



THE BURGESS SHALE GEOSCIENCE FOUNDATION

ANNUAL TEACHERS WORKSHOP (CENTENNIAL EDITION)

Synopsis:

The workshop will consist of a combination of lectures, exercises which can be easily taken into the classroom (and curriculum) and a field trip through the Rockies. Lectures will focus on the physics, chemistry and biology that is entwined with the geological sciences. Three themes of Mountain Building, History of Life and Climate Change will be touched upon. During the workshop, experienced geologists from industry and academia will be on hand to answer any questions. This information filled event is intended to be stimulating and fun. The instructors hope you come out of the workshop with both an understanding and enthusiasm for geology.

Instructors:

Dr. Clinton R. Tippett; Shell Canada Energy

Clint is a graduate of Carleton University in Ottawa, Ontario and Queen's University in Kingston, Ontario. This academic training was primarily on the Precambrian "hard rock" side. In 1980, he was hired by Shell Canada and has been employed there on the "soft rock" side for the last twenty-nine years. His experience spans Canada from the Western Canada Sedimentary Basin to the Arctic and from coast to coast. He has worked on a large variety of plays from carbonates to clastics and in a wide range of structural settings from the compressional Foothills, through the transform faulting of the Mackenzie Delta to the extensional regimes on the passive margins.

Clint is a long term volunteer with the Canadian Society of Petroleum Geologists and the Burgess Shale Geoscience Foundation. He is also President of the Petroleum History Society.

Dr. Jon Dudley; Earth Works

Jon received his B.Sc. in Geology from the University of Toronto and his Ph.D. from the University of Calgary. Geology related work has taken him to the Canadian Arctic, Iceland, Kluane National Park, Brazil, north-central B.C., the American Southwest, Italy, the United Kingdom, and northern Ontario. Jon worked in the oil industry for 26 years with multinational and Canadian oil companies, and as a consultant. He has introduced many non-geologists to the wonders of our planet as a Junior Forest Warden Leader, a volunteer with the Calgary Science Network, the Science Manager for a Calgary School-Industry Partnership, a Calgary Youth Science Fair judge, and as a Guide and Interpreter for The Burgess Shale Geoscience Foundation. Jon loves to teach, and has great admiration for those with the courage and dedication to pursue teaching as a profession.

Philip Benham; Shell Canada Energy

Philip received his B.Sc. from the University of British Columbia in 1987 and his M.Sc. from the Memorial University of Newfoundland in 1992. Philip has been employed by Shell Canada Energy for fourteen years, and during that time has explored for oil and gas in the Canadian Rockies, the Mackenzie Delta and offshore Newfoundland. He is currently chair of the Canadian Society of Petroleum Geologists' Palaeontology Division. Keen to share his love of science, Philip actively volunteers for the Foundation and the Alberta Paleontological Society. He has helped develop and lead a workshop for the Foundation which provides high school science teachers geological fundamentals in the beautiful setting of the Rocky Mountains. Philip enjoys photography and travel to geological and culturally interesting places and is currently in the process of researching more obscure locations for his future journeys.

Erik Katvala; University of Calgary

Erik received his combined B.Sc. in Zoology/Geology from the University of Calgary in 2000. After he received his MSc from the University of Montana in 2004 he returned to the U of C to complete his PhD. His studies have focussed on unravelling the complex geology in Alaska and coastal British Columbia. He has been a volunteer for the Burgess Shale Geoscience Foundation for a number of years.

John Fennel PHD. (pending)

Workshop Program

Day 1 (Saturday August 15th)

- Arrival in afternoon
- Welcome dinner, 6 PM
- Time exercise Phil Benham
- Mary Vaux Presentation portrayed by Shirley Truscott

Day 2 (Sunday August 16th)

- Lecture day I
- Evening Geopardy
- Field Trip Orientation

Day 3 (Monday August 17th)

- Rocky Mountain geological field Trip (8 AM departure)
- Evening “Ask the Geologist” Session

Day 4 (Tuesday August 18th)

- Lecture Day II
- Climate Change Talk
- Open Discussion / Lesson Planning and Exercise Ideas
- Wrap up

Day 5 (Wednesday August 19th)

- Burgess Shale – Walcott Quarry Hike: This hike will be guided by workshop presenter Jon Dudley. Hike departs at 8AM and returns at approximately 6:30PM. Dinner and Lunch is included; all participants should be prepared for a long moderate day hike.

Details of the workshop: The maximum number of teachers that can be accommodated for this workshop is 16 teachers. The teacher workshop fee is \$521 and includes accommodation, food, field trip transportation (with the exception of getting to the trail head at Takakkaw Falls for the Burgess Shale hike), lecture fees, workshop materials, geoscience guide book to the Burgess Shale, published by the Foundation, and guided hike fee. Shared accommodation is in the recently constructed Fireweed Hostel in Field – www.fireweedhostel.com and will be catered to by Checher La Vache Cafe in Field for further details contact: Burgess Shale Coordinator 1-800-343-3006.

Detailed schedule for lecture days

LECTURE DAY I SCHEDULE

Time	Event Room A	Event Room B
8.30-9.30	Biol I; Burgess Shale	-----
9.30-10.30	Phys I: Frank Slide	Chem I: Minerals as Chemicals
10:30-10:45	Coffee Break	Coffee Break
10:45-12:00	Biol II: Evolution, History of Life	Chem II: Living with Calcite
12:00-1:00	Lunch	Lunch
1:00-2:30	Biol III: Molecular Clocks and Paleontology	Phys II; Radiation, Magnetism, Tectonics
2:45-3:30	Rock Identification	-----
3:30-4:30	Mountain Building	-----

LECTURE DAY II SCHEDULE

Time	Event Room A	Event Room B
8.30-9.30	Chem III: Redox	Phys III: Kicking Horse
9.30-10.30	Map Reading	-----
10:30-10:45	Coffee Break	Coffee Break
10:45-12:00	Climate Change	-----
12:00-1:00	Lunch	Lunch
1:00-2:00	Teacher Lead Lesson Planning Ideas	-----
2:00-3:30	Open Discussion / Wrap up	-----

This teacher workshop is financially subsidized by The National Edgeo, www.edgeo.org, The Burgess Shale Geoscience Foundation and volunteers Clint Tippett, Phil Benham, Eric Katvala, Jon Dudley and Jon Fennell. This valued support makes this teacher workshop possible.