

Minutes of 2017 Earth Science Articulation Meeting

Hosted by Yukon College, May 17 to 19th, 2017 (including a pre-meeting field trip to southwest Yukon on May 17th and a post-meeting field trip to Skagway, Alaska, on May 19th)



Earth Science articulation committee members examining the Jurassic Laberge Group conglomerates near to Whitehorse

Meeting called to order at 9:15 AM, May 18th

Chair: Sarah Thornton

Attendance: Russell Hartlaub (BCIT), David Nelles (U.Vic), Sarah Thornton (U.Vic), Joel Cubley (Yukon), Mary Samolczyk (Yukon), Steve Earle (TRU-OL), David Waddington (Douglas), Terrence Day (Okanagan, by Skype), Tark Hamilton (Camosun), Anna Tikina, (BCCAT, by Skype), Deirdre Hopkins (Selkirk), Andrew Egan (Langara), Gordon Weary (NWCC), Steve van Wagoner (TRU), Brett Gilley (UBC)

Regrets: John Greenough (UBC-O), Robbie Dunlop (SFU), Terry Neufeldt (TWU), Katie Burles (COTR), John Martin (KPU), Tim Stokes (VIU), Dileep Athaide (Corpus Christi)

(Contact information for committee members is provided at the bottom of the document)

1) Approval of the agenda: carried

2) Approval of the minutes from 2016 meeting: carried

3) Matters arising from 2016 minutes:

- i. Identification of a new System Liaison Person (SLP) **ACTION:** David Nelles will work on it.
- ii. Xenolith award: Awarded to Gord Weary for being unable to spell “Science”
- iii. Google Groups or Dropbox repository for non-copyrighted resources: BCCAT is working on a place that they host, but this hasn’t yet happened. It would be Moodle based.
- iv. Liaison with high school teachers’ association: Geography is working on getting more science in the high school curriculum. Brett says that it may not be a bad thing if students don’t have exposure to geology in school because most that do tend to see it a soft science option. Dave W. has had good students that took GEOL-12. “Earth Science 11” is mostly geography. Anna reminds us that the Ministry of education is still collecting feedback. **ACTION:** Gord suggests that we should all go to our local high school(s) to talk with Earth Science and Geology teachers about the curriculum change.
- v. Land access concerns for field schools (David Nelles): Started with Mt. Tuam issue for U. Vic., which has been solved with an alternative exercise. There have been other access issues with various stakeholders and it means that more waivers have to be signed. U. Vic. may get special permission from Parks Canada to work in Ruckle Park, and this may work for others. Russel says that ongoing development in the Okanagan has made access difficult. Dave W.: they use provincial crown land exclusively.

4) Institution reports

NWCC (Gord): NWCC is implementing place-based outdoor experiential-education as part of their strategic plan. This year NWCC had approximately 12 students in the geoscience program. Brucejack Mine is partnering with NWCC on a research project on their ice-road access and students from this summer’s field school will have an opportunity to visit the mine. Three instructors from NWCC participated in the “Juneau Icefield Research Program” or “JIRP” in 2016, and two are returning this year. The JIRP field school is 60 days and focusses on glaciology, geoscience, biology and climate change and includes a traverse on skis of the Coast Mountains from Juneau to Atlin.

UBC-V (Brett): UBC is hiring a sedimentologist for global processes; the previous search had to be abandoned because of an impropriety. UBC has two university-wide transfer credit coordinators. New course: Fundamentals of geomicrobiology. Carl Weiman program is winding up.

UVic (Sarah): Numbers have stabilized in under-grad (~1700). Students are being pushed to declare early. There were 174 BSc students in SEOS (92 in Earth Sciences major, rest distributed among other combined majors). Adding several new Ocean Science combined degrees (e.g., Biology-Ocean Science). There are 32 students in Ocean Science minor. Field school registration is down this year. 28 are going on senior field school through Rockies/BC. 58 grad students. 2 new hires this year and 2 next year. Approximately 300 students have been using BCCampus text. David noted that they used to order minerals from DJ Minerals, but the last order has not

been filled after 1.5 years. He asked for names of other suppliers. Steve E. suggested Scott Resources.

VIU (Steve E. for T. Stokes): Numbers are increasing in the BSc Major program. To date there have been 13 graduates, and this year there will be 11 more. The program has had an external review (by John Martin, KPU and Craig Nicholl, UBC-O) culminating in March. Tim is taking students on a GEOL-390 field school to Iceland later this month.

TRU-OL (Steve E.): Enrolments are steady compared with last year, and up over previous years – total of 243 students in 7 courses, most in Physical Geology (lab and non-lab). The Physical Geology courses had a major revision this year and now use the BCCampus text.

Douglas (Dave W.): Now have 40% more classroom space. Gone from 3 to 5 faculty and student numbers are also up. They have a Geo-resources diploma program (2 year, mining and mineral expl., most are university-transfer courses, so students can go and work or go on in geology). Encouraging transfer directly into 2nd year. All courses have been re-written. Have now done Princeton field school for a second time. They use the land-titles tool to check out land ownership.

Camosun (Tark): Because of Tark's injury they were down to one Physical Geology in the fall (Sandra Taylor), one Earth Systems section (Vic Levson). Tark taught Sedimentary Geology and Physical Geology in the spring.

TRU (Steve V.): TRU has two new courses this year: Sedimentology/stratigraphy and optical mineralogy. Enrolment more than doubled in the past year. The department is still hoping to move to a 4-year program in cooperation with Physical Geography.

Okanagan (Terence): Registrations have increased steadily since three years ago. Many of their students are on academic probation (speculates that high school grade inflation is the issue). Developing an associate program in Earth Science, made difficult because they are in the Arts faculty. Making connections with the business faculty (including viticulture program). Has a vacancy in the Salmon Arm campus.

News alert from Kelowna: Okanagan Lake is still rising at 3 cm/day, and is 25 cm above full pool. If this continues there will be major flooding at another 25 cm.

Langara (Andrew): It is now the department of Geography and Geology. Enrolment is increasing, including the 2 second-year geology courses. Some departments are "creating" labs – such as photography. Langara has defined "wet labs" and "dry labs" and 2nd-year environmental science course has been designated as a dry lab – which is a problem.

Selkirk (Deirdre): Deirdre is on 2-year maternity leave. Kim Green is filling in. Physical Geology (24 students) and Historical Geology (9). There has been a major boost in international students, some with minimal English, taking geology as a science elective. Geomorphology was taught last year but is subject to cancellation because of low enrolment.

BCIT (Russell): Combined geology and engineering program. Enrolment reached 45 for a couple of years but is a little down (30) for coming year. Mineral Resource and Mine Engineer and will be a fully accredited engineering degree as soon as there are graduates. Eventually will have 4-5 geologists and 6 engineers on faculty. New courses: advanced petrology, structural geology. New core-logging and storage lab is under development. Should be able to make it available to other institutions. Collaborative mining education initiative (with NWCC, Okanagan, CNC).

Yukon College (Joel): Yukon has a 2-year cohort model. Just finished 2nd-year of the program. (had a 3rd instructor and some causals). 6 students this year, 13 have applied for next year, but some are not qualified – reflects the poor state of the mining industry and some negative views in the community regarding mining. Most students are not from the Yukon (most from eastern Canada). Yukon College is transitioning to a university in 2021. This program is probably going to follow the BCIT 2-year “applied” model, as opposed to a university-transfer model. The program is entirely 3rd-party funded (matching federal and territorial) and that funding expires in a year, but has been re-applied for.

Other (Sarah): TWU still has a Physical Geology course. Corpus Christi – continues to teach Earth’s Natural Disasters.



Maurice Colpron of the Yukon Geological Survey (centre) discusses metamorphosed volcanic rocks of the Stikinia terrane Takhini assemblage with members of the Earth Science articulation committee

5) Chair's report, Sarah Thornton

Sarah observes that the articulation committee field trip is one of the best places for doing informal articulation. Steve E. attended the JAM and has nothing to report of relevance to the committee. Sarah says we should look around the BCCAT website for useful information, and that we should nominate someone for the articulation champion award.

Motion: Tark/Brett: For the Earth Science Articulation Committee to nominate Steven Earle for an articulation award. Carried.

Sarah described the BCCampus Zed-Cred/Zed-degree grant for a set of courses in a specific program area with zero text-book costs.

There is one outstanding articulation agreement: COTR sent to NWCC.

Mary Samolczyk (Yukon) volunteered to be the next chair.

6) BCCAT update (Anna Tikina)

Anna described the articulation section of the website. There are lots of resources there, including agendas, minutes and information for new people. Anna reiterated the need to have minutes submitted early. JAM will be November 17th in Richmond. There will be lots of different aspects discussed.

Work is going on regarding secondary to post-secondary transition. Funding is available for discipline transfer innovation projects (up to \$15k/year). There are several reports available on the website: The changes to the K-12 system, Defining what is academic credit, Dual admissions, Experiential education, Transfer student performance, and Dual-credit (sec/post-sec) programs. Suggests that we sign up for the Engage newsletter (7 to 10 times a year). Anna summarized some of the findings of the BC transfer report.

7) Field school coordination project

Steve E. described the BCCAT-sponsored field-school coordination project, which has the goal of increasing the extent and quality of cooperation amongst institutions on field schools so as to provide more field school options for students. He discussed some of the pedagogical benefits of field courses versus regular courses and some of the ways that cooperation can be increased. These include increasing the proportion of articulated courses, creating bi-party and multi-party agreements at the faculty level, encouraging students to look for relevant field courses at other institutions, making discipline-specific websites listing available field schools, and creating common standards for field schools within a discipline. There was lots of discussion about field school issues and attendees completed a questionnaire that will be added to the data from 10 other articulation committees. The final project report will be completed in the summer. Anna talked about how a Transfer Innovation Project could be used by the committee to create more coordination of field schools in Earth Science.

Brett indicated that they are revising their 2nd-year field school and wants to be involved in any type of project looking at setting standards for field schools. Risk management needs to be included. Anna asked if increasing numbers of international students is an issue (which it doesn't seem to be) and if field schools are required (which they are in most Earth Science programs).

8) New Business

Steve E. introduced the idea of supporting the creation of a museum for the Burgess Shale. David N. said that there are plans from the Burgess Shale Foundation to build something in Golden. It was decided that our group should write to the responsible Minister (Forests, Lands and Natural Resource Operations) to express our support. Brett added that we should also write as individuals.

Motion: Sarah/Brett : Earth Science Articulation Committee will communicate with the Burgess Shale Foundation and write to the Minister of Forests, Lands and Natural Resource Operations to express our support for a Burgess Shale museum. Carried **Action:** Steve will draft a letter.

Gord: Has received transfer requests from international institutions that may not actually be credible, and expressed concern that this could look like it was credit from NWCC. Others said that they actually look at where the credit comes from, and typically only give unassigned credit.

9) Upcoming articulation meetings

Next meeting (2018) will be at UBC in late May and will be organized by Brett. Following meeting (2019) is planned for COTR.

MOTION: Adjourn at 2:30 (Brett)

Minutes by S. Earle



Mount Martha Black and the Auriol Range southwest of Haines Junction, Yukon (all photos by S. Earle)

2017 Earth Sciences Articulation Attendees

Institution	2017 (Yukon)	email
BCCAT	Anna Tikina – via Skype	atikina@bccat.ca
BCIT	Russell Hartlaub	russell_hartlaub@bcit.ca
Camosun	Tark Hamilton	tark_hamilton@yahoo.com
Douglas	David Waddington	waddingtond@douglascollege.ca
Langara	Andrew Egan	aegan@langara.bc.ca
NWCC	Gordon Weary	gweary@nwcc.bc.ca
Okanagan	Terrence Day – via Skype	tday@okanagan.bc.ca
Selkirk	Deirdre Hopkins	dhopkins@selkirk.ca
TRU	Steve van Wagoner	s.vanwagoner@icloud.com
TRU - OL	Steve Earle	steven.earle@viu.ca
UBC	Brett Gilley	brett.gilley@gmail.com
UVIC	Sarah Thornton	sarahjt@uvic.ca
UVIC	David Nelles	dnelles@uvic.ca

Yukon	Joel Cubley	jcubley@yukoncollege.yk.ca
Yukon	Mary Samolczyk	msamolczyk@yukoncollege.yk.ca

Articulation Regrets

Institution	2017 (Yukon)	email
Corpus Christi (UBC)	regrets: Dileep Athaide	dileepathaide@gmail.com
COTR	regrets: Katie Burles	kburles@cotr.bc.ca
KPU	regrets: John Martin	John.Martin@kpu.ca
SFU	regrets: Robbie Dunlop	rdunlop@sfu.ca
TWU	regrets: Terry Neufeldt	terry.neufeldt@twu.ca
UBC-O	regrets: John Greenough	john.greenough@ubc.ca
VIU	regrets: Sandra Johnstone	sandra.johnstone@viu.ca



Alsek Road, field trip group shot, photo by J. Cubley