

Name: JULIA C. NOTAR
Address: Biology Department
Duke University
Box 90338, Biological Sciences Building
Durham, NC 27708
E-mail: julia.c.notar@gmail.com
Website: <http://jnotar.github.io>

EDUCATION

2022 **Duke University**, PhD, Biology
Dissertation: Vision and Light-Guided Behavior in Sea Urchins and Brittle Stars
Major Advisor: Dr. Sönke Johnsen
2016 **UCLA**, MS, Biology
Master's Thesis: A Comparative Study of Sea Urchin Visual Ecology
Major Advisor: Dr. Malcolm S. Gordon
2009 **UCLA**, BS, Marine Biology

PROFESSIONAL EXPERIENCE

2025-present **Postdoctoral Scholar**
Friday Harbor Laboratories, University of Washington
2025 **Visiting Scholar**
Johnsen Lab, Biology Department, Duke University
2023-24 **Postdoctoral Researcher**
Johnsen Lab, Biology Department, Duke University
2022-23 **Associate in Research**
Johnsen Lab, Biology Department, Duke University
2016-22 **PhD Student Researcher**
Johnsen Lab, Biology Department, Duke University
2015 **Graduate Student Researcher**
Gordon Laboratory, Department of Ecology and Evolutionary Biology, UCLA
2014 **Research Assistant**
Gordon Laboratory, Department of Ecology and Evolutionary Biology, UCLA
2010-13 **Whale Photo ID Intern and Volunteer Researcher**
Aquarium of the Pacific, Long Beach, CA
2010 **Research Assistant**
Shipe Laboratory, Department of Ecology and Evolutionary Biology, UCLA

PUBLICATIONS

PEER-REVIEWED

Notar, JC, Havens, HM, and Johnsen, S (in prep). Behavioral sensitivity to light varies across the body of *Lytechinus variegatus*.
Notar, JC, Go, M, and Johnsen, S. (2023). Learning without a brain: Classical conditioning in the ophiuroid *Ophiocoma echinata*. *Behavioral Ecology and Sociobiology*, 77:126, doi.org/10.1007/s00265-023-03402-x

- Notar, JC**, Meja, B, and Johnsen, S. (2022). Testing Mechanisms of Vision: Sea Urchin Spine Density Does Not Correlate with Vision-Related Environmental Characteristics. *Integrative and Comparative Biology*, icac119, doi: [10.1093/icb/icac119](https://doi.org/10.1093/icb/icac119)
- Gordon, MS and **Notar, JC**. (2015). Can Systems Biology Separate Evolutionary Analogies (Convergent Homoplasies) From Homologies? *Prog. Biophys. Mol. Biol.* 117 (2015), 19-29. doi: [10.1016/j.pbiomolbio.2015.01.005](https://doi.org/10.1016/j.pbiomolbio.2015.01.005)
- Notar, JC** and Gessow, J. (2009). Ecology of an intertidal leech: expanding the range of *Malmiana buthi*. Abstracts of the Annual Meeting of the Southern California Academy of Sciences. *Bull. So. Cal. Acad. Sci.*, 108(2), 112. doi: [10.3160/0038-3872-108.2.70](https://doi.org/10.3160/0038-3872-108.2.70)

DIVERSITY, EQUITY, INCLUSION & ANTI-RACISM PUBLICATIONS

- Sosa, K, Noor, MAF, **Notar, JC**, and Eily, A. (2020). Some steps to create a more inclusive classroom environment. *figshare*. Online resource. doi: [10.6084/m9.figshare.13360559](https://doi.org/10.6084/m9.figshare.13360559)
- Sosa, K, **Notar, JC**, and Eily, A. (2020). Fostering open dialogue in the classroom. *figshare*. Online resource. doi: [10.6084/m9.figshare.13360547](https://doi.org/10.6084/m9.figshare.13360547)
- Sosa, K, Quarles, B, **Notar, JC**, Gartner, V, Simha, A, Allen, R, and Carley, LN. (2020). Duke Biology IDEA Actions for Racial Equity Demands. *figshare*. Online resource. doi: [10.6084/m9.figshare.13003181](https://doi.org/10.6084/m9.figshare.13003181)
- Sosa, K, Quarles, B, **Notar, JC**, Gartner, V, Simha, A, Allen, R, and Carley, LN. (2020). Duke Biology IDEA Anti-Racism in Science Initiative. *figshare*. Online resource. doi: [10.6084/m9.figshare.13003163](https://doi.org/10.6084/m9.figshare.13003163)

GRANTS AND FELLOWSHIPS

- 2017-21 **NDSEG Fellowship** (\$153,000), Air Force Office of Scientific Research, US Department of Defense
- 2017-21 **Grant-in-Aid** (\$1,000, awarded 5 consecutive years), Biology Department, Duke University
- 2022 **Graduate Student Travel Award** (\$300), Animal Behavior Society
- 2021 **Jo Rae Wright Fellowship for Outstanding Women in Science** (\$5,000), The Graduate School, Duke University
- 2021 **International Dissertation Research Travel Award** (\$3,000), The Graduate School, Duke University
- 2019 **Lerner-Gray Grant for Marine Research** (\$3,106), Richard Gilder Graduate School, American Museum of Natural History
- 2018 **Graduate Student Training Enhancement Grant** (\$3,332), Office of the Vice Provost for Interdisciplinary Studies, Duke University
- 2018 **Data Expedition Award** (\$1,500), Information Initiative @ Duke, Duke University
- 2018 **Grant-in-Aid of Research** (\$700), Sigma Xi Society
- 2017 **Summer Research Fellowship** (\$5,500), The Graduate School, Duke University
- 2017 **Robert L. Fernald Endowed Fellowship** (\$3,500), Friday Harbor Laboratories, University of Washington
- 2015 **Research/Travel Award** (\$2,000), Department of Ecology and Evolutionary Biology, UCLA
- 2015 **AAUS Dive Fellowship** (\$125), Department of Ecology and Evolutionary Biology, UCLA

HONORS AND AWARDS

- 2021 **Jo Rae Wright Fellowship for Outstanding Women in Science**, The Graduate School, Duke University
- 2021 **Honorable Mention, Mary Price Award for Best Student Presentation**
Division of Invertebrate Zoology, Society for Integrative and Comparative Biology Annual Virtual Meeting
- 2020 **2nd Place Lightning Talk**
Duke VisionFest 2020, Duke University
- 2019 **Dean's Award for Inclusive Excellence in Graduate Education**, as a member of the Biology Department's **Graduate Student IDEA Committee**, on behalf of the Ph.D. Program in Biology
The Graduate School, Duke University
- 2016 **1st Place Graduate Student poster**
19th Annual Biology Research Symposium, Department of Ecology and Evolutionary Biology, UCLA
- 2015 **Schechtman Teaching Award** for Outstanding Merit in Instruction
Department of Ecology and Evolutionary Biology, UCLA

FIRST-AUTHOR PRESENTATIONS (* = POSTER)

- 2025 *Echinoder-bot-a: A sea urchin-inspired camera*
Notar, JC and Havens, HM
Society for Integrative and Comparative Biology Annual Meeting, Atlanta, GA
- 2024 *Turn on the Bright Lights: The Sea Urchin *L. variegatus* is not uniformly sensitive to light*
Notar, JC, Havens, HM, Johnsen, S
Society for Integrative and Comparative Biology Annual Meeting, Seattle, WA
- 2023 *Spatial Vision and Light-Guided Behavior in Two Groups of Echinoderms*
Notar, JC, Johnsen, S
International Conference on Invertebrate Vision, Bäckaskog Castle, Sweden
- 2023 *No Brain? No Problem! Brittle Stars are Capable of Associative Learning*
Notar, JC, Go, M, and Johnsen, S
Society for Integrative and Comparative Biology Annual Meeting, Austin, TX
- 2022 *Sight as a Sea Urchin: No Eyes, No Problem*
Notar, JC
Duke VisionFest, Duke University, Durham, NC
- 2022 *Learning with a Decentralized Nervous System in the Brittle Star *Ophiocoma echinata**
Notar, JC, Go, M, and Johnsen, S
International Congress of Neuroethology 2022, Lisbon, Portugal
- 2022 *Classical Conditioning in an Animal Without a Brain, the Brittle Star *Ophiocoma echinata**
Notar, JC, Go, M, and Johnsen, S
Animal Behavior Society Annual Meeting, San Jose, Costa Rica
- 2022 *Training Animals Without Brains: Brittle Stars Exhibit Associative Learning*
Notar, JC, Go, M, and Johnsen, S
Society for Integrative and Comparative Biology Annual Virtual Meeting
- 2021 *A Living Shag Rug: Sea Urchin Spine Density Differs by Habitat and has Consequences for Vision*
Notar, JC, Meja, B, and Johnsen, S
Society for Integrative and Comparative Biology Annual Virtual Meeting
Honorable Mention, Mary Price Award for Best Student Presentation, Division of Invert. Zoology

- 2020 *Trends in Spatial Acuity Across the Sea Urchins**
Notar, JC and Johnsen, S
 Society for Integrative and Comparative Biology Annual Meeting, Austin, TX
- 2020 *Sea Urchins: Sight Without Eyes*
Notar, JC
 Duke VisionFest, Duke University, Durham, NC
Second place, Lightning Talk Competition
- 2019 *Sea Urchin Vision in Featureless vs. Spatially Complex Environments*
Notar, JC and Johnsen, S
 Society for Integrative and Comparative Biology Annual Meeting, Tampa, FL
- 2018 *Seeing Without Eyes: Exploring the Visual Ecology of Sea Urchins*
Notar, JC
 Invited seminar, Whitney Laboratory for Marine Bioscience, University of Florida, St. Augustine, FL
- 2018 *Do (Eyeless) Sea Urchins have Color Vision?*
Notar, JC and Johnsen, S
 Society for Integrative and Comparative Biology Annual Meeting, San Francisco, CA
- 2017 *Future Directions in the Whole Body Eye of Sea Urchins: Effects of Phylogeny, Light Intensity, and Spine Density*
Notar, JC and Gordon, MS
 Society for Integrative and Comparative Biology Annual Meeting, New Orleans, LA
- 2016 *A Comparative Study of Sea Urchin Visual Ecology**
Notar, JC and Gordon, MS
 19th Annual Biology Research Symposium, Department of Ecology and Evolutionary Biology, UCLA
1st Place, Graduate Student Poster
- 2016 *A Comparative Study of Sea Urchin Visual Ecology**
Notar, JC and Gordon, MS
 Society for Integrative and Comparative Biology Annual Meeting, Portland, OR
- 2015 *A Comparative Study of Sea Urchin Visual Ecology*
Notar, JC and MS Gordon
 EcoEvoPub Seminar, Department of Ecology and Evolutionary Biology, UCLA

CO-AUTHORED CONFERENCE ABSTRACTS (* = UNDERGRADUATE MENTEE)

- 2023 *A role for the central complex in magnetoreception*
 Havens, H, **Notar, JC**, Taylor, B, Lohmann, K
 Society for Integrative and Comparative Biology Annual Meeting, Austin, TX
- 2021 *Insects go With Flow: A Mathematical Model of Induced Flow and Cooling During Flight*
 Meja, B*, **Notar, JC**, and Johnsen, S
 Society for Integrative and Comparative Biology Virtual Annual Meeting
- 2020 *Associative Learning in the Brittle Star Ophioderma brevispinum*
 Go, M*, **Notar, JC**, and Johnsen, S
 Society for Integrative and Comparative Biology Annual Meeting, Austin, TX

TEACHING EXPERIENCE

- 2019-2022 **Certificate in College Teaching Program**
The Graduate School, Duke University
- 2012-22, '25 **Teaching Associate^{1,2}, Teaching Assistant^{1,3}**
Department of Ecology and Evolutionary Biology, UCLA¹
Department of Integrative Biology and Physiology, UCLA²
Biology Department, Duke University³
Courses: Animal Environmental Physiology¹, Advanced Experimental Statistics²,
Biology of Invertebrates¹, Biology of Marine Tetrapods¹, Biology of Vertebrates¹,
Experimental Marine Invertebrate Biology¹, Field Marine Ecology¹, Genetics &
Evolution³, Introduction to Ecology & Behavior¹, Living Ocean¹
- 2018 **Guest Lecture:** *Answering Biological Questions Using Circular Data and Analysis in R*
Biological Data Analysis (Bio 304), Duke University; Prof. Tom Mitchell-Olds
Duke Data Expedition, Information Initiative @ Duke, Duke University
- 2017 **Guest Lecture:** *Future Directions in the Whole Body Eye of Sea Urchins: Effects of Phylogeny, Light Intensity, and Spine Density*
Marine Invertebrate Zoology, Friday Harbor Laboratories, University of Washington; Profs. Gustav Paulay and Peter Funch

MENTORSHIP

- 2024-25 **Division of Invertebrate Zoology Mentor** to undergraduates attending their first scientific meeting
Society for Integrative and Comparative Biology Annual Meeting
- 2015-23 **Graduate Student Advisor** to seven undergraduate researchers
Biology Department, Duke University
Department of Ecology and Evolutionary Biology, UCLA
- 2021-22 **Trinity College Peer Mentoring Fellow**
Duke Interdisciplinary Studies, Duke University
- 2017 **Women in Science and Engineering Graduate Mentor**
Biology Department, Duke University
- 2015-16 **Graduate Student Mentor**
California Teach Program, UCLA

PROFESSIONAL SERVICE AND SOCIETIES

DUKE BIOLOGY DEPARTMENT

- 2016-21 **IDEA (Inclusion, Diversity, Equity, & Anti-Racism) Committee**
Biology Department, Duke University
Worked collaboratively with fellow graduate students on diversity, inclusion, and equity initiatives, including: hosting workshops, writing teaching recommendations for TAs and faculty, promoting diversity and inclusion resources for students, and gathering feedback on department culture. Led work on the following initiatives:
- Mental Health Webpage (https://sites.duke.edu/biodiversity_mindhealth/)
 - Anti-Racism Discussion Groups (monthly)
 - Safe spaces meetup groups (monthly)
 - Hosting the IDEA Book Club (multiple times a semester)

- 2020-21 **Graduate Student Representative** on the faculty **Action for Justice, Equity, and Diversity (AJED) Committee**
Biology Department, Duke University
- 2019-20 **Graduate Student Representative** on the faculty **Task Force on Graduate Admissions and Recruitment**
Biology Department, Duke University
- 2016-Present **Dive Control Board**
AAUS Scientific Diving Program, Duke University

PROFESSIONAL SOCIETIES

Society for Integrative and Comparative Biology
International Society for Neuroethology
Animal Behavior Society
Sigma Xi

REVIEWER FOR: iScience

OUTREACH AND SCIENCE COMMUNICATION

- 2025 **Scientific Advisor, [Submerged! In the Company of Fish, Voyages: Chapter 7](#)**
Submersive Productions and the National Aquarium, Baltimore, MD
- 2021-24 **Presenter, Annual Alumni STEM Speaker Series**
Baltimore City College High School, Baltimore, MD
- 2022 **Visiting Expert**
Sea & Learn Foundation, Saba, Dutch Caribbean
- 2022 **Public Seminar: *Sea and Be Seen: Visual Ecology in the Depths***
Durham County Library, Durham, NC
- 2018-19 **Exhibiting Scientist**
Art of a Scientist, Duke University
- 2016-17 **Educator Outreach Liaison**
Scientific Research and Education Network (SciREN) Triangle, Durham, NC
- 2015-16 **Graduate School Info Session Panel Member**
Diversity Project, Department of Ecology and Evolutionary Biology, UCLA
- 2015-16 **Career Day Presenter**
Los Angeles Academy Middle School, South Los Angeles, CA
- 2015-16 **Scientist Pen Pal**
Letters to a Pre-Scientist Pen Pal Program
- 2016 **Scientist in the Classroom Presenter**
Oak Park High School, Oak Park, CA

SKILLS AND CERTIFICATIONS

Diving and First Aid: AAUS Scientific Diver (30' depth rating, >70 logged dives, wetsuit & drysuit experience), PADI Advanced Open Water, PADI Nitrox, DAN DFA Pro, Experienced freediver
Programming Languages: R, bash, Python
Image Processing and Design: FIJI/ImageJ, Adobe Suite (Illustrator, Photoshop, After Effects)
Statistics: Parametric and Non-parametric analyses incorporating bootstrapping methods