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NEWS FROM *THE CANADIAN JOURNAL OF MINERALOGY AND PETROLOGY* (*CJMP*)

Highlights

The September issue (#5 for 2024) of *The Canadian Journal of Mineralogy and Petrology* (I'm not paid by the word, but I felt like giving you the name in its full glory this time) features a modest thematic issue deriving from the 14th International Platinum Symposium, held in Cardiff in July 2023. This issue features an insightful preface by yours truly, followed by six papers addressing mineral compositional implications relating to PGE-hosting ores in layered mafic-ultramafic intrusions from Canada, South Africa, and Russia, arguably the "big three" hosts of PGE deposits (if we count Sudbury and the Abitibi gold mines as PGE producers, get slightly ahead of ourselves with the James Bay Lowlands "Ring of Fire", and ignore the Stillwater Complex and the Great Dyke).

Sarah-Jane Barnes (Université du Québec à Chicoutimi) presents an examination of concentrations and site occupancies of the PGE and a range of other elements in chromites from komatiites, contrasted to those hosted in layered intrusions, based on which she derives important implications linking chromite mineral composition with parental magma oxidation state and, by inference, tectonic setting. Definitely one for your virtual bookshelf.

This paper is thematically complemented by two studies from Andrei Barkov (Cherepovets State University, Russia), Robert Martin (McGill University, Canada), and other colleagues from Russia, which investigate sulfide and telluride ore-bearing mineral assemblages and trapped melt inclusions from the Siberian Traps (i.e., Norilsk, which we get to spell without the complication of the usual internal apostrophe, because our Russian authors, who should know, have chosen this spelling), and in another paper, hypermagnesian (Mg# between 92 and 98) clinopyroxenes from an ultrabasic complex in the Kola Peninsula (Russia). In both of these studies, the link between mineral composition and primary oxidation state is the critical aspect. The role of magma oxidation state and, by inference, magma oxidation as a genetic process of potential prominence in ore-hosting magmatic rocks, is increasingly highlighted. In addition, three studies of mineral and rock textural analysis from the Bushveld Complex, South Africa, are featured, from a mixture of mostly South African and Canadian-based authors, plus Wolf Maier (Cardiff, UK), with two studies examining chromitite layers hosted by leuconoritic to anorthositic rocks, with the role of magmatic mushes prominently featured. The third, by Mkohonto and colleagues from Laurentian and Queen's Universities, as well as from industry, examine sulfide mineral compositions in the more complex setting of the Platreef of the northern limb of the Bushveld to deduce whether or not crustal contamination by local host rocks was the primary trigger for ore mineralization. I won't spoil the surprise here.

Finally, we would like to again notify our readership that the editorial board of *CJMP* are co-convenors of a (proposed) session at this year's GAC-MAC-IAH-CNC 2025 conference in Ottawa, Ontario (Canada), May 11–14. The session, co-convened by Steven Denyszyn (Memorial University of Newfoundland, Canada), Steve Prevec (Rhodes University, South Africa), and J. Gregory Shellnutt (Taiwan Normal University, Taipei, Taiwan), is entitled ***Mafic intrusions, associated magmatism and metallogenesis in anorogenic settings.*** Don't miss out.

The abstract submissions are open for GAC-MAC-IAH-CNC 2025 conference in Ottawa, Ontario. Submit your abstract at: **https://event.fourwaves.com/ottawa2025**.

MAC TRAVEL & RESEARCH GRANT WINNERS 2023

We congratulate Lukas Louwerse, Philippe Mongeau, and Ofure Onodenalore, each of whom received a 2023 Mineralogical Association of Canada Travel & Research Grant. Additional grant recipients Tiera Naber, Aneesa Ijaz Rabbani, Taylor Ducharme, and Jonathan Spence will be featured in a subsequent *Elements* issue.

Lukas Louwerse completed his MSc degree in August 2023 in geophysics with a collaborative specialization in planetary science and exploration Western University (Canada). Supervised by Dr. Phil J.A. McCausland and Dr. Roberta L. Flemming, Lukas studied the petrophysical properties of chromitite samples from the Bushveld Igneous Complex and compared them

to Howardite-Eucrite-Diogenite meteorites associated with the asteroid 4 Vesta, with the goal of determining how chromitite could be detected by future asteroid prospecting missions. The MAC travel grant allowed him to travel to the 54th Lunar and Planetary Science Conference in 2023, held in The Woodlands, Texas (USA). Lukas presented a poster describing the newly classified Howardite meteorite Northwest Africa 15199, titled "Shock and Regolith Features in NWA 15199." The opportunity to present his work at an international conference allowed Lukas to make connections with other researchers in fields related to his work. It also gave him an opportunity to network and interact with planetary scientists from institutions across the world, from new undergraduate students, to current and former astronauts, to some of the most prolific researchers in planetary science. Lukas is very grateful to the MAC travel grant for facilitating his travel to LPSC 2023, his first in-person conference.

Philippe Mongeau started his undergraduate studies in computer science before completing his BSc in geological engineering at Laval University (Canada) in 2021. In 2023, he completed his MSc at Laval University in collaboration with Agnico Eagle Mines, working on the role of fluid–rock reactions for the gold endowment of the Meliadine Gold District in Nunavut, Canada under the supervision of Professor Crystal Laflamme and Dr. Mercier-Langevin. The MAC travel grant allowed him to attend the SGA's 17th biennial meeting in Zürich, Switzerland, where he gave an oral presentation on the results of his MSc research titled: "Multiple sulfur isotope analyses identify an Archean sulfur source for the aurif-erous fluids at the Meliadine gold district, Nunavut, Canada." In September 2023, Philippe started his PhD at the University of Edinburgh (Scotland), focusing on the controls on precious and critical metal enrichments in VMS deposits of the Caledonian-Appalachian orogeny, under the supervision of Dr. Steven Hollis. The Caledonian-Appalachian orogenic belt hosts a large number of VMS deposits, providing the opportunity to establish a stable, ethically and environmentally responsible supply of these metals in Canada and the United Kingdom. Through his doctoral research, Philippe aims to characterize the regional and deposit-scale controls on precious and critical metal enrichments of these world-class deposits, which occur on either side of the Iapetus suture in Laurentian and Gondwanan-affinity lithologies.

Ofure Onodenalore is a MSc student at Memorial University of Newfoundland (Canada) under the supervision of Dr. Philippe Belley. She was awarded the 2023 MAC travel grant to attend the 2023 Prospector's and Developer's Association of Canada (PDAC) annual convention, where she participated in the PDAC-SEG Student Minerals Colloquium and presented a poster of her research on geochemistry of corundum grains from till and fluvial sediments across Canada. At this conference, not only did Ofure make great connections with professionals in her field, but she also gained valuable feedback and insight into her topic of research that she was able to implement into the final thesis.

IN MEMORIUM OF DONALD CLAYTON HARRIS (1936–2024)

Prepared by **Louis J. Cabri**

Don Harris, raised in Bear River, Nova Scotia, earned degrees in geology from Acadia University (BSc, 1958) and the University of Toronto (MSc, 1961; PhD, 1964). A passionate sportsman, Don excelled in curling and later golf, winning several senior championships at Rideauview Golf Club in Ottawa. He also enjoyed golfing internationally, such as during a visit to the German Geological Survey in 1994.

Don's mineralogical career began at the Royal Ontario Museum, and in 1964, he joined the federal Mines Branch, where he was in charge of the newly acquired ARL-EMX electron microprobe. He soon became a valued contributor to the research activities in the Mineral Sciences Division. In 1973, he published a seminal paper on Os-Ru-Ir alloys that was updated in 1991 to conform with the nomenclature of the International Mineralogical Association (Harris and Cabri 1991). He joined the Geological Survey of Canada in 1982, where his research contributed to understanding the Hemlo gold deposit (Harris 1989) and characterised three new minerals in the deposit: criddleite, vaughanite, and hemloite. Throughout his career, he authored or co-authored 53 peer-reviewed papers and earned the prestigious Hawley Medal in 1972 for the best paper published in *The Canadian Mineralogist* (Harris and Nickel 1972). The new mineral donharrisite from Austria was named in his honor for his major contribution to the mineralogy of ores (Paar et al. 1989).

His professional contributions included 25 years as Canada's representative to the Commission on New Minerals and service as Vice-chairman of IMA's Ore Mineralogy Commission. He treated each new mineral submission with great care and sought the help of mineralogists' expert in particular fields, enabling for an informed voting decision and comments. This is something lacking in today's Commission of New Minerals, Mineral Names, and Nomenclature. A dedicated volunteer, Don also supported the Mineralogical Association of Canada by maintaining its membership database and assisting with journal distribution.

Don is survived by his wife of nearly 55 years, Diane, four children, eight grandchildren, and four great-grandchildren. He will be remembered as a devoted family man, friend, and esteemed colleague.

ACKNOWLEDGMENTS

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SELECTED REFERENCES

Harris DC (1989) The mineralogy and geochemistry of the Hemlo Gold Deposit, Ontario. Geological Survey of Canada Economic Geology Report 38, 88 pp

Harris DC, Cabri LJ (1991) Nomenclature of platinum-group-element alloys: review and revision. The Canadian Mineralogist 29: 231-237

Harris DC, Nickel EH (1972) Pentlandite compositions and associations in some mineral deposits. The Canadian Mineralogist 11: 861-878

Paar WH, Chen TT, Roberts AC, Criddle AJ, Stanley CJ (1989) Donharrisite, nickel-mercury sulfide, a new mineral species. The Canadian Mineralogist 27: 257-262