode Island, RI**
Mentor: Laura Meyerson
Aarhus University, Denmark
Assessed the impacts of genetic composition of an invasive common reed (*Phragmites australis*) on the magnitude of induced defenses to aphid herbivores. Conducted DNA extractions using CTAB methods on over 200 fresh and preserved samples.
- NSF EPSCoR SURF**, 2011 **University of Rhode Island, RI**
Mentor: Michele Guidone and Carol Thornber
Tested the competitive interactions between two isomorphic macroalgal species, and how this interaction is modified by eutrophication, light levels, and herbivore pressure.
- Coastal and Environmental Fellow**, 2010 **The Nature Conservancy, RI**
Mentor: Chris Littlefield
Monitored the reproductive success and survival of populations of transplanted hard clams. Surveyed hard clam population density and demography using SCUBA, quadrat methodology, and a suction sampler.

FUNDING AWARDS

- Visiting Researcher Travel Stipend**, Research Council of Norway, 2017 \$13,260
- Graduate Research Opportunities Worldwide**, National Science Foundation, 2016 \$5,000
- Conference Travel Award**, CSU Council on Ocean Affairs, Science, and Technology, 2016 \$750
- Fellowship in Ecological Restoration**, Garden Club of America, 2016 \$8,000
- Graduate Student Research Award**, CSU Council on Ocean Affairs, Science, and Technology, 2016 \$3,000

Student Research Grant , San Diego State Joint Doctoral Program, 2016	\$2,000
Graduate Research Fellowship , National Science Foundation, 2015	\$142,000
Jastro Shields Award , University of California, Davis Graduate Group in Ecology, 2015	\$2,300
Student Research Grant , San Diego State Joint Doctoral Program, 2015	\$2,000
University of Sussex Partnership Award (Alternate) , Fulbright, 2015	
Award in Coastal Wetland Studies , Garden Club of America, 2014	\$5,000
Career Discovery Fellowship , University of California, Davis, 2014	\$7,000
Jastro Shields Award , University of California, Davis Graduate Group in Ecology, 2014	\$1,592
Student Research Grant , San Diego State Joint Doctoral Program, 2014	\$1,500
Student Research Grant , Society of Wetland Scientists, 2014	\$1,000
Student Travel Award , Western Society of Naturalists, 2014	\$150
Student Research Grant , San Diego State Joint Doctoral Program, 2013	\$1,000
Graduate Student Traineeship , California Sea Grant, 2013	\$21,299
Undergraduate Student Research Stipend , NSF EPSCoR, 2013	\$1,500
Graduate Research Fellowship (Honorable Mention) National Science Foundation, 2013	
Stanley Cobb Endowment , University of Rhode Island, 2012	\$400
Undergraduate Research Initiative , University of Rhode Island, 2012	\$1,000
Stanley Cobb Endowment , University of Rhode Island, 2011	\$500
Undergraduate Research Initiative , University of Rhode Island, 2010	\$1,000

HONORS AND AWARDS

ESA Early Career Mentorship Program Mentee , Ecological Society of America, 2017	
Hillsborough Garden Club Scholar , Garden Club of America, 2014	
Alpha Research Award , University of Rhode Island, 2013	
Alpha Service Award , University of Rhode Island, 2013	
Academic Excellence Award , University of Rhode Island, 2013	
President's Award (best undergraduate presentation), North Eastern Algal Society, 2013	\$50
R. D. Wood Memorial Award , University of Rhode Island, 2013	\$500
Harold Reimenschneider Award in Biology , University of Rhode Island, 2012	\$1,000
Brett Santoro Memorial Scholarship , University of Rhode Island, 2011	\$500
J. Irvine Smir and A. Clark Scholarship , University of Rhode Island, 2011	\$250
Harold Reimenschneider Award in Biology , University of Rhode Island, 2010	\$1,000
Browning Prize in Environmental Plant Biology , University of Rhode Island, 2010	\$500
Phi Eta Sigma Freshmen Honors Society , University of Rhode Island, 2010	

SELECTED PRESENTATIONS

- Rinehart, S.**, and J.D. Long. "Linking omnivore patch selection to diet-mediated performance". Talk At Ecological Society of America Meeting, Aug. 10, 2017.
- White, W*., **S. Rinehart**, J. Walker, and J.D. Long. "Plant community composition determines sediment ammonium levels in two southern California salt marshes". Poster at the SDSU Student Research Symposium, March 3, 2017.
- Rinehart, S.**, and J.D. Long. "Ladybeetle predators enhance salt marsh growth via non-consumptive and total effects". Poster Presentation at CSU COAST Student Research Poster Reception, March 8, 2016.
- Rinehart, S.**, and J.D. Long. "Linking omnivore patch selection to diet-mediated performance". Talk at SDSU Student Research Symposium, March 4, 2016.
- Rinehart, S.**, and J.D. Long. "Ladybeetle predators enhance salt marsh growth via non-consumptive and total effects". Poster at Gordon Research Conference on Predator-Prey Interactions, Jan. 25, 2016.

Rinehart, S., and J.D. Long. “Linking omnivore patch selection to diet-mediated performance”. Talk at Western Society of Naturalists Meeting, Nov. 8, 2015.

Rinehart, S., and J. D. Long. “Predators going green: Flowers reduce the consumptive effects of omnivorous beetles responsible for a trophic cascade”. Talk at UC Davis Ecology Graduate Student Research Symposium, Feb. 14, 2015.

Rinehart, S., and J. D. Long. “Predators going green: Flowers reduce the consumptive effects of omnivorous beetles responsible for a trophic cascade”. Talk at Western Society of Naturalists meeting, Nov. 15, 2014.

Rinehart, S., M. Guidone, C. Thornber. “Overwintering strategies of *Ulva* spp. in Narragansett Bay, RI”. Talk at the Western Society of Naturalists Meeting, Nov. 8, 2013

Rinehart, S., M. Guidone, C. Thornber. “Overwintering strategies of *Ulva* spp. in Narragansett Bay, RI”. Talk at the North Eastern Algal Symposium, April 20, 2013

Rinehart, S., M. Guidone and C. Thornber. “Competition between two *Ulva* species in Narragansett Bay, RI”. Poster at the RI EPSCoR poster conference, July 30, 2011.

Rinehart, S., M. Guidone and C. Thornber. “Overwintering strategies of *Ulva* species in Narragansett Bay, RI”. Poster at the North Eastern Algal Symposium, April 16, 2011.

Rinehart, S., S. Kloebler and J. Opton-Himmel. “Monitoring the hard clam, *Mercenaria mercenaria*, population in Ninigret pond”. Poster at the URI Coastal Fellows Conference, Dec. 11, 2010.

*Undergraduate advised by Shelby Rinehart

INVITED TALKS

Rinehart, S., and J.D. Long. “Omnivore diet selection and top-down control in southern California salt marshes.” University of California, Davis, Graduate Group in Ecology Student Seminar, Feb. 9, 2016.

Rinehart, S., and J.D. Long. “Dietary resources and associated fitness benefits influence the distribution of omnivores in the field”. Marine Ecology and Biology Student Association, Oct. 8, 2015.

Rinehart, S. “How to apply to, and win, the NSF Graduate Research Fellowship”. San Diego State University, Student Grant Writing Group, Sept. 9, 2015.

Rinehart, S. “The Bank: How not to be poor in graduate school”. San Diego State University, Annual Ecology Program Area Retreat, Aug. 29, 2015.

Rinehart, S. “Trophic promiscuity from southern California to Rhode Island”. San Diego State University, Marine Ecology and Biology Student Association Ignite Talks, Aug. 27, 2015

Rinehart, S., and J.D. Long. “Trophic interactions in southern California salt marshes”. San Diego State University, Marine Ecology and Biology Student Association Ignite Talks, Aug. 28, 2014

Rinehart, S., and J.D. Long. “Trophic interactions in the restored marsh at San Dieguito River Park”. San Dieguito River Park, July 17, 2014

TEACHING EXPERIENCE

Research Mentor, 2014-present

Coastal and Marine Institute Laboratory, CA

Supervised undergraduate students in aspects of experimental design, data collection, and data analysis. Mentored students in basic field survey techniques, soil chemistry analysis, behavioral observations, and principles of chemical ecology.

Grant Writing Group Mentor, 2015-2016

San Diego State University, CA

Taught and reviewed basic grant writing techniques and strategies. Edited and provided intellectual feedback on the applications of 12 graduate students. *One student awarded NSF GRFP, one student awarded NSF GRFP Honorable mention.

Lecturer, Ecology and the Environment, 2015

San Diego State University, CA

Wrote and gave 12, 50-minute lectures covering topics from physiological, population, and community ecology. Wrote two exams and five in-class quizzes for 160 undergraduate students.

Career Discovery Group Fellow, 2014-2015

University of California Davis, CA

Facilitated activities revolving around resume and cover letter writing and scientific communication.

Organized a “Meet the Professionals” career panel and career symposium for first year students.

Senior Biology Mentor, 2012-2013

University of Rhode Island, RI

Advised students in the biology B.S. and B.A. programs on coursework, internships, and campus resources.

Created a website for all biology students featuring required paperwork and internship information.

Supplemental Instruction Leader, 2010-2013

University of Rhode Island, RI

Developed lesson plans to reinforce lectures in introductory biology lectures. Taught study and time management skills. Organized exam reviews for over 100 undergraduate students.

URI 101 Student Mentor, 2010-2013

University of Rhode Island, RI

Designed activities to get freshmen students acquainted with the university. Coordinated a beach clean-up and a volunteer experience at the university's agronomy farm. Advised students regarding graduation requirements and extracurricular opportunities on campus.

INSTITUTIONAL AND PROFESSIONAL SERVICE

Discussion Leader, Gordon Research Conference on Predator-Prey Interactions, 2018

Co-chair, SDSU Joint Doctoral Program in Ecology Student Committee, 2016-present

Student Admissions Reviewer, University of California, Davis Graduate Group in Ecology, 2014-2017

Co-Outreach Coordinator, Marine Ecology and Biology Student Association (MEBSA), 2015-2016

Seminar Coordinator, Marine Ecology and Biology Student Association (MEBSA), 2016

Co-Chair, Marine Ecology and Biology Student Association (MEBSA), 2014-2016

Open House Coordinator, Marine Ecology and Biology Student Association (MEBSA), 2014-2016

Student Research Symposium Volunteer, UC Davis Ecology Graduate Student Association, 2015

Orientation Committee Chair, SDSU Joint Doctoral Program in Ecology Student Committee, 2014-2015

First Year Student Mentor, SDSU Joint Doctoral Program in Ecology Student Committee, 2014-2015

Student Retreat Coordinator, SDSU Joint Doctoral Program in Ecology Student Committee, 2014-2015

Graduate Student Association Representative, UC Davis Ecology Graduate Student Association, 2014-2015

Social Coordinator, Marine Ecology and Biology Student Association (MEBSA), 2014-2015

Student Organizer, SDSU Biology Department Faculty Search- Environmental Modeler, 2013

Coastal Fellows Symposium Volunteer, URI Coastal and Environmental Fellows Program, 2010-2013

CELS Ambassador, URI College of the Environment and Life Sciences, 2010-2013

Garrahy Guide, URI College of the Environment and Life Sciences, 2010-2011

Manuscript Reviewer: Ecology

OUTREACH FUNDING AWARDS

Seminar Funding (MEBSA seminar series), San Diego State University College of Sciences, 2016 \$3,500

Seminar Funding (MEBSA seminar series), CSU COAST, 2015 \$700

Event Funding (Marine Science Day), Associated Students Union Board, 2014, 2015 \$6,000

Instructionally Related Activities Fund (MEBSA), San Diego State University, 2014, 2015 \$2,000

Student Success Fee Fund (MEBSA seminar series), San Diego State University, 2014 \$6,000

EXTERNAL ACTIVITIES AND SERVICE

Volunteer Scientist, Skype a Scientist, 2017- present

Volunteer Scientist, Reuben H. Fleet Science Center, 2015-present

STEM Speaker, Ocean Discovery Institute, 2014-present

Vice-President, Sigma Alpha Beta Lambda Alumni Chapter, 2013-present
Volunteer, March for Science-Oslo, Norway, 2017
Volunteer Instructor, High Tech Elementary School- Point Loma, 2016
Volunteer Instructor, Alvera Oaks Elementary School, 2015
Collections Volunteer, San Diego Natural History Museum- Botany Department, 2014

UNDERGRADUATE MENTORED (graduation year, status if known)

San Diego State University

Nina Barr (17'), Gabriel Greenberg- Pines (17', Undergrad Research Technician), Wendi White (17', Undergrad Research Technician), Francesca Ventola (16'), Rainee Wright (16'), Grant Cooper (15', Research Technician), Jessica Grondin (15', MS student at USC)

SOCIETY MEMBERSHIPS

Ecological Society of America, San Diego Arthropod Society, San Diego Science Alliance, Sigma Alpha, Sigma Xi, Society of Wetland Scientists, Union of Concerned Scientists, Western Society of Naturalists

REFERENCES

Jeremy D. Long

Associate Professor, Department of Biology, San Diego State University
(619) 594-3598; jlong@mail.sdsu.edu

Donald Strong

Professor, Department of Evolution and Ecology, University of California, Davis
(530)752-7886; drstrong@ucdavis.edu

Edwin Grosholz

Professor, Department of Environmental Science and Policy, University of California, Davis
(530) 752 9151; tedgrosholz@ucdavis.edu

Erik Sperfeld

Researcher, Center for Ecological and Evolutionary Synthesis, University of Oslo
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Carol Thornber

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Evan Preisser

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