

Annual Awards

Duncan Derry Medal 2020 **Sarah-Jane Barnes**

I am honored by the award of the Duncan Derry medal for 2020 from the Mineral Deposits Division of the Geological Association of Canada. I confess that in this time of pandemic I have struggled to find the right note in writing acceptance remarks, as it seems hardly the time for celebration. However, upon reflection I have concluded it is the time for the famous “Keep calm and carry on”. So, I write this in that spirit.

No one reaches the stage of receiving a medal simply by their own efforts alone, thus an acceptance remarks/speeches must consist of acknowledgements of those who either pointed the way or supported one along the way. First, I would like to thank those who arranged my nomination and wrote letters of support. For a nomination to be successful those supporting the candidate must themselves be successful and thus they are busy people, who gave up their time for no particular gain of their own which requires some sacrifice on their part. Writing a letter of support is an art in and of itself. The selection committee is always faced with a number of good candidates with little to choose between them. The letters of support must say not only that the nominee is worth the award, but also provide some interesting detail to make them stand out (hopefully positively) from the others. I should also here thank MDD and its committees for promoting mineral deposits studies in Canada and encouraging students to study mineral deposits through their field trip program.

I have been fortunate in being able to study ore deposits using a fundamental approach for most of my career. As is the case with most geologists I came to study geology and my specialty more by good luck than good judgement. As an undergraduate in South Africa in the early 70's, I was training to be a science teacher. Teacher, nurse or secretary being the careers deemed suitable for a women at the time. I registered for first year geology in the hope of obtaining a bursary from the mining industry. It was only later that I realized that they did not fund or employ women. Compared with the staid professors of chemistry, physics and mathematics the geologists were an unconventional bunch. Suits and ties were obligatory for lecturers, but in contrast to the other lecturers who wore elegant suits or at least ones that fitted and had matching ties the geologist did not seem to care how out of date or baggy their suits were. What marked them out was their enthusiasm for their topic, whether it was mineralogy or paleontology, and their willingness to talk to students on field trips as though we were real people. This and the idea of the adventure of fieldwork seduced me into studying geology at a time and place where women were not



expected to have a career in geology. Whereas, not all of the lecturers were supportive, I must thank them all for conveying their passion for geology and particular thank those who encouraged me continue my studies (Professor Clifford and Dr. Ferguson).

After graduation, I was sent to Geological Survey's Namibia branch. As the only female geologist I caused quite a few logistical headaches. At twenty-one years old I was also supremely indifferent to the clash of cultures between represented by some of the older conservative geologists and my feminist approach to life. I must thank my immediate boss of the time (Dr. Roy Miller) for his patience with this and his assistance in finding and funding an MSc project for me.

I wrote up the MSc project at the University of Cape Town. At the time the popular topics at the university were meteorites, lunar samples and the flood basalts of the Karoo. A project from the geological survey looking at serpentinites from the Damara mobile belt was considered by the geochemist as not worth bothering with. I must thank the then head of department (Prof Arch Reid) for rescuing me and the newly hired lecturer (Dr. Dave Waters) for accepting to supervise my thesis.

From Namibia to Canada, to do a Ph.D. with Prof. Tony Naldrett. This was once again a big change in culture. I had been almost completely independent during my MSc research and adapting to the Canadian approach of directed research took a little getting use to. I must thank Prof. Mike Gorton for his guidance during this period. At one point in my PhD I was objecting to having to write up a report for the granting authority (right now I cannot think why I did not think it was my job to do this). Naldrett looked at me, pulled in his chin the way (*cont.*)

Annual Awards

he always did when he wanted to make a point and said “Sarah, you must understand, you are now part of Naldrett INC, and as such must contribute to the running of things”. Having now run large teams myself, I now understand this and I have come to realize that being part of Naldrett INC has opened doors for me and given opportunities that training with other professor would not have. I must thank Prof. Naldrett for this.

The Naldrett connection brought me to my post doctorate position in Norway which allowed me to study a layered intrusion in detail. In addition, I was given complete freedom and this allowed me to develop some of the ideas (using metal ratios for example) that have been the main stay of my career. I must thank Dr. Ron Boyd for arranging the project and Are Korneliussen for teaching us how to make Norwegian style coffee and how to ski Norwegian style.

My career as a university professor would not have been possible without the financial support of a number of Canadian institutions that allowed research to be carried out in the spirit of pure curiosity. My first university post at Université du Québec à Chicoutimi was as part of a team of young researchers supported research council of Quebec (FQRNT), with the purpose of supporting the newly opened doctorate program and to study ore deposits in the Precambrian of Quebec. This position was funded for seven years and only required half time teaching and the rest of the time being devoted to research. I must thank Professor Guha for managing the project and other members of Sciences de la Terre for welcoming us into the department. Of course time alone is not enough, funds to carry out the research are necessary and here the NSERC Discovery Grants were crucial. This continual funding through-out my career together with the Canadian Research Chair funding in the last 14 years has been critical in allowing me develop my research in a creative manner. These grants have no specific requirements other than papers and students should be produced broadly in the domain of ones expertise. Unfortunately, neither the Discovery grant program nor the CRC have kept pace with inflation and any increase the research councils have had have been directed to more targeted research. I would urge those who have influence on these decisions to rethink this approach.

Before leaving the topic of institutional support I should thank my home university for allowing me to develop my research laboratory (LabMaTer) and allocating some of the much prized Canadian Fund for Innovation funds to our laboratory. This has allowed my laboratory staff and I to focus on developing analytical technics for ore

deposit materials which are often neglected in conventional geochemistry laboratories and here I must thank in particular two of my laboratory staff Dr. Paul Bédard and Mr. Dany Savard.

Every professor is aware that they would have achieved much less without students and post doctorate fellows. Students, especially undergraduate students, play vital role in training one to communicate clearly. Students and post doctorates are also essential to actually carry out much of the research, grapple with whatever new format journals want and provide energy and enthusiasm when one's own is flagging. They have the sometimes irritating habit of asking fundamental questions. As a professor when I found myself about to answer “Evidently... Obviously... It is well known that...”, it was a signal that this answer is either not evident or is something I do not understand. In either case, some research or reading was required. I must thank the students for keeping me on my toes and opening new avenues of research.

Finally I must thank my husband (Prof. Ed Sawyer) of 42 years and son for keeping me grounded when I got too full of myself and support when I was discouraged usually with just a few chosen words, but often with a simple silence and raised eyebrow.☐

