



Department of Biology

May 14, 2021

UNIVERSITY OF VICTORIA

Biology Honours Students 2021

Congratulations to the following Biology Honours Students, who defended last month!

Madeline Antony

Supervisor: Dr. Patrick von Aderkas

“Are there bacteria in the ovules of *Cycas revoluta*? An exploratory study”

Joshua Benjamin

Supervisor: Dr. Patrick Walter

“Circadian light influences iron uptake, proliferation and reactive oxygen species in neuronal and immune cells”

Lindsay Clark

Supervisors: Drs. Cherisse du Preez & Kim Juniper

“Cold-water coral and sponge diversity on offshore Pacific bioregion seamounts: considerations for future monitoring of marine protected areas”

Megan Davies

Supervisors: Drs. Cherisse du Preez & Francis Juanes

“Distribution and substrate preferences of deepsea sole (*Embassichthys bathybius*) on northeast pacific seamounts”

Hannah Dobbs

Supervisor: Dr. Julia Baum

“Characterizing isotopic niches of coral reef invertebrates from Kiritimati”

Amanda Dundas

Supervisor: Dr. Rana El-Sabaawi

“A survey of meiofaunal communities in beaches of Victoria, B.C.”

Naomi Edmonds

Supervisor: Dr. Patrick Walter

“The effects of iron deficiency and excess on proliferation and cell death in immune and neuronal cells”

Hana Gair

Supervisors: Drs. Catherine Stevens & John Dower

“Assessing diet and nutritional value of small pelagic copepods through lipid analysis”

Wesley Greentree

Supervisor: Dr. Francis Juanes

“Using adult Chinook salmon diets to understand the spatial structure of forage assemblages in the Salish Sea”

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If you have stories or announcements that would like to share in the Biology newsletter, please email: Chantal Laliberté at biology@uvic.ca or Laura Alcaraz-Sehn at bioclerk@uvic.ca



Biology Honours Students 2021 (cont.)

Congratulations to the following Biology Honours Students, who defended last month!

Torin Halvorson

Supervisors: Drs. Julian Lum & Patrick Walter

“Overcoming metabolic competition in the tumor microenvironment: Fructose as an alternative carbon source for chimeric antigen receptor T cells”

Rebecca Hansen

Supervisor: Dr. Julia Baum

“Spatial variation in the benthic reef community of Kiritimati Island after a coral mass mortality”

Nathan Heuver

Supervisor: Dr. Neville Winchester

“Spatial, temporal and life history characteristics of stilt-legged flies (Micropezidae) on Vancouver Island, Canada”

Taylor Holt

Supervisor: Dr. Patrick von Aderkas

“Histological analysis of weevil resistance traits in Sitka spruce (*Picea sitchensis*) trees cross-pollinated and cloned in a somatic embryogenesis trial”

Sophia Loewen

Supervisors: Drs. Marie-Ève Tremblay & Bob Chow

“Density and distribution of microglia following *Salmonella enterica* infection, *Heligmosomoides polygyrus* infection and bile acid diet supplementation in the hippocampus dentate gyrus of adult, male mice”

Bryn Martin

Supervisor: Dr. Bob Chow

“Post-transcriptional regulation of visual system homeobox (*Vsx*) genes in the developing retina”

Alana McPherson

Supervisor: Dr. John Taylor

“Shedding light on *Opn6a* paralogs in sablefish (*Anoplopoma fimbria*) using RT-PCR and qPCR data”

Zoe Molder

Supervisors: Drs. William Halliday & Francis Juanes

“Humpback whale (*Megaptera novaeangliae*) calls in British Columbia and their association with diving behaviour”

Parker Volk

Supervisor: Dr. Jürgen Ehltng

“Iron-chelating ability of root secondary metabolites from *Lavandula x intermedia*, gallic acid, and β -thujaplicin”

Jonathan Walters-Schumka

Supervisors: Drs. Stephanie Willerth & Jürgen Ehltng

“A novel 3D bioprinted model of Alzheimer’s disease using patient derived hiPSC derived neurons in a fibrin-based hydrogel bioink”

Lydia Walton

Supervisor: Dr. Julia Baum

“The impact of human-driven and natural disturbances on the isotopic niche of a generalist carnivore reef fish, *Paracirrhites arcatus*”

Jodie Wiltse

Supervisor: Dr. Steve Perlman

“Impacts of a selfish X-chromosome on the susceptibility of *Drosophila testacea* to parasitic wasps”

Connor Yee

Supervisor: Dr. Fabio de Leo

“A high-frequency in-situ bait-release experiment studying deep-sea scavenger communities near Barkley Canyon (NE Pacific)”

Congratulations!

Calendar

Important Dates:

Thursday, April 15th

Tuesday, April 27th

Wednesday, May 5th

Friday, May 7th

Monday, May 10th

Wednesday, May 12th

Tuesday, May 18th

Monday, May 24th

Examinations begin for all faculties

End of Winter session

May-Aug courses begin for all faculties

Senate meets

May and May-June course begin

Last day for Faculty of Law course changes

Last day for graduate students to register in a personal leave in summer

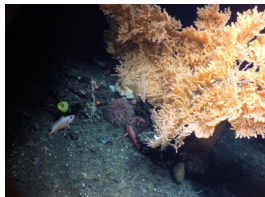
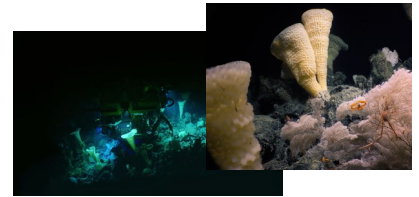
Victoria Day



Honours Projects to Turn Into MSc Opportunities

Government-academic collaborations may turn honours projects into Masters programs

The Canadian government, with its commitment to protect 30% of its oceans by 2030, is looking to science for advice on what to protect and monitor and how best to accomplish this ambitious goal. By partnering with the University of Victoria, Fisheries and Oceans Canada Pacific Region is looking to academics for help with these objectives while training the next generation of ocean scientists—the next researchers in line to take on this long-term responsibility of ocean exploration and stewardship.



If their applications are successful, two of our Honours students, Lindsay Clark and Megan Davies, will begin their Masters at UVic in the Fall with Dr. Cherisse Du Preez (Deep Sea Ecology Program, Fisheries and Oceans Canada Science), Dr. Kim Juniper (UVic Biology) and Dr. Francis Juanes (UVic Biology).

Good luck Lindsay and Megan!

Ocean Exploration Trust/Northeast Pacific Seamount Expedition Partners

Job Opportunities

Ministry of Forest Land and Natural Resources

Aquatic Lead Biologist

\$72,724.97 –\$83,014.85 annually

Under the limited direction of the Fish and Wildlife Section Head, the Aquatic Lead Biologist leads the planning, development and implementation of programs to manage, assess and monitor wild fish stocks, fish habitat and sport fisheries.

Click [here](#) for complete job description and qualifications, and to apply on-line.

BC Nature (Federation of BC Naturalists)

Conservation Coordinator

This is a part-time position with the probable expansion to a full-time position in the near future.

The BC Nature office is in North Vancouver but there is the possibility that the person hired could work from another approved location.

PREFERRED QUALIFICATIONS

- 1) Bachelors or Master's degree in conservation, ecology or a related field.
- 2) Thorough understanding of the principles of conservation and ecology.
- 3) Experience in communication.
- 4) Understanding of education principles and development of education materials.

More details and application info [here](#).

Biology News

Congratulations to Dr. Joe Antos, whose article was chosen as the Editor's Choice in the latest Botany newsletter!

Long-term responses of forest-floor bryophytes buried by tephra in the 1980 eruption of Mount St. Helens

By Stella R. Waxwing, Dylan G. Fischer, Joseph A. Antos, Abir Biswas, and Donald B. Zobel

Recovery of bryophytes after a volcanic disturbance: 36 years in the making. The authors used a unique 36-year data set to address several questions related to bryophyte succession in permanent plots established in disturbance zones affected by aerally transported volcanic 'ejecta', aka tephra, near Mount St. Helens. This interesting long-term analysis showed that 'time since eruption' (1980 vs. 2016) was the strongest effect overall on bryophyte cover. After what could be considered a relatively short period of time from an ecological succession point of view, the authors observed that total bryophyte cover reached their estimated pre-disturbance levels. However, the successional trajectories differed among their 4 sites. This study also highlights the importance of surviving plants for community recovery. You can read the article [here](#).



Publications

Biology Postdoc, Dr. Samuel Starko, Senior Lab Instructor, Dr Katy Hind, et al. have a new publication: Lemay, M.A., Chen, M.Y., Mazel, F., Hind, K.R., Starko, S., Keeling, P.J., Martone, P.T. and Parfrey L. W. (2021) [Morphological complexity affects the diversity of marine microbiomes. ISME Journal.](#)

Biology grad student, Nicholas Planidin and Dr. Thomas Reimchen also have a new publication: [Ecological predictors of lateral line asymmetry in stickleback \(*Gasterosteus aculeatus*\)](#)

New Grants

Congratulations to all faculty who were successful in winning or renewing NSERC Discovery Grants this year! We also had one success in the NSERC RTI competition in the department for a photosynthesis gas analyzer for the Centre for Forest Biology. Additionally, kudos to Dr. Ryan Gawryluk, for his award of a highly competitive New Frontiers in Research Fund grant! The New Frontiers in Research Fund supports research that is international, interdisciplinary, fast-breaking and higher-risk.



Biology News (cont.)

Biology Graduate Student Defences in April and May 2021

- Kevin Bruce MSc Supervisor: Dr. Baum
"Application of structure-from-motion photogrammetry to quantify coral reef structural complexity change following a mass mortality event"
- Jillian Campbell MSc Supervisor: Dr. Juanes
"Examining the Influence of Depth and Tidal Current on Nearshore Fish Communities Using Scientific and Citizen Science Data"
- Garth Covernton PhD Supervisors: Drs. Dower and Dudas
"Microplastics in Coastal Marine Ecosystems: Some Methodological, Anthropogenic, and Ecological Considerations"
- Ainsley Fraser MSc Supervisor: Dr. El-Saabawi
"Characterizing Phenotypic Diversity in Marine Populations of Threespine Sticklebacks"
- Keyrian Le Gratiet MSc Supervisor: Dr. Nashmi
"Differential Distribution of Functional Co-transmitted Cholinergic and GABAergic Synaptic Inputs onto Substantia Nigra Dopaminergic Neurons".
- Audrey McPherson MSc Supervisors: Drs. Perlman and Abram
"Factors influencing the intriguing persistence of a Wolbachia symbiont in spotted wing Drosophila"
- Nicholas Planidin MSc Supervisor: Dr. Reimchen
"Asymmetry in the lateral line of threespine stickleback, *Gasterosteus aculeatus*: ecology, evolution and behaviour"
- Candice Powell MSc Supervisor: Dr. Perlman
"Fitness and transmission of a selfish X chromosome in female *Drosophila testacea*"



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