



Al Martin HCTF Conservation Scholarship Recipient 2025



Noa Mayer

Noa Mayer is a PhD candidate at the University of British Columbia studying how climate change is reshaping the future of Pacific salmon. Her research focuses on Kokanee salmon — a resident form of sockeye salmon — and investigates whether these fish possess adaptations that allow them to better withstand warming freshwater temperatures than other Pacific salmon populations.

Growing up, Noa spent her summers on Cortes Island exploring tide pools, forests, and coastal ecosystems, where her appreciation for ecology and conservation was first fostered. Those early experiences in the natural environments of British Columbia inspired her passion for understanding and protecting aquatic ecosystems in a rapidly changing climate.

Pacific salmon are foundational to the ecosystems, economies, and Indigenous and local communities of western North America. However, rapidly warming rivers and lakes are pushing many salmon populations toward their thermal limits. While numerous wild sockeye populations are declining, Kokanee salmon remain comparatively abundant, suggesting they may possess unique biological traits that improve resilience to heat stress.

Through her research, Noa seeks to answer critical questions: How do Kokanee respond to rising temperatures? What biological signals indicate when salmon are physiologically stressed? Which populations are most vulnerable as freshwater habitats continue to warm?

To address these questions, Noa combines physiology, genomics, and predictive modelling to better understand how salmon respond to environmental stress and how climate warming may affect their survival in the decades ahead. Her work measures how temperature influences salmon metabolism and performance, examines genomic indicators of stress and disease, and develops climate-informed models to predict future vulnerability across populations.

A major component of her work is the development of the “Kokanee Fit-Chip,” a rapid biomarker-based screening tool designed to assess salmon health and provide fisheries managers with real-time information to support conservation decisions. In addition, her research will contribute to vulnerability mapping tools for Kokanee and sockeye salmon, helping identify populations at greatest risk under future climate scenarios and supporting more targeted conservation strategies.

Beyond research, Noa is passionate about science communication and community engagement. She has shared her work through public outreach, mentorship, conference leadership, and media engagement, with the goal of making climate and conservation science more accessible and actionable.

By translating scientific discoveries into practical management tools, Noa’s work aims to help protect Pacific salmon and the communities that depend on them, ensuring these iconic fish continue to persist in a rapidly changing world.

