

# Kaleigh Davis

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Curriculum Vitae

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## Education

- 2017 - 2023    PhD, University of British Columbia, Department of Zoology  
*Nutrient effects on metabolic rate in a changing world: a multiscale approach*  
Faculty Supervisor: Dr. Mary O'Connor
- 2011 - 2015    B.S. Ecology, Odum School of Ecology, University of Georgia  
*Boring Sponge: Effects of Temporal and Spatial Salinity Heterogeneity*  
Faculty Supervisor for Honors Thesis: Dr. Jeb Byers
- 2011 - 2015    B.S. Biology, Franklin College of Arts and Sciences, University of Georgia

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## Professional Positions Held

- 2024 - Present: Postdoctoral Research Fellow. University of Guelph. Guelph, ON, Canada.  
Supervisor: Dr. Joey Bernhardt
- 2024: Postdoctoral Researcher. University of Queensland. Brisbane, QLD, Australia  
Supervisor: Dr. Andrew Letten
- 2022 - 2023: Marine Scientist (Part-time). Dynamic Ocean Consulting, Ltd. Port Moody, BC  
Canada
- 2021 - 2022: CAUS Scientific Diver (Contract). Nicholas Sonntag Marine Education Center.  
Gibsons, BC, Canada.

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## Peer-reviewed Publications

ORCID: 0000-0002-3127-9484

\* undergraduate mentee

**Davis, Kaleigh E**, Margaret A Slein, and Mary I. O'Connor. A general temperature dependence for biological nitrogen fixation. *In review at Nature*.

Kuzyk, ZZ, ... **Kaleigh E Davis**... et al. *In review at Nature Communications*. Losing shikaapaashkw: hydropower development and climate change caused eelgrass ecosystem collapse and social-ecological regime shift.

**Davis, Kaleigh E**, Fanny Noisette, Jens Ehn, Zou Zou Kuzyk, Christopher Peck, Mary O'Connor. 2024. Effects of light and water column nutrient availability on eelgrass

- (*Zostera marina*) productivity in Eeyou Istchee, eastern James Bay, Quebec. *Marine Ecology Progress Series*, 738:103-117. <https://doi.org/10.3354/meps14605>
- Fink-Mercier, Caroline ... **Kaleigh E Davis**, et al. 2024. Cree-driven community-partnered research framework to gain insight on environmental change in coastal water of subarctic Canada. *Arctic Science*. <https://doi.org/10.1139/as-2023-0061>
- Leblanc, Melanie ... **Kaleigh E Davis**, et al. 2022 Limited recovery following a massive seagrass decline in subarctic eastern Canada. *Global Change Biology*, p. Gcb.16499. <https://doi.org/10.1111/gcb.16499>.
- Davis, Kaleigh E**, Fiona Beaty, and Carolina Sánchez\*. 2022. A Flexible Risk Assessment Framework for Marine Plastic Pollution That Synthesizes Waste Management and Ecological Impact Data. *Marine Policy* 137 (September 2021). <https://doi.org/10.1016/j.marpol.2021.104833>.
- Mason, Chase M., Eric W. Goolsby, **Kaleigh E. Davis**, Devon V. Bullock, and Lisa A. Donovan. 2017. Importance of Whole-Plant Biomass Allocation and Reproductive Timing to Habitat Differentiation across the North American Sunflowers. *Annals of Botany* 119 (7): 1131–42. <https://doi.org/10.1093/aob/mcx002>.
- Mason, Chase M., Hiral S. Patel, **Kaleigh E. Davis**, and Lisa A. Donovan. 2017. Beyond Pollinators : Evolution of Floral Architecture with Environment across the Wild Sunflowers ( *Helianthus* , Asteraceae ). *Plant Ecology and Evolution* 150 (2): 139–50. <https://doi.org/10.5091/plecevo.2017.1321>.

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## Invited Research Presentations

- Davis, Kaleigh E**. 2024. The metabolic scaling of nitrogen fixation. Invited seminar. Gulbenkian Institute. Oeiras, Portugal.
- Davis, Kaleigh E**, MI O'Connor. 2023. Does temperature-dependent nutrient supply set the pace of photosynthesis with warming? Invited talk. Canadian Society for Ecology and Evolution Meeting. Winnipeg, MB, Canada.
- Davis, Kaleigh E**, MI O'Connor. 2023. Nutrient effects on metabolism in a warming world: A multiscale approach. Biodiversity Research Center Internal Seminar. Invited seminar. University of British Columbia, Vancouver, BC, Canada.
- Davis, Kaleigh E**, Mary I. Connor. 2022. The metabolic ecology of nitrogen fixation across scales. *Gordon Research Conference: Unifying ecology across scales, New Hampshire, USA*. Invited poster presentation.
- Davis, Kaleigh E**, et al. 2020. Understanding eelgrass through science and Cree knowledge in James Bay, QC. Biodiversity Research Center Internal Seminar. University of British Columbia, Vancouver, BC, Canada.
- Davis, Kaleigh E** et al. 2019 The ecology of eelgrass in James Bay, Quebec. Western Society of Naturalists, Ensenada, Baja California, Mexico.

**Davis, Kaleigh E.** 2018. Invited panelist. A national plastics pollution strategy for Canada. Vancouver, British Columbia, Canada.

**Davis, Kaleigh E, F Beaty.** 2018. UBC's plastic in the ocean. University of British Columbia Zero Waste Action Committee Meeting, Vancouver, British Columbia, Canada.

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## Grants, Fellowships, Awards, and Honors

Total: \$246,600

- Centre for Ecosystem Management Postdoctoral Research Fellowship. 2024-2026. \$145,000
- UBC Graduate Student Travel and Research Dissemination Award. 2022. \$500
- Zoology Graduate Student Travel Award. 2022. \$500
- Margaret Barr Scholarship. 2021-2022. \$5,600
- Zoology Graduate Fellowship. 2021-2022. \$15,000
- UBC Sustainability Green Labs Funding. 2019. \$2000.
- Ocean Leaders Graduate Fellowship. 2017-2021. \$44,000
- NSF GRFP Honorable Mention. 2016.
- Zell Miller Scholarship. 2011-2015. \$36,000 USD

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## Service

### Reviewer for peer-reviewed journals

- PNAS (1)
- Marine Environmental Research (2)
- Ecology Letters (1)

### Western Society of Naturalists

- Secretariat student member (2018 - 2020)

### UBC Department of Zoology

- Zoology Graduate Peer Mentorship Program (2022): Mentor
- Zoology Equity, Diversity, and Inclusion (ZEDI) Committee (2020 - 2022): Founding member
- Biology Undergraduate Diversity in Research (BUDR) Initiative (2021-2022): Founding member and steering committee member

### UBC Conservation Discussion Group (CDG)

- CDG Co-founder, organizer, discussion facilitator (2018 - 2021)
- CDG x UBC Conservation Initiative Conference organizer (2020)

### UBC Labs Re-Use Plastics (Re-UP)

- Re-UP Founder and manager (2018 - 2020)
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## Community Engagement

### Community consultations and symposia in Eeyou Istchee, Quebec

- Eelgrass current status and health. *Eelgrass Symposium, Chisasibi, Quebec*. Sept 2022.
- Eelgrass current status and health. *Community Consultation with Land Users, Eastmain, Quebec*. August 2022.
- Eelgrass current status and health. *Community Consultation with Land Users, Wemindji, Quebec*. August 2022.
- Eelgrass current status and health. *Community Consultation with Chief, Council and Elders, Chisasibi, Quebec*. August 2022.
- Cree cafe community consultation. *Wemindji, Quebec*. June 2019.

### Bio Blitzes

- Hakai Seagrass Bio Blitz. Invited participant. Calvert Island, BC, Canada. June 2018.
- Galiano Bio Blitz. Invited participant. Galiano Island, BC, Canada. June 2023.

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## Selected Conferences and Professional Workshops Attended

Oct 2020	CIEE Working Group: Life in Fluctuating Environments. Invited contributor. <i>Virtual</i> .
Mar 2020	Engaging with Policy Makers. Invited Participant. <i>Vancouver, BC</i> .
Feb 2020	Research Partnerships with First Nations. Invited Participant. <i>Vancouver, BC</i> .
May 2019	Science Communication Series: Op-ed Writing. Invited Participant. <i>Vancouver, BC</i> .
Mar 2019	Working with Indigenous Groups. Invited Participant. <i>Vancouver, BC</i> .
Jan 2019	Data Management in Research. Invited Participant. <i>Vancouver, BC</i> .
Jul 2018	Gordon Research Conference: Unifying Ecology Across Scales. Invited Participant. <i>University of New England, Biddeford, ME</i> .
Mar 2018	GLOBE Forum. Youth Leadership Delegate. <i>Simon Fraser University, Vancouver, BC</i> .
2018	Science Communication Series (4 workshops). Invited Participant. <i>Vancouver, BC</i> .
Oct 2017	Collective Leadership Workshop, Leopold Program. Invited Participant. <i>Vancouver, BC</i> .
Oct 2017	Science and Advocacy. Invited Participant. <i>Vancouver, BC</i> .

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## Courses Taught (Teaching Assistant)

- Biol 402: Aquatic Ecology (UBC, 2020)
- Biol 406: Ecological Methodology (UBC, 2019)
- Biol 345: Human Ecology (UBC, 2018)
- Biol 306: Advanced Ecology (UBC, 2017)
- Bio 1104: General Biology for non-science majors (UGA, 2014)

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## Scientific Diving Experience

Logged scientific dives to date (2019-2025): 80 dives, 66 hours. All coldwater + drysuit.

Logged total dives to date (scientific + recreational): ~110 dives, 85 hours  
Logged dives in the last 12 months: 13 dives, 10 hours

Selected Projects

- 2023 Diver for eelgrass biodiversity surveys and baited remote underwater video deployment & collection. Desolation Sound, BC, Canada. University of British Columbia
- 2023 SCUBA topside support for kelp restoration experiment. Vancouver, BC, Canada. Dynamic Oceans Consulting, Ltd.
- 2022 Underwater methodology consultant for CAUS 1 divers in training. Dynamic Oceans Consulting, Ltd.
- 2022 Diver for aquarium collections. Gibsons, BC, Canada. Nicholas Sonntag Marine Education Center.
- 2021 Diver for benthic substrate and biodiversity survey. Gibsons, BC, Canada. Nicholas Sonntag Marine Education Center.
- 2021 Research team lead and diver for eelgrass manipulative experiments and biodiversity surveys. Eeyou Istchee, Eastern James Bay, QC, Canada.
- 2019 Research team lead and diver for eelgrass biodiversity surveys. Eeyou Istchee, Eastern James Bay, QC, Canada. University of British Columbia.
- 2019 Canadian Association for Underwater Science (CAUS) 1 certification