



Department of Biology

February 14, 2020

UNIVERSITY OF VICTORIA

Oceans of Biodiversity in Victoria

The Department of Biology's Oceans of Biodiversity program (OOB) uses DNA barcoding to add a genetic element to the research of faculty in both Biology and Earth and Ocean Sciences. Funded as part of the University of Guelph's Food from Thought program, the OOB team (Dr. John Nelson and Mallory Van Wyngaarden) works closely with west coast researchers and the Canadian Centre for DNA Barcoding in Guelph to increase our knowledge of marine biodiversity off the coast of BC and throughout Canada's oceans. This knowledge allows us to support marine conservation efforts through collaborations with scientists from UVic, Fisheries and Oceans Canada, the Royal BC Museum and the Hakai Institute.

DNA barcoding allows us to identify an organism using a segment of a specific gene, usually in the mitochondrial DNA for metazoans, or the 16S or 18S rRNA genes from prokaryotes and micro-eukaryotes, respectively. Animals, plants, microbes, and fungus all have different genes that work best for DNA barcoding, but the result is the same – a species identification from a small tissue sample or concentration of microbes on a filter. To start our barcoding process for animal tissues, we take specimens collected by OOB collaborators and remove a small subsample of tissue (<1 mm). We place this tissue in a 96-well plate with 94 other samples and send it to the lab at the University of Guelph, where the lab team extract and sequence the DNA. The lab sends the DNA sequences back to us, and we compare them to the library of millions of identified DNA sequences on www.boldsystems.org, giving us a strong idea of what our sample is. In marine systems, sampled specimens can often be hard to identify – samples could be a piece of an organism, a larval life stage, or something very small and hard to identify. Using DNA barcoding, we can identify our samples much faster than with traditional taxonomy alone. The sequence data also give us more opportunities to answer important questions about marine life in Canada, because we can use it to research other ecological questions about our samples.

At UVic, we work most closely with the labs of Drs. Juniper, Dower, Varela, and Tunncliffe (although Dr. Tunncliffe has recently retired and we will miss her contribution to the program!). Through these collaborations, we've helped to genetically identify deep-sea animals from hydrothermal vents in the Endeavour Hydrothermal Vents Marine Protected Area with the Tunncliffe Lab, characterize hot vent marine microbes and benthic invertebrates with the Juniper Lab, identify zooplankton species with high ecological importance for whales in the Strait of Georgia with the Dower Lab, and genetically characterize marine phytoplankton with the Varela Lab. Through our collaborations with Fisheries and Oceans Canada researchers, we're also working to solve taxonomy questions in Pacific zooplankton, track species range shifts in the Arctic, and characterize coral and sponge ecology on deep-sea seamounts.

All the work under the OOB umbrella helps to develop molecular tools and data for effective management and ecological study of marine resources, a critical step in the future of marine biology and management. By focusing our research through collaborations with leading marine researchers at UVic and throughout Vancouver Island, we're providing insight into critical climate-driven effects on marine environments that help us support marine conservation practices in Canada and beyond.

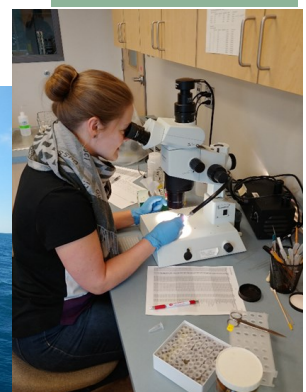
(By: Dr. John Nelson and Mallory Van Wyngaarden)

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Collections of zooplankton for DNA barcoding being done under ideal conditions from the CCGS Sir Wilfrid Laurier



Mallory at work in the lab plating specimens for DNA sequencing

Biology Seminars, Everyone Welcome!

Forest Biology

Dr. Renate Heinzelmann
Faculty of Forestry, UBC

"Biology and Ecology of
Armillaria Species in BC and
Abroad"

Wednesday, Feb 26, 2020
at 2:30 pm in CUN 146

Biology

Dr. Filip Husnik
Postdoctoral
Fellow
Department of
Botany, UBC

"The Goldilocks principle of
microbial community com-
plexity: a comprehensive
study of a termite microbi-
ome"

Friday, February 28, 2020
at 3:30 pm in MSB 150
*Please note the room change



Biology

Dr. Doug Bertram
Research Scientist
Environment and Climate
Change Canada

"Marine Bird Conservation
Research in BC"

Friday, March 6, 2020
at 3:30 pm in MSB 160

Biology

Dr. Waldan
Kwong
Postdoctoral
Fellow
Department of Botany, UBC

"TBA "

Friday, March 13, 2020
at 3:30 pm in MSB 150
*Please note the room change



Calendar

Important Dates:

Saturday, February 15

Faculty of Graduate Studies deadline to apply to graduate for
Spring Convocation (Students completing in the Spring term
only)

Monday, February 17

Family Day

Monday-Friday February 17-21

Reading Break for all faculties

Saturday, February 29

Last day for withdrawing from full year and second term courses without penalty of failure

Friday, March 6

Senate meets



Biology Announcements

Publications:

Cox, K.D., Davies, H.L., Davidson, K., Gerwing, T.G., Dudas, S.E., and Juanes, F. 2020. Shellfish Subsidies Along the Pacific Coast of North America. *Ecography*. 43: 1-14.

<https://onlinelibrary.wiley.com/doi/full/10.1111/ecog.04476>

If you have stories or announcements that would like to share for the Biology newsletter,
please email:

Chantal Laliberté at biology@uvic.ca or Laura Alcaraz-Sehn at bioclerk@uvic.ca



Research Reel Video Contest

If you are making a video, or have any students, staff, alumni or faculty in your area interested in video, now's the time to urge them to finish up! Top prize is a whopping \$2,000. Length is only 1-3 minutes so not a huge time commitment. You can even use your smartphone to shoot & edit!

For rules, tips, and to enter:

<https://www.uvic.ca/info/researchreels/>

A comprehensive tutorial video on how to tell your research story with video:

<https://youtu.be/vSmWRtQOoOg>

A series of video tips on how to catch the judge's attention:

https://www.youtube.com/playlist?list=PL-BEwpypyh8I_uLr9pDI9VL_z1sRHZq9n

The Research Reels Video Contest closes at midnight, February 18, 2020.

UVic Volunteer Opportunities



Multiple Mock Interviews (MMIs)

Have you received an invitation to an MMI-style interview from a medical, physiotherapy, dental, pharmacy or other health-related school? If so, you can take part in our mock MMIs!

Mock MMIs are practice interview, coaching and feedback sessions designed to help UVic students and alumni prepare for their upcoming MMIs. MMIs consist of a series of short interviews (six to 10 minutes each) at separate stations on a circuit. These were initially developed for medical school candidates, but are now common for admittance to nursing, pharmacy, occupational therapy, physiotherapy and veterinary schools

WHEN: February 28, 2020

WHERE: Campus Services Building 110

Register by emailing careers@uvic.ca.

For more information click [here](#).

UVic Co-op and Career - MOWI Information Session



MOWI INFORMATION SESSION

February 26
12:00 – 1:00PM
Petch 206



 CO-OP + CAREER

Register at learninginmotion.uvic.ca

 University of Victoria

Undergraduate Summer School Opportunity

A Unique Summer Opportunity at York University

The Centre for Vision Research (CVR) in partnership with Vision: Science to Applications (VISTA) at York University in Toronto are pleased to offer a one-week, most-expenses-paid*, undergraduate summer school on vision science.

The program includes talks by CVR faculty on current research topics in vision science, as well as hands-on experience in CVR laboratories. The curriculum reflects the wide range of research areas at CVR, which includes research on human visual perception, computer vision, machine learning, visual neuroscience, 3D film, immersive environments, and disorders of vision.

The program is designed for undergraduate students who are interested in attending graduate school and / or pursuing a career in scientific research in a vision-related field.

For application instructions and further information, see <https://cvrss.info.yorku.ca/>.

For more information, write to cvrss@yorku.ca.

The application deadline is February 17, 2020, at 11:59pm.

VISION



**We cover economy-class airfare / train / bus costs, taxis to and from airports or stations, on-campus accommodations, and breakfast and lunch on all program days. Dinners, social events, and meals on days before or after the program are not covered.*

Ideafest 2020

Ideas that can change everything March 2-7, 2020

Ideafest is the University of Victoria's week-long festival of research, art and innovation.

All events are free and tickets are not required unless otherwise stated in the event description.



Mystic Vale tree walk
March 5
12:00pm – 1:00pm

Researchers from the Centre for Forest Biology lead a spring walk through Mystic Vale, sharing the power of plants. Learn about the Indian plum tree, the knees of Douglas firs and the burls of big-leaf maples. Discover the raphide crystals of skunk cabbage, and how red cedar and sword ferns use water efficiently.

This informative walk starts and ends at the Bev Glover Greenhouse in Parking Lot #1. Dress for the outdoors!

Guide: Patrick von Aderkas (Centre for Forest Biology)

Organized by: Centre for Forest Biology



[More Ideafest events](#)

Explore UVic

Explore UVic - Biology

Every year, Explore UVic gives high school students the opportunity to experience university life through campus tours, lectures, panels, information fair and building tours. On Saturday, February 1, Drs. Barbara Hawkins, Gregory Beaulieu and Administrative Officer, Janice Gough, along with volunteer grad and undergrad students helped make this event a great success.



Dr. Gregory Beaulieu



Dr. Barbara Hawkins, Dr. Greg Beaulieu and A.O. Janice Gough

ComSciCon 2020

Call for Graduate Students in the STEM and Related Fields!

Applications are now open for ComSciCon 2020! The 8th annual Communicating Science workshop will be held in Boston, MA, on June 11-13, 2020. Graduate students at U.S. and Canadian institutions in all fields of science, technology, engineering, health, mathematics, and related fields are encouraged to apply. The application will close on March 1, 2020 at 11:59 PM.

Acceptance to the workshop is competitive. Attendance is free, and travel support and lodging will be provided to accepted applicants.

Participants will build the communication skills that scientists and other technical professionals need to express complex ideas to the general public, experts in other fields, and their own peers. In addition to panel discussions (on topics such as Creative Storytelling, Science Journalism, and Diversity/Inclusivity), ample time will be allotted for networking with science communication experts and developing science outreach collaborations with fellow graduate students.

[Apply here!](#)



ComSciCon20
June 11-13, Boston MA

A science communication workshop for graduate students, by graduate students.

"One of the most unique experiences I've had in my time as a graduate student."

"ComSciCon connected me with a community that will be leading the future of sci-comm."

"It was inspiring, engaging and really fun!"

There is no registration fee!
Support for travel and accommodations will also be provided to non-local attendees.

All graduate students from US and Canadian universities are invited to apply, and 50 will be selected to attend.

Apply at ComSciCon.com
For questions, contact comscicon2020@comscicon.com

Job Opportunities

Ministry of Forests, Lands, Natural Resource Operations and Rural Development
Williams Lake

Research Wildlife Ecology Specialist

\$69,900.80 - \$79,791.25 annually

For more information and to apply online please go to:

<https://bcpublicservice.hua.hrsmart.com/hr/ats/Posting/view/67608>

Deadline: February 25, 2020

Fish and Wildlife Management Section Head

Kamloops or Penticton

\$76,442.17 - \$87,354.80 annually plus 3.3% Temporary Market Adjustment

One permanent full time vacancy which can be performed from Kamloops or Penticton.

For more information and to apply online, please go to: <https://bcpublicservice.hua.hrsmart.com/hr/ats/Posting/view/67012>

Deadline: March 1, 2020

Editors: L. Alcaraz-Sehn, C. Laliberté

Contributors:

Dr. J. Nelson, Dr. M. Van Wyngaarden,
K. Cox, Dr. B. Hawkins, Dr. D. Briant,
Ministry of Forest BC, Co-op UVic, FORB,
Communications & Marketing UVic

Department of Biology

P.O. Box 1700, STN CSC
Victoria, BC, V8W 2Y2, Canada
Tel: 250-721-7095
Fax: 250-721-7120

Email: biology@uvic.ca

Website:

<http://www.uvic.ca/science/biology/>

