

JILLIAN KENDRICK

Postdoctoral Researcher | McGill University, Montreal, Canada | jillian.kendrick@mcgill.ca

Education

- Jan. 2018–Jun. 2022 Doctor of Philosophy, Earth Sciences
University of Waterloo, ON
Top PhD thesis in department
- Sept. 2015–Dec. 2017 Master of Science, Earth Sciences (Geology)
Memorial University of Newfoundland, NL
Top MSc thesis university-wide
- Sept. 2011–May 2015 Bachelor of Science, Major in Earth Sciences, First Class Honours
Dalhousie University, NS
Top BSc thesis in department

Publications

Articles in review

Kendrick, J., Duguet, M., Kirkland, C.L., Liebmann, J., Moser, D.E., Vervoort, J., & Yakymchuk, C. Testing the TTG–metabasite connection: an integrated geochemical, isotopic, and petrogenetic modelling approach. *Journal of Petrology*.

Yakymchuk, C., Holder, R.M., **Kendrick, J.**, & Moyen, J.-F. Europium anomalies in zircon: a signal of crustal depth? *Earth and Planetary Science Letters*.

Kinney, C., **Kendrick, J.**, Duguet, M., Yakymchuk, C. Redistribution of heat-producing elements during melting of Archean crust. *Submitted to Journal of Metamorphic Geology*.

Accepted or Published Peer-Reviewed Articles

Kendrick, J., Duguet, M., Kirkland, C.L., Liebmann, J., Lin, S., Moser, D.E., Yakymchuk, C. (2023) Anatomy of a craton: Isotopic heterogeneity across an Archean crustal cross section. *Precambrian Research*, 389, 107005.

Kendrick, J., Duguet, M., Yakymchuk, C. (2022). Diversification of Archean granitoids in a mushy middle crust. *Geology*, 50, 76–80.

Dix, G.R., Davis, D.W., Chadirji-Martinez, K., Marshall, D.D., **Kendrick, J.L.**, Yakymchuk, C., Sutcliffe, C. (2021). Hydrochemical impact of a mantle plume recorded by petrology, geochemistry, and U–Pb geochronology of a calcite vein within the Ottawa-Bonnechere graben, Ontario, Canada. *Chemical Geology*, 120582.

Antonelli, M., **Kendrick, J.**, Yakymchuk, C., Guitreau, M., Mittal, T., Moynier, F. (2021). Calcium isotope evidence for early Archean carbonates and subduction of oceanic crust. *Nature Communications*, 12, 2534.

Yakymchuk, C., van Hinsberg, V., Kirkland, C.L., Szilas, K., Kinney, C., **Kendrick, J.**, Hollis, J. A. (2021). Corundum (ruby) growth during the final assembly of the Archean North Atlantic Craton, southern West Greenland. *Ore Geology Reviews*, 138, 104417.

Parmenter, S., Ivanic, T.J., Korhonen, F.J., Bouvier, A., **Kendrick, J.L.**, Yakymchuk, C. (2020). Metamorphism of the Mougooderra Formation: Implications for Neoproterozoic tectonics in the western Youanmi Terrane, Yilgarn Craton. *Precambrian Research*, 350, 105862.

Yakymchuk, C., Kirkland, C.L., Hollis, J.A., **Kendrick, J.**, Gardiner, N.J., Szilas, K. (2020). Mesoarchean partial melting of mafic crust and tonalite production during high-T–low-P stagnant tectonism, Akia Terrane, West Greenland. *Precambrian Research*, 339, 105615.

Kendrick, J., Yakymchuk, C. (2020) Garnet fractionation, progressive melt loss and bulk composition variations in anatectic metabasites: Complications for interpreting the geodynamic significance of TTGs. *Geoscience Frontiers*, 11, 745–763.

Kendrick, J., Indares, A. (2018). The Ti record of quartz in anatectic aluminous granulites. *Journal of Petrology*, 59, pp. 1493–1516.

Kendrick, J., Indares, A. (2018). The reaction history of kyanite in high-P aluminous granulites. *Journal of Metamorphic Geology*, 36, pp. 125–146.

Kendrick, J.L., Jamieson, R.A. (2016). The fate of olivine in the lower crust: Pseudomorphs after olivine in coronitic metagabbro from the Grenville Orogen, Ontario. *Lithos*, 260, pp. 356–370.

Government Reports

Kendrick, J., Yakymchuk, C., Duguet, M. (2019). Tectonometamorphic history of the Wawa–Abitibi Terrane: Crustal differentiation and low-grade metamorphism in the Kapuskasing Uplift; in Summary of Field Work and Other Activities, 2019, Ontario Geological Survey, Open File Report 6360, pp. 10-1 to 10-7.

Kendrick, J., Yakymchuk, C., Duguet, M. (2018). Tectonometamorphic history of the Wawa–Abitibi Terrane: A deep crustal transect through the Kapuskasing Uplift; in Summary of Field Work and Other Activities, 2018, Ontario Geological Survey, Open File Report 6350, pp. 9-1 to 9-6.

Steenkamp, H.M., Wodicka, N., Weller, O.M., **Kendrick, J.** (2016). Overview of bedrock mapping in the northern and western parts of the Tehery Lake-Wager Bay area, western Hudson Bay, Nunavut. Summary of Activities, 2016, Canada-Nunavut Geoscience Office, pp. 27–40.

Wodicka, N., Steenkamp, H.M., Weller, O.M., **Kendrick, J.**, Tschirhart, V.L., Peterson, T.D., Girard, É. (2016). Report of 2016 activities for the bedrock geology and economic potential of the Tehery-Wager area: GEM 2 Rae Project. Geological Survey of Canada, Open File 8149.

Geological Maps

Steenkamp, H.M., Wodicka, N., Lawley, C.J.M., Peterson, T., Garrison, W., Therriault, I., **Kendrick, J.**, Weller, O.M., Tschirhart, V., *in prep.* Bedrock geology, Daly Bay area, Kivalliq, Nunavut, NTS 56-A, 46-D west, 46-E southwest, and 56-H south. Geological Survey of Canada, Canadian Geoscience Map 458, 1 sheet, 1:150,000 scale.

Steenkamp, H.M., Wodicka, N., Lawley, C.J.M., Peterson, T., Weller, O.M., **Kendrick, J.**, Tschirhart, V., *in prep.* Bedrock geology, Armit Lake area, Kivalliq, Nunavut, NTS 56-B and 56-C east. Geological Survey of Canada, Canadian Geoscience Map 459, 1 sheet, 1:150,000 scale.

Steenkamp, H.M., Wodicka, N., Weller, O.M., **Kendrick, J.**, Therriault, I., Peterson, T., Lawley, C.J.M., Tschirhart, V., *in prep.* Bedrock geology, Wager Bay area, Kivalliq, Nunavut, parts of NTS 56-F and 56-G. Geological Survey of Canada, Canadian Geoscience Map 460, 1 sheet, 1:150,000 scale.

Invited Presentations (* = presenter)

Kendrick, J.*, Duguet, M., van Hinsberg, V., Yakymchuk, C. (2023). Field observations, petrography, geochemistry, and phase equilibrium modelling: The four pillars of petrological investigations of crustal differentiation. Oral presentation, Goldschmidt 2023, Lyon, France.

Kendrick, J.*, Duguet, M., Kirkland, C.L., Liebmann, J., Moser, D.E., Vervoort, J.D., Yakymchuk, C. (2022). Reading the Archean geological archive preserved in tonalite-trondhjemite-granodiorite suites. Oral presentation, Goldschmidt 2022, Honolulu, HI.

Kendrick, J.* (2020). Modelling TTG petrogenesis: Recent advances and a case study from the Kapuskasing Uplift, Ontario. Oral presentation, Canadian Tectonics Group Online Seminar Series.

Yakymchuk, C.*, **Kendrick, J.*** (2019). Insights from forward and inverse modelling of the anatectic crust. Workshop lecture and tutorial, PETROCHRO19: Melting, modelling, dating the crust, Potsdam, Germany.

Conference Presentations

Kendrick, J.*, van Hinsberg, V. (2023). Lire les archives du bore de la Terre primitive: Une approche expérimentale pour contraindre le comportement du bore de l'eau de mer aux roches métasédimentaires. Poster presentation, Geotop Student Meeting 2023, Orford, QC.

Kendrick, J.*, Duguet, M., Kirkland, C., Liebmann, J., Moser, D., Yakymchuk, C. (2022). Do Archean grey gneiss domains represent mid-crustal-scale crystal mush complexes? Oral presentation, Geological Association of Canada–Mineralogical Association of Canada Joint Meeting 2022, Halifax, NS.

Kendrick, J.*, Duguet, M., Kirkland, C.L., Liebmann, J., Moser, D.E., Vervoort, J., Yakymchuk, C. (2021). Granulites to granitoids: A multifaceted investigation into the origin of TTGs in the Kapuskasing Uplift, Canada. Poster presentation (virtual), American Geophysical Union Fall Meeting 2021, New Orleans, LA.

Kendrick, J., Duguet, M., Yakymchuk, C*. (2021). TTG geochemical trends controlled by plagioclase fractionation in a middle-crustal mush. Oral presentation, Geological Society of America Annual Meeting, Portland, OR.

Kendrick, J.*, Yakymchuk, C., Bédard, J. (2020). The onset of modern-style subduction recorded by late-Archean sanukitoids: Insights from thermodynamic modeling. Oral presentation, American Geophysical Union Fall Meeting 2020, virtual event.

Kendrick, J.*, Yakymchuk, C., Duguet, M., Vervoort, J., Moser, D. (2020). Tectonometamorphic history of the Kapuskasing uplift: New perspectives from TTG-series rocks and mafic migmatites. Oral presentation, Geological Society of America Annual Meeting, virtual event.

Kendrick, J.*, Yakymchuk, C., Duguet, M., Vervoort, J., Moser, D. (2020). The granulite-TTG connection in the Neoarchean Kapuskasing uplift, Canada. Oral presentation, Geological Association of Canada–Mineralogical Association of Canada Joint Meeting 2020, virtual event.

Kendrick, J.*, Yakymchuk, C., Duguet, M., Moser, D. (2019). Are TTGs and mafic granulites consanguineous? A case study in the Kapuskasing Uplift, Canada. Poster presentation, American Geophysical Union Fall Meeting 2019, San Francisco, CA.

Yakymchuk, C.*, Kirkland, C.L., Hollis, J., **Kendrick, J.**, Gardiner, N., Szilas, K. (2019). Accretion or stagnation? Archean granulite-facies metamorphism in the Akia Terrane, West Greenland. Oral presentation, Geological Society of America Annual Meeting, Phoenix, AZ.

Kendrick, J.*, Yakymchuk, C., Duguet, M., Vervoort, J. (2019). The Kapuskasing Structure revisited: New insights into reworking of Neoarchean crust from garnet geochronology. Oral presentation, Geological Association of Canada–Mineralogical Association of Canada Joint Meeting 2019, Québec City, QC.

Kendrick, J.L.*, Yakymchuk, C. (2018). Forward modeling of trace elements in Archean TTGs: The importance of open-system processes. Oral presentation, Geological Society of America Annual Meeting, Indianapolis, IN.

Indares, A.*, **Kendrick, J.** (2018). Tracking the anatexis record of aluminous granulites: new approaches and limitations, with examples from the Grenville orogen. Oral presentation, Granulites & Granulites 2018, Ullapool, Scotland.

Kendrick, J.L.*, Indares, A. (2017). Unravelling the history of high-pressure granulite-facies rocks: The metamorphic record of kyanite. Oral presentation, Geological Association of Canada – Mineralogical Association of Canada Joint Meeting 2017, Kingston, ON.

J. Kendrick

Kendrick, J.*, Indares, A. (2016). The beauty and complexity of partially melted aluminous rocks: Disequilibrium recorded by Ti-in-quartz. Oral presentation, 2nd European Mineralogical Conference, Rimini, Italy.

Kendrick, J.*, Indares, A. (2016). Coupled Ti-in-quartz thermometry and cathodoluminescence imaging: A potential technique for investigating the thermal history of partially melted rocks. Oral presentation, Geological Association of Canada Newfoundland and Labrador Spring Technical Meeting, St. John's, NL.

Kendrick, J.*, Indares, A. (2016). Ti-in-quartz thermometry coupled with cathodoluminescence imaging: A novel tool for interpreting the metamorphic history of migmatites. Oral presentation, 42nd Atlantic Geoscience Society Colloquium, Truro, NS.

Kendrick, J.*, Jamieson, R.A., Chapman, G.G. (2015). Multistage corona formation in Algonquin metagabbro: Unravelling the metamorphic history of Grenvillian lower crust. Oral presentation, 41st Atlantic Geoscience Society Colloquium, Sackville, NB.

Kendrick, J.*, Jamieson, R.A., Chapman, G. (2014). The fate of olivine in the lower crust: The petrology of coronitic metagabbro in the western Grenville Province, Ontario. Oral presentation, Atlantic Universities Geoscience Conference, Fredericton, NB.

Awards and Honours

W.B. Pearson Medal, 2023 (Waterloo – top doctoral student in department, 1 recipient/year)

University Finalist for the Alumni Gold Medal, 2022 (Waterloo – Institutional)

Wares Postdoctoral Fellowship, 2022 (\$50,000CAD/year for 2 years, \$10,000CAD research stipend) (McGill – Institutional, 2 recipients/year)

Outstanding Student Presentation Award for American Geophysical Union Fall Meeting 2021, award in honour of Dr. Guatam Sen from AGU Volcanology, Geochemistry and Petrology Section (\$200USD) (International, 3 recipients/year)

Geological Society of America Student Research Grant, 2019 (\$2,200USD) (International, ~392 recipients/year)

Vanier Canada Graduate Scholarship, 2018 (\$50,000CAD/year, 3 years) (National, ~56 recipients/year across sciences and engineering)

Natural Sciences and Engineering Research Council of Canada Alexander Graham Bell Doctoral Scholarship, 2018 (\$35,000CAD/year, 3 years) (National, ~227 recipients/year) (Declined)

Provost Doctoral Entrance Award for Women, 2018 (\$5,000CAD) (Waterloo – Institutional)

University Medal for Excellence in a Thesis-Based Masters Program, 2018 (Memorial – Institutional, 1 recipient/year)

Fellow of the School of Graduate Studies, 2016-2017 (Memorial – Institutional)

Dr. Alfred K. Snelgrove Scholarship in Earth Sciences, 2015-2016, 2016-2017 (\$5,000CAD) (Memorial – Departmental, 2 recipients/year)

Mineralogical Association of Canada Foundation Scholarship (MSc level), 2016 (\$5,000CAD) (National, 1 recipient/year)

Honourable mention – Atlantic Geoscience Society Colloquium Sandra Barr Award, 2016 (best graduate oral presentation),

School of Graduate Studies F.A. Aldrich Fellowship, 2015/2016 (\$3,000CAD) (Memorial – Institutional, 6-8 recipients/year)

Natural Sciences and Engineering Research Council of Canada Canada Graduate Scholarship - Masters, 2015/2016 (\$17,500CAD) (Memorial – Institutional, ~10 recipients/year)

J. Kendrick

University Medal in Earth Sciences (Dalhousie – Departmental, top grade in Earth Sciences), 2015
Best Overall Honours Thesis, Earth Sciences, 2015 (Dalhousie – Departmental)
Best Honours Thesis Defence, Earth Sciences, 2015 (Dalhousie – Departmental)
Natural Sciences and Engineering Research Council of Canada Undergraduate Summer Research Awards, 2014, 2015 (\$4,500CAD) (Dalhousie – Institutional, ~70 recipients/year)
Atlantic Universities Geoscience Conference Best Overall Presentation Award, 2014 (\$500CAD)
Golden Hand Lens Award (excellence in advanced field school), 2014 (Dalhousie, 1 recipient among field school attendees)
Mineralogical Association of Canada Undergraduate Award, 2013/2014 (Dalhousie – Departmental, 1 recipient/year)
MacEachern-Ponsford Memorial Award (excellence in field school and overall), 2013 (\$2,000CAD) (Dalhousie – Departmental, 1-2 recipient(s)/year)
Waverly Prize, 2012 (\$350CAD) (Dalhousie – Institutional, top grade in first-year calculus course)
Dalhousie Entrance Renewable Scholarship, 2011-2015 (\$5,000CAD/year, 4 years) (Dalhousie – Institutional)
J & W Murphy Scholarship, 2011 (\$6,000CAD) (Dalhousie – Institutional)

Other Employment

June 2016–Aug. 2016	Senior Geologist, Bedrock Mapping, Nunavut <i>Geological Survey of Canada</i>
May 2015–Aug. 2015	Research Assistant <i>Dalhousie University</i>
June 2014 – Aug. 2014	Field/Research Assistant, Georgian Bay area <i>Dalhousie University</i>

Service and Other Activities

Mentoring and Student Supervision

Co-supervised undergraduate honours thesis project (University of Waterloo) (2020/2021)
Supervised student field assistants during PhD field program (University of Waterloo) (2018–2019)
Mentored undergraduate and graduate students, including assisting students with chemical analysis and presenting short course on THERMOCALC software (Memorial University) (2016–2017)

Peer Review

Journal reviewer: Nature Communications (2023), Geological Society of America Bulletin (2023), Earth and Planetary Science Letters (2022, 2023), Journal of Petrology (2022), Geological Magazine (2019)

University Committees and Student Associations

Graduate student representative, Nominating Committee for the Position of Chair, University of Waterloo Department of Earth and Environmental Sciences (2020)
President, Earth Sciences Graduate Association (University of Waterloo) (2019-2020)
Councillor for Earth & Environmental Sciences, Graduate Student Association (University of Waterloo) Council (2019)
Vice-president, Earth Sciences Graduate Association (University of Waterloo) (2018)

J. Kendrick

Conference Sessions

Co-convenor, 'Evolution of cratons and cratonic margins: the role of microscale techniques to unravel Precambrian tectonic processes', Geological Association of Canada–Mineralogical Association of Canada Joint Meeting 2020, virtual event.

Outreach

Demonstrator/assistant, Earth and Planetary Sciences Open House (McGill University, 2022)

Demonstrator, March Break Open House outreach event for secondary school students (University of Waterloo, 2019)

Demonstrator, Junior High Enrichment Mini-course outreach event for secondary school students (Memorial University of Newfoundland, 2016 and 2017)

Demonstrator, Discovery Days Earth Science session outreach event for primary and secondary school students (Dalhousie University, 2015)