

Alexandra (Lexie) Arnott, PhD.

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TEACHING EXPERIENCE

INSTRUCTOR, LIMITED TERM APPOINTMENT, DALHOUSIE UNIVERSITY

2016-2021

Dalhousie University, Halifax, NS

Department of Earth and Environmental Science / Faculty of Science

- Dalhousie Integrated Science Program
- Geology 1 & 2
- Dinosaurs
- Natural Disasters
- Introduction to Physical Geography

Duties: Organization and logistics of fieldtrips, preparation of class materials/labs, preparation of integrated lectures and exams with other faculty, examinations and evaluations; supervision of student research projects, departmental committees

Committees

- TA Co-ordinator (2019-2021)
- Science Atlantic, Earth Science Chair (2019-present)
- Field Safety Co-ordinator (Fall 2019)
- Outreach committee (2018-2021)
- First year Science Committee

PART-TIME INSTRUCTOR

1999-2016

Dalhousie University, Halifax, NS

Faculty of Science

- Dalhousie Integrated Science Program

Department of Earth and Environmental Sciences

- Geology I
- Introduction to Physical Geography
- Igneous Petrology
- Earth and Society
- Mineralogy

Department of Engineering

- Introduction to Geology for Engineers

Duties: Preparation of class materials, laboratory assignments, lectures, examinations, and evaluations.

PART-TIME FACULTY

2003-2007

St. Mary's University, Department of Geology

- First year lab instructor
- Environmental Geology
- Mineralogy
- Applied Geochemistry

NON-ACADEMIC WORK EXPERIENCE

GEOLOGIST/EDITOR

2008-2014

RPS Energy, Halifax, NS

Duties: Editing QC reports; Preparation of environmental impact assessments; Liaising with clients and consultants;
Co-ordination of marine mammal/seabird observer training (including safety training)

GEOLOGIST

1994-1995

Cuesta Research, Dartmouth, NS

Duties: Geophysical / geochemical assessment of rock properties; Technical writing; Microbeam geochemical techniques and interpretations; Mapping and sampling of copper – bearing rocks and drill core, northern Chile

FIELD ASSISTANT, GEOLOGY

SUMMER 1994

Geologic Survey of Canada, Bedford Institute of Oceanography

Duties: Mapping Devonian-Carboniferous clastic sedimentary and volcanic rocks in Cape Breton Island, NS, data input, camp work, sample preparation

FIELD ASSISTANT

FALL 1994

McGregor GeoScience Ltd.

Duties: Aided in the conducting of a land seismic survey (Shubenacadie, NS)

FIELD ASSISTANT, GEOLOGY

SUMMER 1992

Ontario Geologic Survey, Thunder Bay, ON

Duties: Mapping Precambrian metasediments and metavolcanics in northern Ontario, data input, camp work

EDUCATION

PhD.

2003

Department of Earth Sciences, Dalhousie University, Halifax, NS

Thesis Title: Evolution of the hydrothermal alteration at the Chuquicamata Porphyry Copper System, northern Chile (Supervisor: M. Zentilli), 450p.

BSc. (Honours)

1994

Department of Geology, Acadia University, Wolfville, NS

Thesis Title: Petrology and geochemistry of the Fisset Brook Formation, Gillanders Mountain area, Cape Breton Island, Nova Scotia (Supervisor: S. Barr), 117p.

UNDERGRADUATE RESEARCH SUPERVISION

- Determining Original Melt Composition of Silica-Undersaturated Dykes of the Bermudian Basement Rocks Using Clinopyroxene-Augite (2020, Supervisor, Undergraduate Research Project)
- Portable X-Ray fluorescence Differentiation of Mafic and Ultramafic Rocks of the Bermuda Rise (2021, Supervisor, Integrated Science Program Research) (3 students)
- Portable X-Ray fluorescence analysis on Bermuda core (2020, Supervisor, Integrated Science Program Research) (1 student)
- Electron Microprobe study of lapis lazuli to determine provenance of potential conflict origins (2018, Supervisor, Integrated Science Program Research) (2 students)
- Weathering of Gravestones in Halifax (2016, Co-supervisor, Integrated Science Program Research Project) (2 students)
- Relationship between pH, conductivity, total dissolved solids, and texture of soil samples from Halifax, Nova Scotia (2017, Mentor, Integrated Science Program Research Project)

PROFESSIONAL DEVELOPMENT

Teaching

- Teaching certificate (in progress)
 - Course: Learning Focused Course Design
 - Studio course: Topics in Science Teaching: Through the Visualization Lens
- Society for Teaching and Learning in Higher Education Conference (Attendee, 2017)
 - Workshop: Landscape of accessibility and accommodation for students with disabilities in Canadian post-secondary education
 - Workshop: Learner-centered design of blended courses: An inclusive model and framework
- Community of Teaching Practice (2015-2019 Faculty of Science, Dalhousie University)
- Centre for Learning and Teaching, Dalhousie University
 - Critical Pedagogy: Thinking about what and how we teach (2017)
 - Trans Issues on Campus (2017)
 - Using Twitter to build community in large classes and departments (2016)
 - Mental Health 101: Identifying and Responding to Students in Distress (2015)
- 6th Biennial Threshold Concepts Conference June (Attendee, 2016)
 - Introducing Threshold Concepts: Student Uncertainty and the Process of Learning, Teaching and Assessment, Pre-Conference Event (TCCP 2016)
- Dalhousie Conference on University Teaching and Learning: Exploring Change and Resilience in University Teaching and Learning (Attendee, 2016)
- Brightspace Training (LMS) (2016) (Basics and Tools)
- *Webinars (Science Education Resource Centre @ Carleton College)*
 - *Teaching the Impacts of Human Carbon Emissions on the Atmosphere, Oceans, and Economy*
 - *Teaching about Soils as a Critical Resource: Materials and Activities for your Classroom*
 - *Improving Climate Literacy Through your Undergraduate Course*
 - *Connecting Science to Issues of Justice in your Course*

Health and Safety

- Health & Safety for Mineral Exploration (PDAC 2020)
- Minimizing Environmental Impact (PDAC 2020)
- Emergency First Aid / CPR Level A (2018)
- Risk and Loss Control; Dalhousie Continuing Technical Education (2012)
- WHMIS (NSCC 2010)
- Occupational Health and Safety (NSCC 2010)

Science

- Your Career and Public Reporting, APGNS Workshop (2018)
- Marine Mammal Observation Training (2013)
- Introduction to Seabird Observation (ECASE) (2013)
- Environmental Impact Assessment; Dalhousie Continuing Technical Education (2010)

Workshops

- Being a Woman in the Field (with Kara Vogler). Atlantic Geoscience Society 46th Colloquium and Annual Meeting.
- Journaling as a learning tool in the sciences. Dalhousie Conference on University Teaching and Learning 2019

Volunteer Work

- Mentor, Dalhousie Chapter, Association of Women Geoscientists
- Young Naturalists Club of Nova Scotia, Board Member, field trip leader (since 2020)
- Atlantic Geoscience Society, Councillor (since 2018)
- Local Committee Halifax 2022 GAC MAC meeting
- AGS Member (ongoing)
- Association of Women Geoscientists (ongoing)

Extracurricular

- Society for Creative Anachronism, Halifax Chapter (President 2012-2015; Archery Official 2014- present)
- Introduction to Weaving (LaHave Weaving Studio, 2017)
- Introduction and Intermediate Weaving (2016, 2018 NSCCD)
- Gemmology (NSCAD, 2017)

LIST OF SELECTED PUBLICATIONS

Publications

- Ryan, A.M, **Arnott, A.**, Chisholm, R., deGelleke, L., Gibson, L., Grantham, D., Kienast, S., Mullally, M., Ross, T., Schmidt, A., Stevens, L., Welsh, E. 2017. Conversations in a Coffee Shop: Voices from within a community of teaching practice of university science faculty. *Transformative Dialogues: Teaching & Learning Journal* 9 (3).
- Hein, F.J. and **Arnott, A.M.** 1995. Petrography of coarse clastic facies, Fisset Brook Formation and Horton Group (Upper Devonian-Lower Carboniferous), Lake Ainslie and Margaree map areas, Cape Breton Island, Nova Scotia. *Current research 1995-E/Recherches en cours 1995-E*; by Geological Survey of Canada; GSC Current Research no. 1995-E, 1995; pp. 293-300
- Barr, S.M., MacDonald, A.S., **Arnott, A.M.**, and Dunning, G.R. 1995. Field Relations, structure, and geochemistry of the Fisset Brook Formation in the Lake Ainslie-Gillanders Mountain area, central Cape Breton Island, Nova Scotia. *Atlantic Geology*, v. 31, pp. 127-139.

Reports

- LaPierre, T., **Arnott, A.**, Hawkins, C., Simpson, K., Davis, D., and Girling, J. 2010. Environmental impact assessment for marine 2D seismic reflection survey, Baffin Bay and Davis Strait, offshore eastern Canada by TGS – NOPEC Geophysical Company ASA. RPS Energy Report # HOP0401 to NEB, 325p.
- LaPierre, T., **Arnott, A.**, Hawkins, C., and Simpson, K. 2009. Environmental impact assessment for ocean bottom refraction survey, Scotian Shelf / Slope, offshore Nova Scotia, for Offshore Energy Technical Research Association. RPS Energy Report # 09-376, 137 p. + Appendices.
- LaPierre, T., **Arnott, A.**, Simpson, K., and Hawkins, C. 2009. Preliminary environmental impact assessment for marine 3D seismic reflection survey, Disko West, Licence Block 5 (2007 / 22) and Licence Block 7 (2007 / 24), Offshore Greenland for Husky Oil Operations Limited. RPS Energy Report # 09-382. Prepared for the Bureau of Minerals and Petroleum, Greenland, 144p. + Appendices.

Theses

- **Arnott, A.M.** 2003. Evolution of the Hydrothermal Alteration at the Chuquicamata Porphyry Copper System, Northern Chile. Dalhousie University, PhD. thesis. 450p.
- **Arnott, A.M.** 1994. Petrology and Geochemistry of the Fisset Brook Formation in the Gillanders Mountain Area, Cape Breton Island, Nova Scotia. Acadia University, BSc. Undergraduate thesis. 117p.

Abstracts and Presentations

- Cray, H., Gass, S. Mui, A. and **Arnott, L.** 2021 Making the invisible intentional: addressing the “hidden curriculum” of soft skill development in Undergraduate university education. Dalhousie Conference on University Teaching and Learning 2021 (pending)
- Arnott, A.M. and Vogler, K. 2020. Being a woman in the field. Roundtable. Atlantic Geoscience Society meeting. (February 2020)
- Albert, J. and **Arnott, A.** 2021. Study of silica-undersaturated dykes of the Bermuda basement. Atlantic Geoscience Society Meeting. Online. February 6-7, 2021)
- Arnott, A.M. 2019. Journaling as a learning tool in the sciences. Dalhousie Conference on University Teaching and Learning 2019
- Pesternikova, S. and **Arnott, A.** 2018. Electron microprobe study of lapis lazuli to determine provenance. Atlantic Universities Geoscience Conference (November 1-3, 2018)
- **Arnott, A.M.** and Zentilli, M. 2005. The relationship between intrusion and alteration at the Chuquicamata Porphyry Copper system, Chile. 2005 Salt Lake City Annual Meeting (October 16–19, 2005)
- **Arnott, A. M.** and Zentilli, M. 2003. The Chuquicamata Intrusive Complex: its relation to the Fortuna Intrusive Complex and the role of the Banco Porphyry in the potassic alteration zone: Actas -10º Congreso Geológico Chileno, Concepción, 2003.
- **Arnott A.M.** and Zentilli M. 2000: Evolution of the potassic alteration assemblage at the Chuquicamata porphyry copper deposit, Chile. Abstracts with Programs - Geological Society of America 32(7): 138