

Minutes of the BC Environmental Articulation Committee May 22 – 23, 2018

In attendance:

Anna Tikina	BCCAT
Olga Petrov	BCIT
David Blundin	Camosun College
Cheryl Schreuder	Capilano University
Rachel Clearwater	Capilano University
David Dick	College of the Rockies
Mike McPhee	Douglas College
Reid Staples	Douglas College
Andrew Egan	Langara College
Ken Shaw	Northwest Community College
Matt Dodd	Royal Roads University
Robert Macrae	Selkirk College
Tom Pypker	Thompson Rivers University
Maxwell Ofosuhene	Trinity Western University
Todd Whitcombe	University of Northern British Columbia
Michelle Rhodes	University of the Fraser Valley
Valentine Schaefer	University of Victoria
Stephanie Duff	Vancouver Island University
Katrine Frese	Yukon College

Location: Trinity Western University, 7600 Glover Road, Langley, BC V2Y 1Y1 in the Robert N. Thompson Building, room RNT-122 on May 22, on an Agro-Ecology themed field trip to the EcoDairy Farm, Abbotsford, BC, Krause Berry Farms & Estate Winery, Langley, BC, and the TWU Blaauw Eco Forest Reserve, Langley, BC on May 23

Minutes recorded by Robert M. Macrae

From 10:00 am to noon on May 22 there was a pre-meeting Campus Tour led by David Jordan, Ted Goshulak, and Chris Hall all members of the TWU faculty. The entire tour was outdoors. We visited Trinity Lake, a dugout pond connected to the Salmon River. It was built in the 1960s or 70s when environmental regulations were laxer (non-existent?). The dugout was originally used as a fire reservoir for TWU and briefly as a wastewater treatment lagoon. Connections with the Salmon River have been severed except during flooding. Trinity Lake has become a habitat for native and non-native fish, birds, amphibians, and reptiles. It is being used for ecological study by TWU students. We toured the TWU Ecological Stewardship Area (ESA) where hundreds of regional school children participate in the Salmon in the Valley experiential environmental program annually, where TWU students undertake ecological studies, and where environmental inventory is in progress. Among other things, the ESA is home to an endangered snail.

The business meeting began on Tuesday May 22 at 1:00 pm. BC EAC members were welcomed by host Maxwell Ofosuhene of the TWU Department of Geography & Environment. Patricia Victor University Siya:m, Co-Director, Institute of Indigenous Issues & Perspectives, Program Elder, Dr. Bob Wood, Dr. Craig Montgomery, and Dr. Todd Martin welcomed guests.

There was a call to order. Attendance was recorded, minutes from the previous meeting were discussed (minutes are circulated in advance electronically, approved in advance of the annual general meeting, and posted on the BCCAT web site).

There was a discussion of the agenda, call for new business, and approval of the agenda as amended.

The chair advised:

- Tara Ivanochko sent regrets from UBC-V
- Marnie Branfireum and Jeremy Venditti sent regrets from SFU and a report
- Georgie Harrison sent regrets from NIC
- Linda Kaivanto of the BC Ministry of Advanced Education has retired. Subsequent to the meeting Robert Macrae learned that Tim Ewanchuk is Linda's replacement at the BC Ministry of Advanced Education, Skills and Training
- Next year's BC EAC meeting will be hosted by Selkirk College. Members were asked to vote for their preferred dates (either Tuesday and Wednesday May 7 and 8 or Wednesday and Thursday May 8 and 9, 2019). May 8 and 9, 2019 was chosen. One day will be dedicated to a business meeting and the second for field trips

Institutional reports were presented as listed below. BC EAC members submitted reports in advance which were posted on the following web site: <https://www.twu.ca/2018-bc-environmental-articulation-committee-eac-meeting> (PW: "GENV2018"). Four themes emerged in the reports: (1) the jump in international students, especially from the Punjab; (2) exploration of a "strategies for success in post-secondary education" course; (3) the value of experiential education; and (4) outreach programs to raise awareness of environmental issues within the greater institutional and surrounding community.

- Robert Macrae reported from Selkirk College. Selkirk is interested in renewing course articulation agreements that have expired. Articulation is critical to the Selkirk College School of Environment and Geomatics core two year diploma programs, particularly the Integrated Environmental Planning Technology program. Selkirk offers an Advanced Diploma in GIS with the IEPT diploma or equivalent as a prerequisite including certain associate degrees. Credit in basic GIS is a helpful prerequisite. It is possible to complete a 4th year following the ADGIS and obtain a BGIS. College-wide, there is a jump in international students, primarily from the Punjab, which has led to two new programs just for international students and discussion regarding a one semester, one or two hours per week "strategies for success in post-secondary education" course for all students.
- Michelle Rhodes presented a report on behalf of the University of the Fraser Valley. Her report is posted. Michelle updated us on the new degrees at UFV. UFV has experienced a jump in international students now at 13% and targeted for 20% of full-time enrolment. Michelle is undertaking a BCCAT transfer project on challenges to transfer in interdisciplinary studies. An explanatory document and link to the survey is at: <file:///C:/Users/Owner/Downloads/Invitation%20Letter--Survey%20onInterdisciplinary%20Credit%20Transfer.pdf> Michelle reported on a number of Community Engagement and Research Highlights at UFV.
- Anna Tikina from BCCAT requested BC EAC members ensure their courses are articulated. There is a faculty member at each BC post-secondary institution who oversees articulation so the procedure is simply to submit a course outline to the institutional articulation officer (institutional contact person or ICP) with a request to seek articulation. The BCCAT Joint Annual Meeting (JAM) will be held in Vancouver, November, 16, 2018. Maxwell Ofosuhene will be asked to attend to represent the BC EAC. Anna reminded members about the Transfer Innovation Projects. There was discussion that a common college success course be proposed as an innovation project.

- Todd Whitcombe reported from UNBC on the Environmental Science and Environmental Engineering programs. His report is posted. Of note, enrolment in the Environmental Engineering program has risen from 10 to 120 since inception in 2002, Environmental Science enrolment has returned to 1998 levels of 70 students after dipping to 40 around 2008, and Physical Geography enrolment has declined from a peak of 40 to less than 10.
- Professor Karen Steensma presented a talk on Land Management Practices on the TWU campus. Steensma has been a professor at TWU for the past 31 years and she is a dairy farmer in Washington State. She discussed the 20th century ethos of urban sprawl, the use of the classroom versus outdoor laboratories, and the phenomenon of Nature Deficit Disorder attributed to Richard Louv to describe placeless learning or students feeling cutoff from the earth. Steensma mentioned the 70 acres on Saltspring Island (the Crow's Nest) that has been donated to TWU, how student bio-inventory work led to \$100,000 in research grants, and the Salmon in the Valley program at TWU. She closed with references to “transcending the utilitarian ethics of the market place,” a passage by Wendell Berry, a comment on the Agricultural Land Reserve not being construed as the Developers’ Land Reserve, and Psalms 24:1, “see the land as the gift it is and remember its true owner.”
- Stefanie Duff Chair of the Department of Fisheries and Aquaculture at VIU reported. She submitted a detailed illustrated report. She discussed internationalization, indigenization, law suits, layoffs, lock-outs and a student suicide. The VIU Fisheries and Aquaculture program has a strong emphasis on experiential learning with a remarkable array of on-campus research facilities.
- David Dick from College of the Rockies reported. His report is posted. He reported on outreach activities, improved bus services between Cranbrook and Kimberley, and as a result of stronger enrolment, the prospect for a new environmental science program – probably a two year associate of science program. David sought suggestions for that new program.
- Olga Petrov reported from BCIT. Her report is posted. The Environmental Engineering Technology program is undergoing major revision. While overall, student satisfaction is high, there are areas of significant concern. Student graduation rate has dropped to 35% as a result of a demanding final project requirement and a heavy course load. In addition to major program revision, actions taken to improve program enrolment and overall student satisfaction included: more aggressive marketing with the help of BCIT marketing experts, additional informational sessions, final project course changes and updates, student and faculty engagement and the program leadership change. Since January 2018 enrolment is showing improvements. Experts from the BCIT Learning Teaching Centre (LTC) are being consulted on a regular basis during the major program revision process. BCIT is also getting ready to host The Ecocity World Summit in 2019.
- David Blundin reported from Camosun College. His report is posted. The Camosun Environmental Technology program has gone through a program review and has shifted so 57% of courses are unique to the Environmental Technology program (have an ENVR course code) and 43% are UAS courses (other course codes). This shift reflects the Camosun focus on experiential education. The Camosun Environmental Technology program has a successful co-op requirement and relies on articulation. Camosun is appreciative of its agreement with RRU where there is no “dithering.” Unfortunately, Camosun has been unable to negotiate a block transfer agreement with the University of Victoria, where there is allegedly a “no block transfer” policy. This was questioned by Val Schaefer who thought block transfer is now a possibility at UVic.

- Reid Staples reported from the Douglas College Earth and Environmental Sciences program. His report is posted. The Douglas Earth and Environmental Science programs are well subscribed. There is interest in articulation into environmental science programs and potentially into an Advanced Diploma in GIS or BGIS program. The Douglas College Institute of Urban Ecology is an example of an outreach program that delivers environmental workshops to local youth in Vancouver area schools. It engages volunteers to participate in environmental monitoring.
- Cheryl Schreder reported from Capilano University. Her report is posted. CapU does not presently have an environmental sciences or studies program, but does offer related courses in biology and geography. CapU is developing both an Environmental Stewardship minor and Environmental Studies major. CapU offers a number of environmental outreach initiatives and events including EarthWorks, a lecture, film, and field trip series with an environmental stewardship and interdisciplinary flavour. All events are free and open to students, staff, faculty, and the public.
- Mike McPhee reported from the Douglas College Department of Geography and the Environment. His report is posted. He reported that 80% of the associate degree graduates transfer to the SFU geography program. Mike referred to the Worldwatch Institute report, “Can a City be Sustainable?” He also mentioned the number of field schools being organized by Douglas College, the transformative learning engendered by participating in field schools, and a field school in Iceland scheduled for 2019. Mike mentioned the R. Howard Webster Foundation which provides financial support for planning “team-based” projects, the aboriginal gardens initiative, the New Westminster lost streams project and web site, a new grade introduced at Douglas for failure as a result of academic dishonesty, and Douglas is considering a “strategies for success in post-secondary education” course.
- Val Schaefer reported from the University of Victoria. His report is posted. The UVic offers a BSc and a BA in Environmental Studies, a credit Diploma, and non-credit Certificate in Ecological Restoration (another outreach program). The bachelor program is a double major so students take a second major in addition to Environmental Studies, often Biology or Geography. UVic offers a Minor in Environmental Studies. The majority of Environmental Studies courses are at the 3rd and 4th year level specializing in three themes: ethnoecology, ecological restoration and political ecology. UVic offers eight field school programs. Enrolment has been steadily rising to at almost 200 undergraduate students and 52 graduate students. UVic has been approved for a Tier 2 Canada Research Chair in Political Ecology.
- Maxwell Ofosuhen reported from Trinity Western University’s new Geography and Environment Department. His report is posted. Enrolment is strong with approximately 25 students split one third in geography and two-thirds in environmental studies or science. TWU built a new student residence last summer, is in the process of building another one this year, and is considering a new building for its business program. Funding is through private sources. TWU now offers a GIS certificate program. Prof. Karen Steensma and collaborators at the University of Hawaii received a grant for US\$50,000 from the US Department of Agriculture to study agricultural habitat for the endangered Pueo owl on the islands of Maui and Oahu. Dr. David Clements received a grant for \$18,500 under the Endeavour Sabbatical Fellowship from the Australian government for his continuous research on weeds. Both Dr. Clements and Prof. Steensma involve undergraduate students in their research. Dr. Clements and Prof. Steensma are taking 17 students to the Big Island for a TWU Hawaii Travel Study excursion. As previously mentioned, TWU has an outreach program, Salmon in the Valley, that permits hundreds of regional grade 4 students to participate in experiential environmental education on the TWU campus. TWU is interested in collaborative environmental science research projects with other post-secondary institutions.

- Andrew Egan reported from Langara College. His report is posted. Andrew has replace Katina Erdos as program co-ordinator. International student enrolment has risen while domestic student enrolment has declined at Langara. The environmental studies courses have not been as popular with international students so there has been a slight drop in ENV5 enrolment. This has led to some administrative changes including altering the length and lodging location for the ENV5 2470 field school, a partnership with Parks Canada for a field school at Pacific Rim National Park Reserve to participate in a research project to study scouring rush (horsetail) on sand dune ecology and morphometry, and increase field trips and explore new opportunities with City Studio.
- Tom Pypker reported from the TRU Natural Resources Sciences program. His report is posted. The BNRS program allows graduates to apply for professional biologist, forester and agrologist status. Enrolment in both the undergraduate and masters programs are strong at approximately 50 entering the undergraduate program and 36 graduating. There are approximately 11 in the masters program which is impressive since it began in 2010. Faculty are active in research with NSERC and other peer-reviewed research grants. The BNRS has articulation agreements in place to receive students from other post-secondary programs including two-year diploma programs.
- Matt Dodd reported from Royal Roads University. His report is posted. RRU offers four undergraduate programs within the School of Environment and Sustainability: Bachelor of Science in Environmental Science, (BSc-ES), Bachelor of Science in Environmental Management (BSc-EM), Bachelor of Arts in Environmental Practice (BAEP), and Bachelor of Science in Environmental Practice (BSEP). The BSc-ES program is an intensive on-campus 12-month degree completion program. This program relies on articulation agreements for its success. The BSc-ES students are required to complete a major project in applied research on behalf of a sponsor. The major project is a key component of the program and serves as an integrating activity to assist students to develop competencies in environmental sciences through the application of knowledge, skills, and values; synthesis; and effective communication. The BSc-EM's unique blended-delivery model is an alternative for those unable to commit to the 12-month on-campus (BSc ES) option. Students complete their degree using a combination of intensive three-week on-campus residencies and distance learning courses over two years. It allows students to keep working and earn their degree at the same time. It is a cohort-based model that develops teamwork, leadership and management skills in addition to a comprehensive interdisciplinary environmental science foundation. The Bachelor of Arts in Environmental Practice/ Bachelor of Science in Environmental Practice (BAEP/BScEP) programs are 30-credit online Bachelor of Arts or the Bachelor of Science degrees. Both programs are coordinated by the Canadian Centre for Environmental Education (CCEE), which is a partnership of Royal Roads University and Environmental Careers Organization of the School of Environment and Sustainability Canada (ECO Canada). RRU also offers a number of MA and MSc programs through
- Katrina Frese report from Yukon College. Her report is posted. After approval, Yukon College will launch a Bachelor of Arts in Indigenous Governance degree, a three year (90 credit) program. It will be YC's first independently offered degree. Yukon College continues to offer a certificate in climate change with four online courses and one field school course. Yukon College expects to become Yukon University in 2019 - 20. Yukon College is currently partnering with Vancouver Island University and the Master Card and Rideau Hall Foundations on a 5-year project to increase access to, retention in, and graduation from post-secondary education for indigenous students.

- Ken Shaw reported from NWCC. His report is posted. The Applied Coastal Ecology Program (ACE) completed its 22nd year and continues to evolve. Recent changes include an Ocean Equipment Technology course developed by Ocean Networks Canada, a Virtual Reality lab and remote sensing with drone technology, a 20' boat fitted for research and environmental monitoring. ACE Enrolment has been steady at 8 domestic students per year. Courses are offered in a two year rotation so cohorts are combined. Twelve international students arrived in January, 2018 which completely changed scheduling and class sizes. International enrollment is strong. ACE has external partnerships: Invasive Species Program, DFO, Port of Prince Rupert, Kelp Corridor Project, Vancouver Aquarium, Amphibian project, and the North Coast Ecology Center. ACE was involved in an Eagle Cam project established at the Wildlife Shelter. NWCC will change its name to Coast Mountain College effective June 18, 2018 with major rebranding. There are degree completion opportunities with Royal Roads, UBC, UVic, UNBC, and TRU. The Sustainable Communities Associate Degree program was relaunched. A Foundational Permaculture design course is being offered June 11 – 27, 2018.

On Tuesday May 22, after the business meeting, there was a break for dinner followed by two informative presentations. The first was presented by Dr. Paul Brown on his work in Honduras with a soap plant and rural development. The second was by Dr. Dennis Venema on Faith and Science or perspectives on evolution and creation. Dr. Venema's presentation brought to mind a passage by Karen Armstrong.

"The moral direction offered by the world's great religions, including Buddhism, Christianity, Islam, and Judaism is summarized by Karen Armstrong¹ in her book, *The Spiral Staircase: My Climb Out of Darkness*, 2004.

Her summary of religious moral codes is:

- treat others as you would treat yourself,
- avoid materialism and excess,
- treat the Earth and all life with care and dignity, and most importantly
- perform selfless deeds.

She concludes that beyond these previous points, everything else found in religion is dogma."

Next Meeting

As discussed, next year's BC EAC meeting will be hosted by Selkirk College on May 9 – 9, 2019 (Wednesday to Thursday). The meeting will not be a cluster meeting composed of several articulation committees. Robert Macrae will contact institutions offering GIS courses or program as advanced certificates, undergraduate degrees, or graduate degrees. There will be a focus on GIS with the possibility of hands-on demonstrations. The Selkirk College School of Environment and Geomatics is in the process of requiring that students have a tablet so there may be discussion and demonstration of how this requirement is evolving. One day will be dedicated to a business meeting and the second for field trips.

¹ Armstrong is a religious scholar, author, instructor at London's Leo Baeck College for the Study of Judaism, and former Roman Catholic nun.

Field Trips

TWU organized an Agro-Ecology themed field trip to the EcoDairy in Abbotsford, BC, the Krause Berry Farms and Estate Winery in Langley, BC, and the Blaauw Eco Forest Reserve, in Langley, BC. All participants agreed that the field trips were fascinating and the people who led the tours provided useful information on the Canadian dairy industry, on berry farming in BC, and how TWU was endowed with protecting an property that may have otherwise become part of Lower Mainland urban sprawl.

Thank you

Maxwell Ofosuhene and his faculty colleagues did an outstanding job organizing and hosting the 2018 BC EAC meeting. The collaborative spirit of the faculty was a delight, as was their hospitality, and their enthusiasm. I certainly felt that I had seen aspects of TWU not reported in the media and aspects that reflect very positively on TWU's contribution to post-secondary environmental education and research.

Meeting Adjourned

Adjournment: The field trips concluded on Wednesday May 23, 2017 4:30 pm.