

**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**

2022-Present **Research Associate**  
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**, Go, M, and Johnsen, S. (in review). Learning without a brain: Classical conditioning in the ophiuroid *Ophiocoma echinata*.  
**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 **Honorable Mention, Mary Price Award for Best Student Presentation**  
Division of Invertebrate Zoology, Society for Integrative and Comparative Biology Annual Virtual Meeting
- 2020 **2<sup>nd</sup> 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 **1<sup>st</sup> Place Graduate Student poster**  
19<sup>th</sup> 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)

- 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  
 19<sup>th</sup> 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)

- 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 **Graduate Teaching Assistant<sup>1</sup>, Teaching Associate<sup>2,3</sup>, Teaching Assistant<sup>2</sup>**  
 Biology Department, Duke University<sup>1</sup>  
 Department of Ecology and Evolutionary Biology, UCLA<sup>2</sup>  
 Department of Integrative Biology and Physiology, UCLA<sup>3</sup>  
Courses: Animal Environmental Physiology<sup>2</sup>, Advanced Experimental Statistics<sup>3</sup>, Biology of Invertebrates<sup>2</sup>, Biology of Marine Tetrapods<sup>2</sup>, Biology of Vertebrates<sup>2</sup>, Experimental Marine Invertebrate Biology<sup>2</sup>, Field Marine Ecology<sup>2</sup>, Genetics & Evolution<sup>1</sup>, Introduction to Ecology & Behavior<sup>2</sup>, Living Ocean<sup>2</sup>
- 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**

- 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

#### **SERVICE (SELECTED)**

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/](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

#### **OUTREACH AND SCIENCE COMMUNICATION**

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), PADI Advanced Open Water, PADI Nitrox, DAN CPR/First Aid/O<sub>2</sub> (lapsed), Wilderness First Aid Responder (lapsed in 2020)

Programming Languages: R, UNIX, Python

Animal Behavior and Tracking Software: BORIS

Image Processing and Design: FIJI/ImageJ, Adobe Suite (Illustrator, Photoshop, After Effects)

Statistics: Parametric and Non-parametric analyses incorporating bootstrapping methods

### **PROFESSIONAL SOCIETIES**

Society for Integrative and Comparative Biology (SICB)

Animal Behavior Society (ABS)

Sigma Xi