



Department of Biology Newsletter

March 15, 2017

UNIVERSITY OF VICTORIA

Upcoming Oral Defences

Angeleen Olson, MSc Candidate Supervisors: Drs. Francis Juanes and Margot Helsing-Lewis



March 28, 2017 at 2:00 pm ECS Room 130

“Seagrass meadows as seascape nurseries for rockfish (*Sebastes* spp.): habitat adjacency impacts on recruitment and food webs”

Jasem Estakhr, MSc Candidate Supervisor: Dr. Raad Nashmi

March 29, 2017 at 10:00 am MSB Room 210

“Cholinergic neurotransmission in different subregions of the substantia nigra differentially controls DA neuronal excitability and locomotion”



Anne Shaffer, PhD Candidate Supervisor: Dr. Francis Juanes



April 13, 2017 at 10:00 am David Turpin Building Room A137

“Nearshore Restoration Associated with Large Dam Removal and Implications for Ecosystem Recovery and Conservation of Northeast Pacific Fish: Lessons Learned from the Elwha Dam Removal”

James Robinson, PhD Candidate Supervisor: Dr. Julia Baum

April 19, 2017 at 1:00 pm David Turpin Building Room A144

“Disentangling human degradation from environmental constraints: macroecological insights into the structure of coral reef fish and benthic communities”



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Upcoming Seminars. Everyone Welcome!

Biology

Dr. Katy Hind

Senior Lab Instructor
Department of Biology, UVic

“Coralline algae: biodiversity and community structure in the northeast Pacific”

Friday, March 17, 2017
at 2:30 pm in MSB 150

Biology

James Robinson

PhD Candidate
Department of Biology, UVic

“Disentangling natural variation from human impacts: macroecological perspectives on tropical coral reefs”

Friday, March 24, 2017
at 2:30 pm in MSB 150

Biology

Dr. Chelsea Wood

University of Washington

“Biodiversity and disease: Ecosystem services or disservices?”

Friday, March 31, 2017
at 2:30 pm in MSB 150

Biology

Anne Shaffer

PhD Candidate
Department of Biology, UVic

“Nearshore Restoration Associated with Large Dam Removal and Implications for Ecosystem Recovery and Conservation of Northeast Pacific Fish: Lessons Learned from the Elwha Dam Removal”

Friday, April 7, 2017
at 2:30 pm in MSB 150

Calendar

Important Dates:

Tuesday, April 4, 2017

Last day of classes for all faculties, except Faculty of Human and Social Development

Friday, April 7

Senate meets. Examinations begin for all faculties, except Faculty of Human and Social Development

Friday, April 14

Good Friday

Monday, April 17

Easter Monday

Tuesday, April 25

Examinations end for all faculties. End of Winter Session



Recent Biology Publications

F. Y. M. Choy and C. L. Christensen

Francis Y.M. Choy and Chloe L. Christensen. "Progranulin as a Novel Factor in Gaucher Disease". *EBioMedicine* 2016, 13: 13–14. <http://dx.doi.org/10.1016/j.ebiom.2016.11.006>

Chloe L. Christensen and Francis Y. M. Choy

"A Prospective Treatment Option for Lysosomal Storage Diseases: CRISPR/Cas9 Gene Editing Technology for Mutation Correction in Induced Pluripotent Stem Cells". *Diseases* 2017, 5, 6-21; doi:10.3390/diseases5010006

D. C. Claar, N. S. Fabina, H. M. Putnam, R. Cunning, E. Sogin, J. K. Baum, R. D. Gates

"Embracing Complexity in Coral–Algal Symbioses"

Publication date: February 2017

Book: Chapter in *Algal and cyanobacteria symbioses*

Pages: 467-492

D. A. Marques, J. S. Taylor, F. C. Jones, F. Di Palma, D. M. Kingsley & T. E. Reimchen

"Convergent evolution of SWS2 opsin facilitates adaptive radiation of threespine stickleback into different light environments" Stanford University School of Medicine, Department of Developmental Biology, 279 Campus Dr, Beckman Center B300, Stanford, CA, USA

Friedrich Miescher Laboratory of the Max Planck Society, 72076 Tübingen, Germany

Earlham Institute and University of East Anglia, Department of Biological Sciences, Norwich, UK

*Corresponding author: David A. Marques, davidmarques@uvic.ca

H. Renault, A. Alber, N.A. Horst, A. Basilio Lopes, E.A. Fich, L. Kriegshausen, G. Wiedemann, P. Ullmann, L. Herrgott, M. Erhardt, E. Pineau, J. Ehlting, M. Schmitt, J.K.C. Rose, R. Reski, D. Werck-Reichhart

(2017) A phenol-enriched cuticle is ancestral to lignin evolution in land plants. *Nat. Commun.* 8: 14713

doi:10.1038/ncomms14713

url: <http://www.nature.com/articles/ncomms14713>

Congratulations

GSS News

Congratulations to Jess Wyatt who has been elected (pending ratification) as the new GSS Director of Services.



Jess Wyatt

A big thank you to Amanda McLaughlin who is finishing her term as the Chair of the GSS.



Amanda McLaughlin

von Aderkas Lab Update

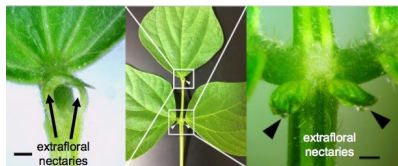
Marie Vance's doctoral study of population genetics of sub-alpine larch (*Larix lyallii*) is proceeding swimmingly, so much so that she is undertaking a co-op with the BC Ministry of Forests, Lands and Natural Resource Operations. Marie is also acquiring accreditation as a Registered Professional Forester.

Andrea Coulter is completing her thesis on origin and function of the pollination drop of yew and Douglas-fir.

Alicia Lew's Open Access article with Patrick von Aderkas, Anne, Terri Lacourse, Charles Curry, Bárbara Tencer, and Andrew Weaver just came out and is free to a good home. Just click on the title : [An assessment of *Pinus contorta* seed production in British Columbia: Geographic variation and dynamically-downscaled climate correlates from the Canadian Regional Climate Model](#)

Patrick von Aderkas is awash in proteomics data from nectar and nectaries of half-a-dozen flowering plants being studied with in a larger international NSF-funded project run by Clay Carter, Univ. Minnesota.

Lisheng Kong, Will Hintz and Patrick von Aderkas are finishing up another contract studying the reasons behind the serious shortfall in seed experienced by North Okanagan lodgepole pine seed orchards.



Extrafloral nectaries of the common bean



Sub-alpine larch in the Canadian Rockies

Announcements

Vancouver Island Regional Science Fair 2017

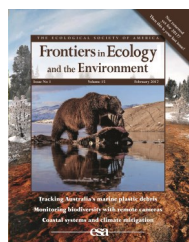
The Vancouver Island Regional Science Fair will be held on April 9 and 10, 2017, at the University of Victoria, Elliot Building, Lecture Wing.

April 9 from 1:00 to 4:30 pm; April 10 from 10:00 am to 12:30 noon.

Please visit the online registration for judges and volunteers:

<http://web.uvic.ca/~virsf/judgesreg.php>

For more information visit: <http://web.uvic.ca/~virsf/index.php>



Frontiers in Ecology and the Environment

Scaling-up camera traps: monitoring the planet's biodiversity with networks of remote sensors

Remote cameras are a rapidly growing technology that has great potential to transform global monitoring for terrestrial biodiversity and can be an important contributor to the call for measuring Essential Biodiversity Variables. Recent advances in camera technology and methods enable researchers to estimate changes in abundance and distribution for entire communities of animals and to identify global drivers of biodiversity trends. We suggest that interconnected networks of remote cameras will soon monitor biodiversity at a global scale, help answer pressing ecological questions, and guide conservation policy. With modest investment in infrastructure, and continued innovation, synthesis, and collaboration, we envision a global network of remote cameras that not only provides real-time biodiversity data but also serves to connect people with nature.

For the full article read: <http://onlinelibrary.wiley.com/doi/10.1002/fee.1448/full>

https://www.dropbox.com/sh/qnq2ysakbdmp6tw/AAB_MSWfBpoqNz-R-00MxvXVa?dl=0

R. Steenweg, M. Hebblewhite, R. Kays, J. Ahumada, J. T. Fisher, **C. Burton**, S. E. Townsend, C. Carbone, J. M. Rowcliffe, J. Whittington, J. Brodie, J. A. Royle, A. Switalski, A. P. Clevenger, N. Heim, L. N. Rich

Miscellaneous

Take Back the Wild: Marine Conservation

CPAWS-BC is launching an exciting conservation training program for young adults in your community.

Take Back the Wild: Marine Conservation is a free 5-month program which includes a multi-day training summit on April 28-May 1, 2017 at the Strathcona Park Lodge. Participants will receive training in a wide range of campaign skills including communications, media relations, community engagement, indigenous relations, and government relations. Further, participants will learn about marine conservation and planning taking place on BC's coast. Following the summit, participants will apply their new skills to a conservation project in their community.

CPAWS-BC is seeking young adults, aged 18-30 from BC's coast who have an interest in marine conservation and desire to develop skills in campaign planning. The goal is to bring a diverse and passionate group of people together to learn from local leaders in conservation, to engage in dialogue on key components of campaign planning, and to inspire and celebrate regional conservation in action.

Register by March 23, 2017 at <http://www.takebackthewild.ca> or email takebackthewild@cpawsbc.org

The poster features a green and blue color scheme with a background image of a sunset over water. Text includes: 'FREE PROGRAM FOR YOUNG ADULTS AGED 18-30 FROM BC'S COAST', 'CONSERVATION CAMPAIGN TRAINING', 'TAKE BACK THE WILD', 'APRIL 28 - MAY 1' (3 day, 3 night Marine Conservation Training Summit at the Strathcona Park Lodge on Vancouver Island), 'MAY - OCTOBER 2017' (Participant-led Marine Conservation Projects will take place across BC's coast line), 'Develop the knowledge, skills & capacity to participate in marine conservation in your region through workshops & presentations', 'Register by March 23rd at takebackthewild.ca or email takebackthewild@cpawsbc.org', and logos for the Gordon and Betty Moore Foundation and CPAWS (Canadian Parks and Wilderness Society) British Columbia Chapter.

Summer Course at Friday Harbor Laboratories

Summer Course on Fish Swimming at Friday Harbor Laboratories

Fish Swimming: Kinematics, Ecomorphology, Behavior & Environmental Physiology". A summer course for graduate students and post-doctoral fellows, July 17 to August 18, 2017 (FHL 528, 9 credits).

Instructors: Drs. Pablo Domenici and John F. Steffensen

Subjects and techniques: The main subjects will be: 1) the kinematics and performance of swimming in fish using various locomotory modes, 2) the ecomorphology of fish locomotion, 3) locomotor strategies, 4) metabolic aspects of fish swimming, and 5) the effect of various environmental factors on fish swimming. These topics will be treated in lectures and laboratory sessions. Students will learn technique of video analysis, kinematics, energetics and respirometry.

For a list of published papers carried out by students during the course in previous years: <http://www.mbl.ku.dk/JFSteffensen/fhl/publications-fhl.htm>

Tuition fees and financial aid: FHL offers financial aid to applicants from any country. FHL has recently lowered the tuition fees for summer courses. General information for applicants (including tuition and financial aid, room and board) can be found at: <http://depts.washington.edu/fhl/studentSummer2017.html#SumB-3>

Deadline: Applications will be accepted until the end of February or later, if space is available.

Contact: For additional information contact: paolo.domenici@cnr.it or jfsteffensen@bio.ku.dk



If you have an event or story you would like to share in the Biology Newsletter, please e-mail: biology@uvic.ca or bioclerk@uvic.ca

Job Opportunities

Ocean Networks Canada Deep Sea Sediment Sample Pre-Processing

Ocean Networks Canada is a world-leading organization supporting ocean discovery and technological innovation. ONC is a not-for-profit society that operates and manages innovative cabled observatories on behalf of the University of Victoria that supply continuous power and internet connectivity to various scientific instruments located in coastal, deep ocean and Arctic environments.

Ocean Networks Canada requires an individual as soon as possible for the processing of deep-sea sediment samples collected during ONC's observatory research cruises. Sediment samples collected during 2015 and 2016 cruises are to be used in collaborative projects with Ifremer, University of La Republica in Montevideo, Uruguay (Udelar), Florida State University (SFU) and the Natural History Museum of London (NHM). A total of 86 core sediment samples need to be sieved through a set of 250 mm and 32mm sieves in order to separate the meio- from macrobenthos. This pre-processing stage is required since the sub-sets of samples will be analyzed by different groups of researchers. Additionally, it will facilitate the shipping of samples, having their volume of preserving chemicals reduced by about 50%. Two publications are expected after the analysis of these samples.

Experience Required:

- Demonstrated experience in working with ecological samples.
- Previous experience in working with marine sediment samples for studying macro-benthic invertebrate communities.
- Experience with deep sea sediment samples where benthic invertebrates are generally more fragile than shallow water specimens is desirable.
- Experience in working in a laboratory setting with equipment and chemicals utilized to sort and preserve biological samples.
- Experience working under a fume hood, which requires basic training with lab safety and hazardous materials.
- Responsibility and organization skills for recording precise information related to the origin of samples (labeling with cruise code, station, depth, dates, and additional metadata info).

Wage and timeline:

The rate of pay for this task is \$20.00 per hour and the estimated time in which to complete is between 30 and 40 hours. Please send your CV and a short email cover letter outlining your qualifications to: Fabio C. De Leo, PhD / Staff Scientist – Benthic Ecology and Ecosystem Function Ocean Networks Canada fdeleo@uvic.ca

BC SPCA WILD ARC Wildlife Rehabilitator

The Wildlife Rehabilitator will participate in all wildlife care duties and the daily operation of the centre including rescue and rehabilitation of wildlife, in addition to maintenance of facilities and cleaning. By telephone and in person, promote the BCSPCA philosophy and mandate with respect to wildlife and animal welfare. Work in a humane, professional, and responsible manner, and encourage by teaching and example, other staff and volunteers to show the same qualities. Maintain operations to BC SPCA Wild ARC guidelines in conjunction with IWRC/NWRA minimum standards for wildlife rehabilitation.

Job qualifications: Must currently be legally entitled to work in Canada (proof required) and must undergo a criminal record check.

For more information visit: <http://www.sPCA.bc.ca/branches/wild-arc/>

Deadline: March 15, 2017 at 5:00 pm

Wage: \$18.72 per hours plus vacation, MSP and extended health benefits.

Please submit resume, cover letter, and contacts for 3 references (2 former employers)

to: Kari Marks, Wild ARC Manager, 1020 Malloch Road, Victoria, BC V9C 4G9. info@wildarc.com



Editors:

L. Alcaraz-Sehn, C. Laliberté

Contributors: Dr. B. Hawkins, Dr. F. Juanes, Dr. C. Burton, Dr. R. Marx, Dr. T. Reimchen, Dr. F. Choy, Danielle Claar, Marie Vance

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/>