

Jack Hoyt Buckner Ph.D.

RESEARCH ASSOCIATE · EARTH, OCEANS AND ATMOSPHERIC SCIENCE

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Education

Ph.D. Ecology

September 2019 - December

2023

THE UNIVERSITY OF CALIFORNIA, DAVIS

Davis, CA

- Using Ecological Models to Inform Decisions in Dynamic and Uncertain Environments”
- Advisors: Dr. Marissa L. Baskett and Dr. Michael R. Springborn

B.A. Mathematics and Chemistry

September 2014 - June 2018

CARLETON COLLEGE

Northfield, MN

- *Magna cum laude* and Honors in Chemistry
- Chemistry Thesis: “Mechanisms of secondary organic aerosol formation from isoprene.”
- Mathematics Thesis: “Simple models reveal the potential for alternative stable state in the earth’s climate system.”

Research Interests

My research investigates the effect of scientific uncertainty and environmental change on resource management and conservation outcomes. I combine tools from population ecology, resource economics, and statistics to develop mathematical models that quantify the effectiveness of resource management strategies for achieving economic and conservation goals.

Professional Experience

2024 - **Research Associate**, Oregon State University

2019 - 2023 **National Science Foundation Graduate Student Research Fellowship**, the University of California Davis

2022 **Graduate Student Researcher**, Environmental Science and Policy, the University of California Davis

2022 **Graduate Teaching Assistant**, Environmental Science and Policy, the University of California Davis

2020 **Sustainable Oceans NRT Internship**, National Oceanic and Atmospheric Administration, Seattle, WA

2018 **Undergraduate Teaching Assistant**, Mathematics and Statistics, Carleton College

2017 **National Science Foundation Research Experience for Undergraduates**, Chemistry and Biochemistry, Montana State University

Publications

PUBLISHED

Buckner J.H., W.H. Satterthwaite, B.W. Nelson, E.J. Ward, 2023. Interactions between life history and the environment on changing growth rates of Chinook salmon. *Canadian Journal of Fisheries and Aquatic Sciences*, 00: 1-15.

Buckner J.H., G. Chowell, M.R. Springborn, 2021. Dynamic prioritization of COVID-19 vaccines when social distancing is limited for essential workers. *Proceedings of the National Academy of Sciences*, 118(16): e2025786118.

Lazlo K.J., **J.H. Buckner**, E.B. Munger, M.F. Bush, 2017. Native-like and denatured cytochrome-C Ions yield cation-to-anion proton transfer reaction products with similar collision cross-sections. *Journal of the American Society for Mass Spectrometry*, 28(7): 1382-1391.

IN REVIEW

Buckner J.H., T. Davies, S. MacAdam, E.B. Taylor, R. Waples, M.L. Baskett, Long life spans can mitigate the genetic effects of straying for temporary conservation hatchery programs.

IN PREP

Buckner J.H., M.R. Springborn, Investing in information for fisheries management: a bio-economic model and implications for prioritizing stock assessments.

Presentations

** presenting author*

INVITED PRESENTATIONS

Springborn M.R.*, **J.H. Buckner***, G. Chowell, 2020. Talk: “Dynamic Prioritization of COVID-19 Vaccines When Social Distancing is Limited for Essential Workers”. World Health Organization - Strategic Advisory Group of Experts (SAGE) on Immunization Working Group on COVID-19 Vaccines - Impact Modelling subgroup, online.

Springborn M.R.*, **J.H. Buckner***, G. Chowell, 2020. Talk: “Dynamic Prioritization of COVID-19 Vaccines When Social Distancing is Limited for Essential Workers. California Department of Public Health, online seminar.

Springborn M.R.*, **J.H. Buckner***, G. Chowell, 2020, Talk: “Dynamic Prioritization of COVID-19 Vaccines When Social Distancing is Limited for Essential Workers.” MIDAS Webinar Series: COVID-19 Modeling Interventions, online.

CONTRIBUTED PRESENTATIONS

Buckner J.H.*, T. Davies, S. MacAdam, E.B. Taylor, R. Waples, M.L. Baskett, 2022. Talk: “Long life spans can mitigate the genetic effects of straying for temporary conservation hatchery programs.” North American Sturgeon and Paddlefish Society, Folsom, CA.

Buckner J.H.*, W.H. Satterthwaite, B.W. Nelson, E.J. Ward, 2022. Talk: “Interactions between life history and the environment on changing growth rates of Chinook salmon.” American Fisheries Society, Spokane, WA.

Buckner J.H.*, G. Chowell, M.R. Springborn, 2020. Talk: “Dynamic prioritization of COVID-19 vaccines when social distancing is limited for essential workers.” COVID-19 Dynamics and Evolution Virtual Conference Series, online.

Awards, Fellowships, & Grants

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| 2019 | Graduate Research Fellowship , National Science Foundation | \$ 147,000 |
| | Graduate Group in Ecology Fellowship , the University of California Davis | |
| 2018 | Phi Beta Kappa , Carleton College | |
| | Sigma Xi , Carleton College | |
| 2016 | MIAC Conference Champion in Decathlon , Track and Field, NCAA DIII | |
| 2015 | MIAC Conference Champion in Decathlon , Track and Field, NCAA DIII | |

Teaching Experience

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| 2022 | Population Ecology , Teaching Assistant |
| 2018 | Ordinary Differential Equations , Undergraduate Teaching Assistant |

Outreach & Professional Development

SERVICE AND OUTREACH

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| 2022-2023 | Natural Resource Economics and Policy Lab , (seminar series), Student Coordinator |
| 2022 | Ecology and Evolution Graduate School Preview Program , (DEI initiative), Treasurer |

PEER REVIEW

Vaccine
Ecology
Ecology Letters
PLOS-one