ISABELLE P. NEYLAN

Louisiana State University, Department of Biological Sciences
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EDUCATION

University of California Davis, Davis, CA 9/2017 – 6/2023
- PhD in Population Biology

Stanford University, Stanford, CA 9/2011 – 6/2015
- Bachelor of Science in Biology with honors; concentration in ecology and evolution

PUBLICATIONS

Neylan, I.P., Longman, E. K., Sanford, E., Stachowicz, J. J., Sih, A. Long-term anti-predator learning and memory differs across populations and sexes in an intertidal snail. Proc. B. *In prep.*

Neylan, **I.P.,** Swezey, D. R., Boles, S.E., Sih, A., Stachowicz, J.J. Long-term stress legacy effects of ocean acidification on red abalone (Haliotis rufescens) growth and performance. Glob. Change Biol. *In review.*

Clement, D., **Neylan, I. P.,** Roberts, N. J., Schreiber, S., Trimmer, P. C., & Sih, A. (2023). Evolutionary history mediates population response to rapid environmental change through within-generational and transgenerational plasticity. Am Nat. 201(5), E90-E109. https://doi.org/10.1086/723624

Neylan, I.P., Sih, A., Stachowicz, J. J. (2022). Local adaptation in the transgenerational response to copper pollution in the bryozoan Bugula neritina. Ecol. Evol. 12(11), e9524. https://doi.org/10.1002/ece3.9524

Sih, A., Chung, H. J., **Neylan, I.P.,** Ortiz-Jimenez, C., Sakai, O., Szeligowski, R. (2022) Fear generalization and behavioral responses to multiple dangers. Trends Ecol. Evol. 38(4). http://doi.org/10.1016/j.tree.2022.11.001

Boles, S. E., **Neylan, I. P.,** Rogers-Bennett, L., & Gross, J. A. (2022). Evaluation of gonad reproductive condition using non-invasive ultrasonography in red abalone (Haliotis rufescens). Front. Mar. Sci., 9, 784481. https://doi.org/10.3389/fmars.202

Sobral, M., **Neylan, I. P.,** Narbona, E., & Dirzo, R. (2021). Transgenerational plasticity in flower color induced by caterpillars. Front. Plant Sci., 12, 617815. https://doi.org/10.3389/fpls.2021.617815

Sobral, M., Sampedro, L., **Neylan, I.P.,** Siemens, D., & Dirzo, R. (2021). Phenotypic plasticity in plant defense across life stages: inducibility, transgenerational induction, and transgenerational priming in wild radish. PNAS, 118(33), e2005865118. https://doi.org/10.1073/pnas.2005865118

Smith, C.S., Paxton, A.B., Donaher, S.E., Kochan, D.P., **Neylan, I.P.,** Pfeifer, T., Van Hoeck, R.V. and Taylor, J.C. (2021). Acoustic camera and net surveys reveal that nursery enhancement at living shorelines may be restricted to the marsh platform. Ecol. Eng., 166, 106232. https://doi.org/10.1016/j.ecoleng.2021.106232

Neylan, I.P., Smith, C.S., Swanson, E.D., Fegley, S.R., Gittman, R.K. (2019). Interspecific and intraspecific interactions between fiddler crabs Minuca pugnax (mud fiddler) and Leptuca pugilator (sand fiddler) influence species' burrowing behavior. J Exp Mar Biol Ecol. 517, 40-48. https://doi.org/10.1016/j.jembe.2019.05.010

Neylan, I.P., Dirzo, R., Sobral, M. (2018.) Cumulative effects of transgenerational induction on plant palatability to generalist and specialist herbivores. Web Ecol. 18, 41–46. https://doi.org/10.5194/we-18-41-2018

Needleman, R.K., **Neylan, I.P.**, Erickson, T.B. (2018). Environmental and ecological effects of climate change on venomous marine and amphibious species in the wilderness. Wilderness Environ. Med. 29, 343–356. https://doi.org/10.1016/j.wem.2018.04.003

Needleman, R.K., **Neylan, I.P.,** Erickson, T. (2018). Potential environmental and ecological effects of global climate change on venomous terrestrial species in the wilderness. Wilderness Environ. Med. 29, 226–238. https://doi.org/10.1016/j.wem.2017.11.004

Smith, C.S., Gittman, R.K., **Neylan, I.P.,** Scyphers, S.B., Morton, J.P., Joel Fodrie, F., Grabowski, J.H., Peterson, C.H. (2017). Hurricane damage along natural and hardened estuarine shorelines: Using homeowner experiences to promote nature-based coastal protection. Mar. Policy 81, 350–358. https://doi.org/10.1016/j.marpol.2017.04.013

Gittman, R.K., Scyphers, S.B., Smith, C.S., **Neylan, I.P.,** Grabowski, J.H., 2016. Ecological consequences of shoreline hardening: A meta-analysis. Bioscience.https://doi.org/10.1093/biosci/biw091

FUNDING

$240,000 – **National Science Foundation Postdoctoral Research Fellowship in Biology**, (Awarded 2023)
$20,000 – **Bilinski Fellowship,** Bodega Marine Lab, (2021)
$1,995 – **Center for Population Biology Affiliate Funding,** UC Davis, (2021)
$120,000 – **California Sea Grant Graduate Research Fellowship**, UC Davis, (2020-2022)
$2,983 - **Henry A. Jastro Graduate Research Award**, UC Davis, (2019-2020)
$25,355 – **Population Biology Graduate Group Fellowship**, UC Davis, (2017-2018)
$138,000 - **National Science Foundation Graduate Research Fellowship Program**, (Awarded 2017)
$6,000 - **Undergraduate Advising and Research Major Grant**, Stanford University, (2014-2015)

AWARDS

Best talk, Benthic Ecology Meeting Conference**,** 4/2022
Best talk (Applied Ecology), Western Society of Naturalists Conference**,** 10/2021
Ann C. Powel Student Travel Award, Atlantic Estuarine Research Society, 3/2016
Firestone Medal for Excellence in Undergraduate Research, Stanford University, 6/2015

PRESENTATIONS

Neylan, I.P., Longman, E. K., Sanford, E., Stachowicz, J. J., Sih, A. Antipredator behavior and morphology vary across populations and risk levels in a marine snail (Nucella canaliculata). *Poster presentation.* Western Society of Naturalists Conference, Oxnard, CA. November 2022.

Neylan, I.P., Longman, E. K., Sanford, E., Stachowicz, J. J., Sih, A. Antipredator behavior and morphology vary across populations and risk levels in a marine snail (Nucella canaliculata). *Poster presentation.* Gordon Research Conference: Predator-Prey Interactions, Luca, Italy. October 2022.

Neylan, I.P., Swezey, D. R., Boles, S. E., Gross, J., Sih, A., Stachowicz, J. J. Long-term effects of ocean acidification on red abalone (Haliotis rufescens) growth and performance. *Oral presentation.* Benthic Ecology Meeting Conference, Portsmouth, NH. April 2022.

Neylan, I.P., Swezey, D. R., Boles, S. E., Sih, A., Stachowicz, J. J. Long-term effects of ocean acidification on red abalone (Haliotis rufescens) growth and performance. *Oral presentation.* Western Society of Naturalists Conference. October 2021.

Neylan, I.P., Sih, A., Stachowicz J. J. Local adaptation in the transgenerational response to copper pollution in the bryozoan Bugula neritina. *Oral presentation.* Western Society of Naturalists Conference. October 2020.

Neylan, I. P., Smith, C. S., Peterson, C. H. Assessing the habitat use and optimal construction of marsh sills through benthic infaunal community composition. *Poster presentation.* North Carolina Sea Grant Graduate Training Symposium, New Bern, NC. April 2016.

Neylan, I. P., Smith, C. S., Peterson, C. H. Assessing the habitat use and optimal construction of marsh sills through benthic infaunal community composition. *Poster presentation.* Atlantic Estuarine Research Society (AERS) Meeting, Virginia Beach, VA. March 2016.

Neylan, I. P. Herbivory, transgenerational changes, and communication in wild radish. *Oral presentation.* University of North Carolina Chapel Hill Department of Marine Sciences Graduate Student Symposium, Morehead City, NC. September 2015.

Neylan, I., Sobral, M., Dirzo, R. The effects of herbivory, transgenerational changes, and conspecific communication of the induced defenses of wild radish (*Raphanus raphanistrum*). *Poster presentation*. Stanford University Biology Department Achauer Honors Symposium, Stanford, CA. May 2015.

RESEARCH EXPERIENCE

Research Assistant, Stachowicz Lab, University of California Davis, Bodega Marine Lab, 6/2017 – 9/2017

Research Technician, Peterson Lab, University of North Carolina Chapel Hill Institute of Marine Sciences, Morehead City, NC 7/2015–5/2017

Honors Thesis, Dirzo Lab, Biology Department, Stanford, CA 2/2014 – 6/2015

Research Assistant, Block Lab, Stanford University, Hopkins Marine Station, Monterey, CA 1/2014 – 4/2014

Intern, Block Lab, Stanford University, Hopkins Marine Station, Monterey, CA 6/2013 – 9/2013

Research Assistant, Dirzo Lab, Biology Department, Stanford, CA 8/2012 – 6/2013

BROADER IMPACTS

Member, Diversity, Equity, and Inclusion (DEI) Committee for Bodega Marine Lab, Bodega Bay, CA, 11/2021 – 6/2023

Co-director, Santa Rosa Junior College-Bodega Marine Lab (SRJC-BML) Internship Program, Bodega Bay, CA, 10/2020 – 5/2023

Outreach coordinator, Bodega Marine Sciences Association, Bodega Bay, CA, 2/2021 - present

Mentor and writing resource, Evolution and Ecology Graduate Admissions Pathways (EEGAP) Program, NSF GRFP prep 5/2020 - 10/2020

Mentor, UC Davis CMSI and BML mentorship program 5/2020 – 9/2020

Mentor and facilitator, Ecology, Evolution, and Biodiversity graduate school preview program 5/2020 – 10/2020

Mentor, Santa Rosa Junior College-Bodega Marine Lab (SRJC-BML) Internship program, Bodega Bay, CA, 5/2019 – 8/2019

Member, Bodega Science Communication Collective, Bodega Bay, CA, 8/2018 – 10/2019

Activity coordinator, STEM Squad middle school science program, Davis, CA 6/2019 – 6/2020

Volunteer coordinator and founding member, STEM Squad middle school science program, Davis, CA 10/2017 – 6/2019

Member, ESTEME (Equity in Science, Technology, Engineering, Math, and Entrepreneurship), Davis, CA 9/2017 – 3/2020

Coordinator and instructor, Exploring Estuarine Shoreline Habitats Teacher Workshop, Morehead City, NC 7/2015-7/2016
Mentor, Science in Service, Stanford, CA, 1/2015 – 6/2015
Tutor, Eastside College Preparatory School, Stanford, CA 4/2014 – 6/2015
Leader, Stanford Outdoor Outreach Program (SOOP), Stanford, CA 9/2012 – 5/2015

OTHER SKILLS

AAUS scientific diving, animal husbandry, seawater system design and maintenance, boat operations