

## LILLIAN R. AOKI

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*In 2021, working remotely from Portland, OR*

### EDUCATION

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2018 *Ph.D.*, Environmental Sciences, University of Virginia  
2012 *B.A., cum laude* in Chemistry and in History, Cornell University

### PROFESSIONAL EXPERIENCE

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2020-present Fellow, Cornell Atkinson Center for Sustainability  
2019-present Postdoctoral Research Associate, Cornell University,  
Department of Ecology and Evolutionary Biology  
2018-2019 Postdoctoral Research Associate, University of Virginia,  
Department of Environmental Sciences  
2013-2018 Research Assistant, Univ. of Virginia, Dept. of Environmental Sciences  
2013-2016 Teaching Assistant, Univ. of Virginia, Dept. of Environmental Sciences  
Summer 2012 Technician, Univ. of Alaska-Fairbanks, Institute of Arctic Biology  
Summer 2011 Undergraduate Research Intern, Smithsonian Environmental Research Center

### COMPETITIVE FUNDING AND AWARDS

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2019 Sustainability and Biodiversity Fund (\$7400), *Atkinson Center for Sustainability, Cornell Univ.*, “Foundation species under threat: Managing outbreaks of eelgrass wasting disease”  
2018 Ecological Dissertations in the Aquatic Sciences (Eco-DAS) XIII selected participant (\$1000), *National Science Foundation, Association for the Sciences of Limnology and Oceanography*  
2018 Jay Ziemann Research Publication Award (\$1000), *Univ. of Virginia, Dept. of Environmental Sciences*  
2017 Moore Research Award (\$3000), *Univ. of Virginia, Dept. of Environmental Sciences* “N fixation in the root zone of a restored seagrass meadow”  
2017 Joseph K. Roberts Conference Presentation Award (\$500), *Univ. of Virginia, Dept. of Environmental Sciences*  
2015 Environmental Resilience and Sustainability Fellowship (\$5500), *Univ. of Virginia, Office of the Vice President for Research, Office of Postdoctoral and Graduate Affairs, Jefferson Trust*, “Seagrass restoration: Services and values”  
2015 Graduate Student Outstanding Research Award in Ecology (\$500), *Univ. of Virginia, Dept. of Environmental Sciences*  
2015 National Science Foundation Graduate Research Fellowship, Honorable Mention  
2014 Exploratory Research Award (\$1500), *Univ. of Virginia, Dept. of Environmental Sciences* “Nitrate reduction pathways in restored seagrass beds”

## PUBLICATIONS

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### *Journal articles in review*

Shackelford, N, Murphy, S, Battaglia, L, Bestelmeyer, B, **Aoki, LR**, Bradford, J, Fagan, M, McGlathery, KJ, Reid, L, Suding, K, Twilley, R, Zahawi, R. Thinking big: Strategies for large-scale restoration. In review at *Ecology and Society*.

### *Published peer-reviewed journal articles*

**Aoki, LR**, McGlathery, KJ, Wiberg, P, Oreska, MPJ, Berger, A, Berg, P, and Orth, RJ. 2021. Seagrass recovery following marine heat wave influences sediment carbon stocks. *Frontiers in Marine Science* 7: 576784. doi.org/10.3389/fmars.2020.576784

Mueller, P, Mozdzer, TJ, Langley, A, **Aoki, LR**, Noyce, GL, and Megonigal, JP. 2020. Plant species determine tidal wetland methane response to sea level rise. *Nature Communications* 11: 5154. doi.org/10.1038/s41467-020-18763-4

Orth, RJ, Lefcheck, JS, McGlathery, KS, **Aoki, LR**, Luckenback, ML, Moore, KA, Oreska, MPJ, Snyder, R, Wilcox, DJ, Lusk, B. Restoration of seagrass habitat leads to rapid recovery of coastal ecosystem services. *Science Advances* 6: eabc6434. doi.org/10.1126/sciadv.abc6434

Oreska, MJP, McGlathery, KJ, **Aoki, LR**, Berger, AC, Berg, P, and Mullins, L. The greenhouse gas offset potential from seagrass restoration. *Scientific Reports*, 10:7325. doi.org/10.1038/s41598-020-64094-1

**Aoki, LR**, McGlathery, KJ, Wiberg, PL, and Al-Haj, A. 2020. Depth affects seagrass restoration success and resilience to marine heat-wave disturbance. *Estuaries and Coasts*. 43:316-328. doi.org/10.1007/s12237-019-00685-0

**Aoki, LR**, Oreska, MPJ, and McGlathery, KJ. 2019. Seagrass restoration reestablishes the nitrogen filter through enhanced burial. *Limnology and Oceanography* 65:1-12. doi.org/10.1002/lno.11241

**Aoki, LR** and McGlathery, KJ. 2019. High rates of N fixation in seagrass sediments measured via direct <sup>30</sup>N<sub>2</sub> push-pull method. *Marine Ecology Progress Series*, 616:1-11. doi.org/10.3354/meps12961p

LaRoche, C, Goldstein, B, Cybulski, JD, Raymundo, LJ, **Aoki, LR**, and Kim, K. 2018. A decade of change in *Enhalus acoroides* seagrass meadows in Guam, Mariana Islands. *Marine and Freshwater Research*, 69:1-9. doi.org/10.1071/MF18062

**Aoki, LR** and McGlathery, KJ. 2018. Restoration enhances denitrification and DNRA in *Zostera marina* seagrass meadows. *Marine Ecology Progress Series*, 602: 87-102. doi.org/10.3354/meps12678

**Aoki, LR** and McGlathery, KJ. 2017. Push-pull incubation method reveals the importance of denitrification and DNRA in seagrass root zone. *Limnology and Oceanography: Methods*, 15: 776-781. doi:10.1002/lom3.10197

Lunstrum, AM and **Aoki, LR**. 2016. Oxygen interference with membrane inlet mass spectrometry may overestimate denitrification rates calculated with the isotope pairing technique. *Limnology and Oceanography: Methods*, 14: 425–431. doi:10.1002/lom3.10101

*Peer-reviewed reports*

Contributing author, NYDF Assessment Partners. (2019). Protecting and Restoring Forests: A Story of Large Commitments yet Limited Progress. New York Declaration on Forests Five-Year Assessment Report. Climate Focus (coordinator and editor). Accessible at [forestdeclaration.org](http://forestdeclaration.org).

*Broader Impact (non-peer reviewed)*

Rawlings III, HR, & **Aoki, LR**. 31 January 2013. “A College Education is About More Than a First Job.” Op-Ed. *HuffingtonPost.Com*

**PRESENTATIONS AND SEMINARS**

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*Invited Presentations*

2018 Ecological Society of America Annual Meeting, New Orleans, LA.

*Contributed Presentations*

2020 Western Society of Naturalists Annual Meeting, virtual.

2020 Ocean Sciences Meeting, San Diego, CA.

2019 Association for the Sciences of Limnology and Oceanography, San Juan, Puerto Rico.

2018 Western Society of Naturalists Annual Meeting, Tacoma, WA.

2018 LTER All-Scientists Meeting, Asilomar, CA.

2017 Coastal and Estuarine Research Federation Biennial Meeting, Providence, RI.

2017 Association for the Sciences of Limnology and Oceanography, Honolulu, HI.

2015 Coastal Estuarine Research Federation Biennial Meeting, Portland, OR.

2015 LTER All-Scientists Meeting, Estes Park, CO.

*Seminars*

2018 Dept. of Environmental Science and Management, Portland State University. Nov 16, Portland, OR.

2018 Western Ecology Division, Environmental Protection Agency. Nov 6, Corvallis, OR.

2018 Dept. of Environmental Sciences, University of Virginia, Mar 15, Charlottesville, VA.

**TEACHING AND MENTORSHIP**

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2020 **Guest lecturer**, Virginia Tech, School of Plant and Environmental Sciences  
*Plant Materials for Environmental Restoration*, 20 students

2019-2020 **Program co-Coordinator and Instructor**, Cornell Ocean Research  
Apprenticeship for Lynch Scholars (CORALS) Program, Cornell University

2017-2018     **Outreach Coordinator**, interdisciplinary working-group, Washington Latin Public Charter School, Washington, D.C.

Developed curriculum and co-led monthly workshops integrating art, humanities, and environmental science for high-school students, culminating in a 3-day field trip to the Virginia Coast Reserve Long-Term Ecological Research site.

2013-2016     **Teaching Assistant**, Univ. of Virginia, Dept. of Environmental Sciences  
*Introduction to Environmental Policy*, Section Leader, 51 students, Fall 2013-Fall 2015  
*Fundamentals of Ecology*, Laboratory Instructor, 13 students, Spring 2014-Spring 2016

2014-2018     **Research Mentor**, Univ. of Virginia, Dept. of Environmental Sciences  
Supervised 6 undergraduate students in REU internships at the Virginia Coast Reserve LTER  
(D. Martin, E. Daly, L. Edwards<sup>†</sup>, E. Ferrum, A. Bartenfelder, B. Shayka)  
Supervised 6 undergraduate laboratory assistants during the academic year  
(A. Kamani, A. Chan, D. Eddy, K. Kerns, S. Knepper, P. Olivares)  
<sup>†</sup>*Student completed the Distinguished Majors Thesis Program*

#### **PROFESSIONAL SERVICE AND AFFILIATIONS**

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Ad-hoc journal reviewer for: *Biogeochemistry, Ecosphere, Ecosystems, Environmental Microbiology, Environmental Research Letters, Estuaries and Coasts, Global Biogeochemical Cycles, Global Change Biology, Journal of Geophysical Research – Oceans, Limnology and Oceanography, Marine Ecology Progress Series, Marine Environmental Research, Scientific Reports*

Ad-hoc grant proposal reviewer for:  
California State University Council on Ocean Affairs, Science, and Technology  
National Science Foundation – Biological Oceanography Program  
Oregon Sea Grant

Contributing author to the Intergovernmental Panel on Climate Change, Sixth Assessment Report, Working Group Three Contribution: *Mitigation of Climate Change, Chapter 4: Agriculture, Forestry, and Other Land Uses* (to be finalized in July 2021)

Member of:  
Coastal and Estuarine Research Federation (CERF)  
Association for the Sciences of Limnology and Oceanography (ASLO)  
Ecological Society of America (ESA)

Volunteer at CERF 2015, ASLO 2017, WSN 2020 meetings

2020           DEIJB Seminar Series Working Group participant, Dept. of Ecology and Evolutionary Biology, Cornell Univ.

2017-2018     Graduate Collaborative Networks working group participant, “Ecological Methods Lab,” Institute of the Humanities and Global Culture, Univ. of Virginia

- 2016 EnviroDay Symposium Co-Chair, Dept. of Environmental Sciences, Univ. of Virginia
- 2014-2015 Treasurer, Environmental Sciences Graduate Student Association