Interview with Pércio de Moraes Branco

Anísio Cláudio Rios Fonseca[1]

[1]Centro Universitário de Formiga (UNIFOR-MG)

This month in the "10 questions for a scientist" section, we are pleased and proud to interview, Pércio de Moraes Branco.

Pércio de Moraes Branco has always been a landmark in Brazilian mineralogical literature. Above average knowledge and professional experience, he has the gift of sharing his vast knowledge with generations of geologists, gemologists, teachers and other professionals through his works. His books are a must-read for all who militate in the mineral world. His mineralogy dictionary pioneered in Brazil, as well as his gemology dictionary. Its simple language and, at the same time, highly technical, are trademarks of this great professional and writer. In a country still lacking genuinely national quality technical literature, its works are pleasant surprises that transcend time. "

01) Tell us about your academic background and the motivation that led you to follow the career of Geologist and Gemologist

The option for Geology was the consequence of an attraction I always had for the natural sciences. I took the Geology course at UFRGS (Rio Grande do Sul Federal University), the only one in Rio Grande do Sul (none in Santa Catarina), graduating in 1970. In 1976 I majored in Mineral Economics at Fundação Getúlio Vargas from Rio de Janeiro.

The interest in gemology came in 1978 and was the result of the many questions they asked me about gems, questions that I could not answer because my undergraduate had not prepared me for that. I took several courses with Brazilian professors and with two from the prestigious Gemologic Institute of America.

02) Discuss about your area of activity during and after your career at CPRM (Mineral Resources Research Company) - Geological Service of Brazil

The CPRM was created a year before I graduated. I was still a student when I decided that this was the company I wanted to work for. And so it was. After a brief visit to Brazilian Coper Company, I joined the local CPRM where I worked for 35 years, working in four states.

My retirement in 2007 did not break this long-standing connection; three times after leaving the company I was hired by it to write scientific articles on geology for students and teachers. I have edited 64 articles for Canal Escola, the company's website (www.cprm.gov.br). In addition, I continued to collaborate informally and without payment with Ask a Geologist, a service which I created when I was in the company that intends to answer any questions about Geology.

In addition to these activities, I have provided several services as an independent consultant: courses, lectures, travel guide to mining settlements and companies of precious stones of Rio Grande do Sul, review of technical books and identification of gemstones etched.

03) Your books have always been a respected and obligatory reading in the area of mineralogy and gemology, whether in universities or even by scholars and mineral collectors. How was the production of the first of them realized and its importance in the mineralogical scenario?

The preparation of the first book, the Dictionary of Mineralogy, required four years of work and its publication was complicated and time-consuming. Geology books published in Brazil were very rare, and I was an unknown author. However, it came to public and had three issues, all sold out. There was (and is not) similar work published in our country. It was the graduation gift that the patron of the first group of geologists of Angola gave to the trainees. As my second book, the Gemological Glossary, also ran out after three editions, the Texts Workshop proposed to reissue the two, merging them into one book. Thus appeared the Dictionary of Mineralogy and Gemology, enlarged and updated version of the two, with 608 pages and 118 colored photos, which was not in previous works. This book is already in its second edition.

04) In your Dictionary of Mineralogy and Gemology, you dedicate a section to regional / obsolete names. How was the work of gathering such information so regionally differentiated?

The terms of the miners' jargon were collected from various sources, not all technical books. Already obsolete names are mainly those so classified and periodically reported by The American Mineralogist magazine, edited in the United States. The Portuguese dictionary of Caldas Aulete, much praised at least until the Houaiss Dictionary, the largest and most modern of the Portuguese language, is rich in mineral names, but many of them obsolete.

05) Your latest book recounts your extensive personal and professional experiences as a collector and geologist. Tell us more about it.

My sixth book in the area of Geology, published in February 2019, is the first that is not technical. He reports experiences in many Brazilian states and in several other countries. There are dozens of stories in the field, in Bahia, Rio Grande do Sul, Rio de Janeiro, Santa Catarina and Amazonia, but also in the Sahara desert and in major cities such as Santiago, Miami, Porto (Portugal) , New York and some Brazilian capitals. There are 443 pages with stories that are curious, funny, intriguing or even tragic, but which today seem funny. There are also chapters that say "serious" in which I talk about Gemology in my professional life; my twelve year work as coordinator of the Museum of Geology of CPRM and as a collector of minerals; on some geotourism trips in Brazil and abroad and participation in geology congresses. The book has a great acceptance, not only for being an easy and pleasant reading, but also for showing how well it is the professional work of a geologist.

06) The south of Brazil is prodigal in occurrences of agate, quartz and opal. How important is this exploitation to the national economic scenario?

Rio Grande do Sul produces three gemstones: amethyst, agate and citrine, obtained by thermal treatment of the amethyst. Despite this small diversity, it is the second largest producer of precious stones in Brazil, because the volume produced is very large. There is production of fire opal, but in very small volume and of no commercial importance. Santa

Catarina produces agate and amethyst, but in incomparably smaller volumes.

07) The basaltic and rhyolitic spills of the south of the country are admittedly for being extensive and rich in minerals. Discuss some important and/or peculiar occurrences.

The basalts of southern Brazil occupy, in fact, a very large extent. In Rio Grande do Sul, for example, they cover more than half of the state. The main minerals found there are, as I've already said, agate and amethyst. Other gemstones are jasper, obsidian, onyx and carnelian, all of which are insignificant in relation to amethyst and agate. There are also occurrences of copper, never used economically.

Numerous occurrences of minerals from the zeolite group deserve mention. Although they are not used economically, they are highly valued by mineral collectors for their great beauty. For a good number of years, I exchanged with collectors from at least fifteen countries and sent many samples of heulandite, escolecita and stilbite mainly. There is also modernita, cabazita, analcima and other species of this group, less abundant. Along with these zeolites, it is common to find calcite and apofilite, also in beautiful crystalline aggregates.

In the research that resulted in the gemological maps of Rio Grande do Sul and Santa Catarina, a colleague and I also recorded the occurrences of minerals for collection, a work that I believe had never been done in Brazil until then. This allowed us to discover that zeolites occur mainly in a SW-NE direction range from Lajeado (RS) to São Joaquim and Bom Jardim da Serra (SC).In some Planalto (RS) mines, amethyst growers also extract beautiful gypsum crystals of the selenite variety, sometimes very transparent and limpid, some with tens of kilos, as well as exotic specimens of pseudomorphic quartz on anhydrite. In the agate mines of Salto do Jacuí (RS), there is abundant common opal, despised by the minners. In several points, obsidian occurs, whose best occurrence I found in Lagoa Vermelha (RS).

08) National zeolites have reached the height of fame in the famous occurrence "Das Antas", known all over the world. How are these occurrences currently? Is there any exploitation of these for the collections market?

The occurrence of zeolites and green apofilite from the Antas river region, in fact, became famous. Several major museums exhibit specimens from that region and I´ve seen one at the New York Museum of Natural History. Another very famous occurrence among the collectors is the one of the quarry of the City hall of Morro Reuter (RS), now deactivated. I have been there numerous times and collected wonderful pieces for the collection of the Museum of Geology, for distribution among collectors, students and teachers and for my own collection. Herbert Pöllmann, a German mineralogist who took me there, said it was an outcropping perhaps unique in the world to the abundance of zeolites. And I would add: also by its dimensions. The largest crystals of stilbite, escolecita and apofilita that I have seen were collected by me there. Despite this wealth, these minerals are not found in Rio Grande do Sul market trade.

09) Brazil is undoubtedly the largest producer of colored gemstones in the world. How is the national scenario in terms of stoning technology and gem treatment? Does it meet the international standards?

The stoning and treatment of gemstones in Brazil are still far from having the importance one would expect, considering the volume of national production. In Rio Grande do Sul, we have mastered and applied well the agate dyeing technology and amethyst heat treatment. In other regions, I believe that heat treatment is also widely used, but I do not know this sector well. The stoning I think is still very insufficient and it seems to me that it has not evolved much.

10) What would be your advice to anyone who intends to pursue a geoscience and gemology career in Brazil or abroad?

The labor market for geologists is traditionally marked by positive and negative phases that succeed each other. With the discovery of the Pre-salt, there was a great demand for these professionals, but we are already in a new phase of low demand, I do not know how to predict how it will evolve.In the area of Gemology, the creation of the undergraduate course of the Federal University of Espírito Santo in 2009 was a huge step forward. Unfortunately, he is still the only one in Brazil. Those who wish to pursue a career in this field have sought the courses of the Gemological Institute of America in the USA or others in England and Germany, for example. Brazil needs gemologists a lot, but the jeweler market still does not know and dosen't value this professional accordingly.

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Anísio Cláudio Fonseca
Author of Conexão Ciência Journal