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June 2024



The Jackson Farewell party 11th May 2024

DIARY

June	1	10:00–14:00	Open to the Public Day – Rocks, gems, jewellery, mineral specimens to look at, chat about, swap, sell or buy.
July	6	10:00–14:00	Open to the Public Day – Rocks, gems, jewellery, mineral specimens to look at, chat about, swap, sell or buy.

The Jackson Farewell Party on 11th May 2024 was a great success. About thirty members popped in to wish Malcolm and Margaret all the best for their new life in the UK, and partake of tea and snacks. The Club gave the Jacksons a 32-page photobook of MinSoc memories from Montebello until the present day, covering history, field trips, Gemborees, Malcolm's lapidary work, and pictures of members past and present. A second copy has been printed for the Club to keep in its library.



"Simply Red"

By Peter Rosewarne

Introduction

By popular demand (trust me) we continue with our colour-theme series of articles, building on the, “*In the Pink*,” “*Back in Black*” and “*Colourless Characters*” offerings. A number of red minerals readily come to mind such as *rhodochrosite*, *rhodonite*, *realgar*, *cinnabar*, *vanadinite*, *tourmaline* and *garnet*, oh and *nambulite* but that has already featured in the “*Obscurities II*” article. Mind you, many of the other-mentioned minerals have appeared in Minchat articles too, but not recently, and so some will be reprised. Other minerals that have also come to mind now include *ruby*, *spinel*, *cuprite* and *zincite*. The red colouration is usually due to metallic *cations* such as *manganese* (Mn^{3+}) and *chrome* (Cr^{3+}) being present in trace amounts in the crystal lattice. And another two minerals coming to mind are red *beryl* (*bixbite*) and *proustite*. There are also famous mineral specimen localities such as the Red Cloud Mine, Arizona, USA (*wulfenite*), the Red Lead Mine, Dundas, Tasmania (*crocoite*), that’s two more red minerals, and Redruth, Cornwall, UK (no red minerals but, *inter alia*, *chalcocite*).

The Minerals

We’ll start off with rhodochrosite, a manganese *carbonate* that is found as “best of” specimens in three locations and in three differing crystal forms. **Figure 1** is an example from the Sweet Home Mine in Colorado, USA. The discovery of these stunning specimens of large rhombs on a matrix of *quartz* and *tetrahedrite* and sometimes purple *fluorites* is a story of perseverance, faith in the quest and expenditure of large sums of money by a consortium led by Bryan Lees of Collector’s Edge using venture capital. The value of the specimens since recovered from this specimen-mining operation runs into the tens of millions of US\$.

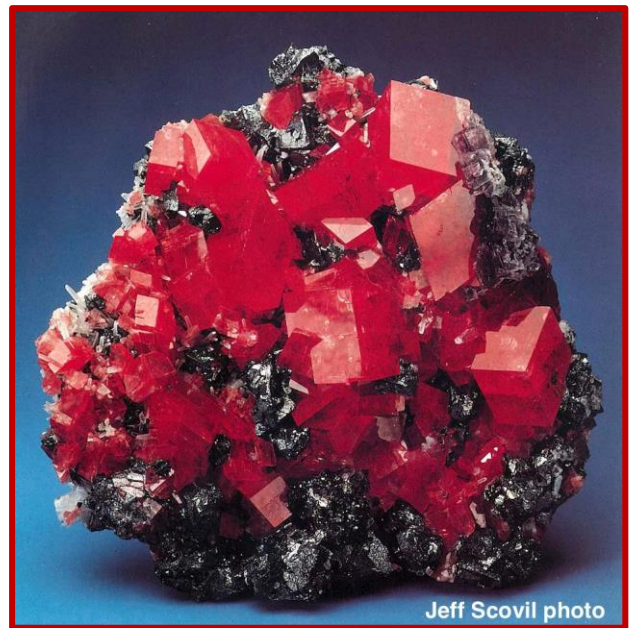


Figure 1: Rhodochrosite on Tetrahedrite and Quartz, Sweet Home Mine, USA, 13.2 cm (courtesy of Collector’s Edge)

Much closer to home we have the well-known rhodochrosites from the N’Chwaning I Mine in the Kalahari Manganese Field which were discovered in the course of normal manganese ore mining in 1978. A typical example of a crystal cluster of the *scalenohedral* habit is shown in **Figure 2** and it was also found as so-called “*Wheatsheaf*” bundles and, rarely, botryoidal form. The Mineral Record (2017) gives a detailed account of the recovery of many of these specimens by Des Sacco.



Imaged by Heritage Auctions, HA.com



http://mineral-4-graf.com

Figure 2 left: Rhodochrosite Crystal Cluster, N’Chwaning I, RSA (courtesy of Heritage Auctions)

Figure 3: The Emperor of China, Wutong Mine, China. 40 x 60 cm (courtesy of Collector’s Edge)

Where else but China could come up with examples to match the above? **Figure 3** shows the “*Emperor of China*,” a 40 x 60 cm specimen with individual flattened crystals to 22 cm, from the Wutong Mine, China. This and other extraordinary discoveries were made in April 2010 in a partnership with Collector’s Edge and the local mine owners. By way of contrast, examples from Peru and Gabon (this must be the first time this country has featured in Minchat? Probably the last too...) are shown in **Figure 4a** and **4b**, respectively.



Left. **Figure 4a:** Rhodochrosite, Peru

Right. **Figure 4b:** Rhodochrosite, Gabon (both images courtesy of Hummingbird Minerals)

Rubies are found in countries such as Myanmar, Sri Lanka and Mozambique and in association with bright green *zoisite* in Tanzania, forming the attractive rock *anyolite* with dark green/black *pargasitic amphibole* (see inset image below). However, Tanzania is also a source of gemmy ruby, as shown by the example in **Figure 5** from Morogoro.



Figure 5: Ruby Crystal Group, Morogoro, Tanzania 6.5 x 5.5 x 6 cm (courtesy of the MIM Museum)

When it comes to rhodonite, a *manganese silicate*, most of us are familiar with the massive pink variety usually mixed with black manganese oxide and often sold in the form of polished cabochons or eggs/spheres (see inset image). However, rarely, it forms deep red gemmy crystals like the one shown in **Figure 6** which is from a locality in Minas Gerais, Brazil: talk about chalk and cheese, or should that be candy floss and Turkish delight?



Figure 6: Rhodonite Crystal, Minas Gerais, Brazil. 9.9 x 3.5 x 2.5 cm (courtesy of the MIM Museum)

Red beryl or bixbite is found in *rhyolitic* lavas of the Thomas Range, Utah, USA, usually as small <1 cm opaque hexagonal crystals but occasionally as larger gemmy crystals, like the example in **Figure 7 below**. Sherry-coloured gem *topaz* is also found in this locality.

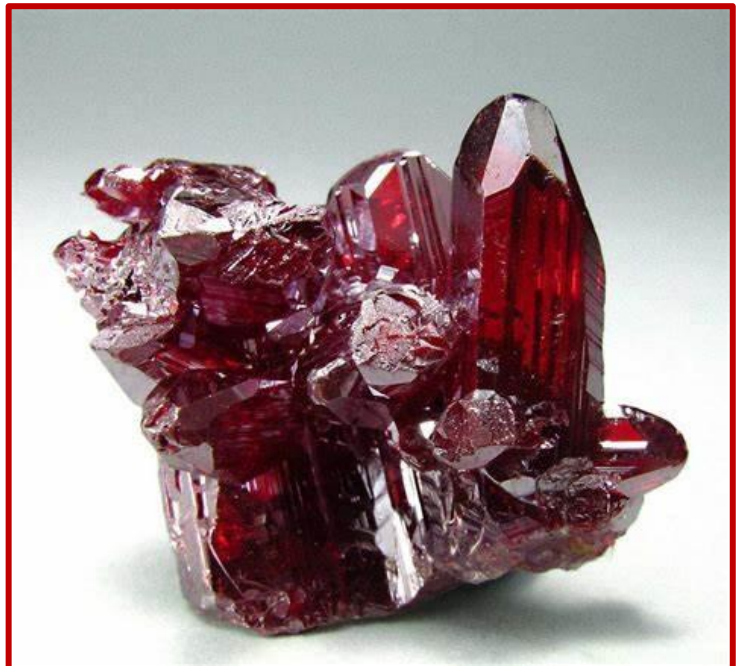


Figure 7 left: Red Beryl, Utah, USA (Internet stock image) **Figure 8: Proustite, Saxony, Germany** (courtesy of Fabre Minerals)

I think this is the first time that proustite has been featured in one of my Minchat articles. The specimen in **Figure 8** is from the famous *silver* mining area of Saxony, Germany and is courtesy of Fabre Minerals (since bought-out by Weinrich Minerals). Proustite is a [sulfosalt mineral](#) consisting of [silver sulfarsenide](#), Ag_3AsS_3 , also known as ruby silver ore, and an important source of the metal. It is closely allied to the corresponding [sulfantimonide](#), [pyrargyrite](#).

Crocoite (pronounced with 'hard' c's) is a *lead chromate*, PbCrO_4 . The best specimens come from the Dundas area of Tasmania and it is the official mineral of Tasmania. It is relatively rare because of the conditions needed for its formation, which require an oxidized lead ore and *ultramafic* rocks for the source of the chrome. It forms characteristic, bright red acicular crystals, as shown in the fine example in **Figure 9**.



Figure 9: Crocoite Crystal Group, Dundas, Tasmania, 14 x 14 x 18 cm (courtesy of the MIM Museum)

Spinel is the magnesium-aluminium oxide of the spinel group, which contains well-known minerals such as *magnetite*, *chromite* and *franklinite*. It can be colourless, black, pink, blue, green, brown and yellow but we are only interested in red ones here. Its hardness is 8 on the Mohs scale and so it is an important gemstone. Gem varieties have historically been sourced from Sri Lanka, Myanmar and more recent finds have been in Vietnam and Tanzania. It is commonly found in metamorphosed limestones, which gives rise to the attractive combinations of red octahedra on white crystalline *marble*, as shown in **Figure 10**. Red spinels were often confused with rubies before the advent of modern X-ray diffraction techniques.



Figure 10: Spinel on Marble, Vietnam, 11 x 7 x 12 cm (courtesy of the MIM Museum)



Figure 11: Cuprite Crystal, Milpillas Mine, Mexico (Pinterest)

Last, but not least, we have cuprite which commonly crystallises as dull, metallic grey octahedra but occasionally occurs as bright red crystals. The Bisbee Mine in the USA was a famous locality for these crystals but the example in **Figure 11 above right** is from the equally famous Milpillas Mine in Mexico. Talk about going out with a bang!

Concluding Remarks

There are some “firsts” in this article; first mention of Gabon and proustite and these are probably “lasts” as well. The three previous “colour-theme articles all ended on *diamond*, but do you get red diamonds? Turns out that you do but that they are the rarest of the coloured diamonds and most have originated from the Argyle Mine in Australia, which was mentioned in the “*In the Pink*” article as being the main source of pink diamonds. But there are a few famous red diamonds. The Hancock Red (0.95 carat), which sold for \$926,315 per carat in 1987, was found in Brazil sometime before its purchase by Warren Hancock in 1956. The Moussaieff Red (5.11 carat), the largest red diamond known, was also found in Brazil sometime prior to its acquisition by William Goldberg Diamond Company in the mid-1990s. Finally, the DeYoung Red (5.03 carat) was purchased at a flea market by Sydney DeYoung but the source of this diamond is unknown (Wikipedia).

References

The Mineral Record (2017), *N’Chwaning!* January-February 2017. Vol. 48, No.1. Tucson.

Real Thing Reprised (sub-title - The Perils of “Silver Pick” Collecting)

by

Peter Rosewarne

Introduction

A “Silver Pick” mineral specimen collector is one who buys, rather than self-collects mineral specimens. Unless you run your own specimen mining operation, work at a mine or have contacts or are happy to scratch around on old mine dumps and possibly small mining operations, you are going to have to buy specimens at some stage for your collection. And if you want to add a specimen from say the Tsumeb or Kombat mines you are going to have to buy them (or trade/swap them).

Buying “in the flesh” so to speak is not an issue and you can see exactly what you are buying. However, buying on the Internet is a whole new ball game and not for the faint-hearted or inexperienced, or even experienced. I have noted the perils of buying mineral specimens on the Internet in a Minchat article in October 2023 and my latest experiences in this regard (March 2024) prompted me to write this follow-up or reprise mini-article as a sort of catharsis.



The Crystal that Wasn't

I have bought a number of specimens recently (late 2023, early 2024) from a dealer in Pakistan and they have mostly been as indicated in the photographs he sent me to entice my business. (They don't let up even after my sending multiple messages saying, “I'm not buying at the moment”). I think most people would agree that the crystal of *spodumene* from Afghanistan shown in **Figure 1a** is pretty alluring and it was going for a very reasonable price (that should have warned me). This looked like a lovely example of the yellow variety of spodumene, *triphane*.



I was therefore in a state of high anticipation as I unwrapped it. You can perhaps imagine my disappointment when I held in my hand the crystal shown in **Figure 1b**. It is the same crystal believe it or not. When I remonstrated with the dealer about the discrepancy in appearances, he admitted that he'd used artificial coloured light to enhance the salability of the crystal.

<Figure 1a: Triphane Crystal, Afghanistan

Figure 1b: Spodumene Crystal, Afghanistan>



After lodging a complaint through Paypal I was able to get a partial refund but that didn't make up for the disappointment. To cap it all, after haranguing the dealer over this fraud he then immediately sent me an image of another mineral specimen for sale, a very nice-looking blue fluorite but who knows, it could have been any colour.

The Cluster that Wasn't

The cluster of *heliodor* (or yellow *goshenite*) crystals with accentuating *smoky quartz* crystals in **Figure 2a** looked very alluring on the dealer's home page, despite it clearly being stated that it was only a miniature-sized specimen. The actual specimen in **Figure 2b** is much duller and hardly worth bothering with. I did get a partial refund on this one too.



Left. Figure 2a: Heliodor with Smoky Quartz, Erongo Mountains, Namibia

Right. Figure 2b: Heliodor with Smoky Quartz, Erongo Mountains, Namibia

Concluding Remarks

I'm not sure which is the more disappointing; the arrival of a much anticipated specimen that doesn't look anything like what I thought I had bought, or the arrival of a much anticipated specimen that would have looked like what I thought I had bought but for the fact that it was in pieces thanks to the SAPO or, more rarely, the courier company. It's even more disappointing when you find that you can't put Humpty Dumpty back together again.

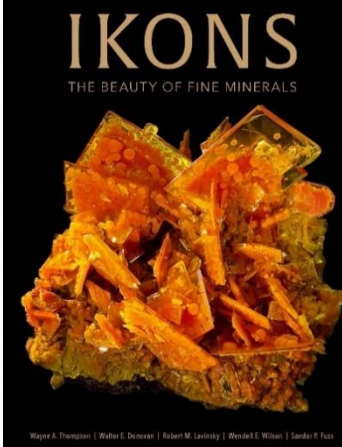


The jury is still out on that one and writing this article hasn't been in any way cathartic; it's just reminded me of how many times I have been right-royally shafted as a silver pick collector! Serves me right for not sticking to the mantra of Mineralaholics Anonymous of taking life, "one crystal at a time." **Luckily, as many of you know, I have stopped collecting.** 😊

Ed: does anyone believe that last sentence?

What's New on the Book Scene

Book Review: *Ikons – The Beauty of Fine Minerals*



From the moment I saw the photograph of the cover of this new book, published by The Mineralogical Record, I knew I had to have it. The image of those wulfenite blades with mimetite from the San Francisco Mine, Mexico, looks edible and like a confection dreamt up by a master confectioner. Open up the book and you'll find another 448 images of equally alluring, world-class, mineral specimens to whet your appetite for minerals and mineral collecting. The book has been put together by five of the most knowledgeable and respected doyens of the mineral collecting world. It builds on the "Ikons" supplement to the Mineral Record of 2007, which is now out of print, and out of date.

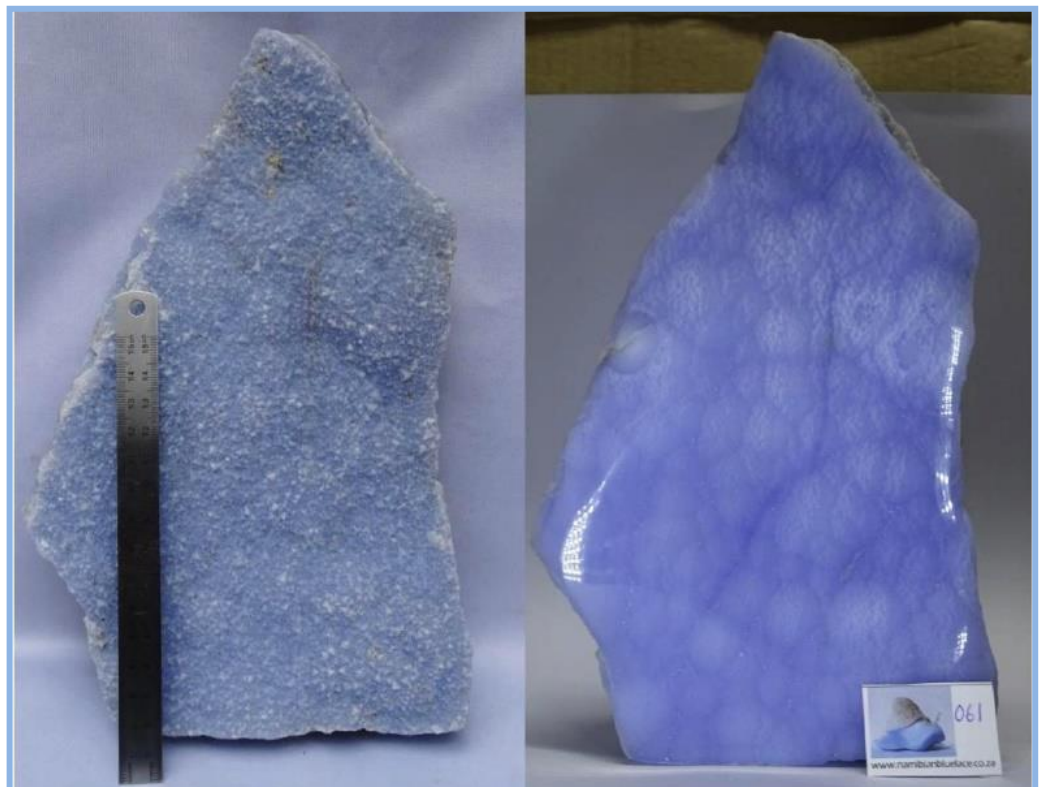
It showcases famous mineral producing sites and best-of specimens for all the key minerals that feature in generalist collections. South Africa and Namibia are well represented with minerals from the Kalahari Manganese Field, Riemvasmaak, Erongo Mountains, Kaokoveld and Tsumeb. It is informative to compare the minerals featured in this book against benchmark books of an earlier time such as Peter Bancroft's "The World's Finest Minerals and Crystals" dated 1973. There is minimal text, with short articles on e.g. mineral collecting, rating of mineral specimens and descriptions of famous mineral finds and each image/mineral species has a short informative accompanying text.

It is a coffee-table-sized book at 33.5 x 25 x 4.5 cm and weighs a hefty 3.6 kg so make sure you have a sturdy coffee table. It also costs a not inconsiderable \$200 plus courier but would be a wonderful addition to your mineral collection library and is a classic in-the-making. **PR**

LAPIDARY WORK BIG AND SMALL



Lilly Morris has now gained her Introductory Course certificate



POLISHING PROBLEMS, PATIENCE, AND SUNLIGHT

Polishing properly is a matter of patience as I have again found out, but thankfully not to my cost this time. Duncan is the expert who taught me to facet, and the late Mike Fritz taught me to make cabochons long before the days of diamond pads. However, being the maverick that I am, I have always wanted to polish items larger than most other people do.

This time my *victim* was yet another piece of Blue Lace agate; quite a large, early slab that I got from Maurice's stone yard many years ago. It is 27 cm in height, and 16 cm wide, but had no particular appeal apart from its size and weight, and its nice metallic ping, like the dolerite stones in the Karoo. And dolerite-like it proved to be. It was a classic slab with very small points on its crust. I thought these would be easily ground down by a



50 grit diamond pad, but all that happened was that the points ground the diamond off the pad! So, it was necessary to call in the heavy brigade in the form of my angle grinder and diamond-coated grinding blade. **Even with that, it still took about 20 minutes to get the small points off, and the surface as smooth as possible, before starting work with the 50# diamond pad on my hand drill.** Another hour of this constant "smoothing" work with a fine stream of water to keep everything cool and the swarf washed away, still saw scuffs and scratches from the angle grinder left on its surface. These I marked with a child's wax crayon, and proceeded to dedicate another 30 mins to the bad areas. One or two minor scuffs still remained, but I felt certain that 100# would be strong enough to tackle them. I changed pads to 100# and gave them another half an hour's work. It didn't look that bad ... until I left the stone drying in the sun. Uh oh ... two or three bad scratches were still very visible. They were re-marked and each given at least another 5 minutes work at 100#. By that time the sky had clouded over but the stone looked good enough for 200#. Great. I changed pads, worked it all over at 200# and left the stone in peace for the night.

The next day was sunny and once out in the yard again I could now clearly see one really bad scratch visible on my stone, and I knew that no ways would any diamond pad except for the 50# make a difference to removing it, so back to the beginning again I went. Yes, I only worked in and around the problem area but again it took almost 20 minutes to remove that scratch, and to progress back up through the 100# and 200# pads, and when satisfied, on to the 400#. I have found that 400# is about the last time that any stone will actually get worn away, and especially on harder stones this is actually the start of the polishing process.

The 50# and 100# stages are the critical part of any polishing and take almost as long, if not longer, to complete than working up through the remaining five pads (200, 400, 800, 1200/1500, and 3000). You cannot skip out pads on the way, there are no short cuts, and the end result just won't be as good. The finer the grit you are using is, the more the imperfect work from the early stages of polishing shows up. Good luck to all polishers out there. JW

From the Cabinet of Curiosities



This month's Curiosity is a **Chrysanthemum stone** a type of 'viewing stone' from China. I came across this one in a crystal/gem shop in Mauritius in April 2024 and Shannon Pelham had a small example at a Club Open Day a few months ago. It comprises a dark grey shale with embedded crystal sprays of celestite as shown in **Figure 1**. Millions of viewing stone enthusiasts exist in China apparently and a million square metre park was opened in 2013 for viewing stone exhibits. Check out the supplement to the Mineralogical Record of January-February 2013 for more information on this subject. PR



Figure 1: Chrysanthemum Stone

“FACETIPS – A Gem Cutter’s Notebook” by Duncan Miller.

Most of the faceting articles published over the past few years in the Mineral Chatter have now been compiled into a single 128-page document. The pdf file is available for download for free from <http://ctminsoc.org.za/articles.php> for those interested in having all the articles together.

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