Noah Rose

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Research Interests

I study population-level responses to environmental change. I use population genomic and computational tools, along with field and laboratory study of natural populations, to investigate evolutionary and physiological responses to changing conditions.

Education

PhD	Stanford University, Department of Biology	2012–2016
BSc	Brown University, Department of Computational Biology Awarded with Honors 3.6 GPA Equivalent	2012

Research Experience

Postdoctoral Researcher, McBride Lab, Princeton University	2017-Present
PhD Student, Palumbi Lab, Stanford University	2012–2016
Rotation Student, Grossman Lab, Carnegie Institution for Science	2013
Research Assistant, Morse Lab, Brown University	2010–2012
Research Assistant, Weinreich Lab, Brown University	2011–2012

Teaching Experience

Guest Lecturer, Marine Experimental Physiology, California State University at Monterey Bay	Spring 2016
Guest Speaker, RISE Summer Internship Program, Stanford University	Summer 2014
Guest Speaker, Olosega Elementary School, American Samoa	Winter 2013, Winter 2014
Guest Speaker, Manihiki Elementary School, Cook Islands	Spring 2014
Teaching Assistant, BioCore, Stanford University	Spring 2014
Teaching Assistant, Genetic Basis of Human Disease, Stanford University	Spring 2013
Teaching Assistant, Genetics, Brown University	Fall 2012
Volunteer, Biobus Mobile Educational Lab	Spring 2011, Spring 2012

Fellowships, Awards & Grants

Helen Hay Whitney Postdoctoral Fellowship	Begins April 2018
Hopkins Marine Station Outstanding Achievement Award	2016
Stanford CEHG Seed Award	2016
Myers Trust Research Award	2015
NSF Graduate Research Fellowship	2012
James F. Kidwell Prize in Genetics or Population Biology, Brown University	2012
Undergraduate Training and Research Award, Brown University	2011

National Merit Scholar 2008

Publications

The Aedes Genome Working Group. Improved *Aedes aegypti* mosquito reference genome assembly enables biological discovery and vector control. *In review, Nature (preprint available on Bioarxiv).*

NH Rose, RA Bay, MK Morikawa, SR Palumbi. Polygenic evolution drives species divergence and climate adaptation in corals. *Evolution,* 2018*.*

L Thomas, **NH Rose**, RA Bay, EH Lopez, MK Morikawa, L Ruiz-Jones, SR Palumbi. Mechanisms of thermal tolerance in reef-building corals across a fine-grained environmental mosaic: lessons from Ofu, American Samoa. Frontiers in Marine Biology, 2018.

RA Bay, **NH Rose**, CA Logan, SR Palumbi. Genomic models predict successful coral adaptation if future ocean warming rates are reduced. *Science Advances*, 2017.

N Traylor-Knowles, **NH Rose**, SR Palumbi. The cell specificity of gene expression in the response to heat stress in corals. *Journal of Experimental Biology*, 2017.

N Traylor-Knowles, **NH Rose**, EA Sheets, SR Palumbi. Early transcriptional responses during heat stress in the coral *Acropora hyacinthus. The Biological Bulletin,* 2017*.*

RA Bay*, **NH Rose***, RDH Barrett, RB Brem, CK Ghalambor, L Bernatchez, PL Ralph, JR Lasky, SR Palumbi. Using population genomics to predict evolutionary responses to environmental change. *The American Naturalist,* 2017. **These authors contributed equally.*

NH Rose, FO Seneca, SR Palumbi. Gene networks in the wild: identifying transcriptional modules that mediate coral resistance to experimental heat stress. *Genome Biology and Evolution*, 2015.

NH Rose, R Halitschke, DH Morse. Tri-trophic effects of seasonally variable induced plant defenses vary across the development of a shelter-building moth larva and its parasitoid. *PLoS ONE*, 2015.

Publications in Preparation

NH Rose, BT Barney, RA Bay, MH Pespeni, P De Wit, SR Palumbi. Gene regulatory polymorphisms: an abundant class of functional variants that drive local adaptation. *In preparation.*

NH Rose, RA Bay, MK Morikawa, SR Palumbi, Genomic architecture of resilience to the third global bleaching event. *In preparation.*

Presentations

NH Rose, BT Barney, RA Bay, MH Pespeni, P De Wit, SR Palumbi. Polygenic regulatory adaptation in the ocean. American Genetics Association, President's Symposium, Pacific Grove, CA 2016. *Student abstract award.*

NH Rose, SR Palumbi. Population genomics of resilience in the 2015 coral bleaching event. International Coral Reef Symposium, Honolulu, HI, 2016.

NH Rose, RA Bay, SR Palumbi. Using population genomics to predict evolutionary responses to environmental change. American Society of Naturalists, Pacific Grove, CA, 2016.

NH Rose and SR Palumbi. Alleles that alter gene expression: surprisingly common and surprisingly powerful in evolving ocean populations. Hopkins Marine Station Graduate Research Symposium, Pacific Grove, CA, 2016.

NH Rose, FO Seneca, SR Palumbi. Individual variation and plasticity in coral gene expression responses to experimental heat stress. American Society of Naturalists, Pacific Grove, CA, 2014.

NH Rose, FO Seneca, SR Palumbi. Individual variation and plasticity in coral gene expression responses to experimental heat stress (poster). Stanford Center for Evolutionary and Human Genomics Symposium, 2015. Systems Genetics and Evolution, Ascona, CH, 2014. Bay Area Population Genetics Group Meeting, Berkeley, CA, 2013.

Academic Service

Nutrition Coordinator, Hopkins Marine Station Graduate Student Council 2014–2016

Symposium Organizer, American Society of Naturalists, Pacific Grove, CA 2016

Treasurer, Hopkins Marine Station Graduate Student Council 2016