

MAKING IT MINE

SIR ARTHUR RUSSELL AND HIS MINERAL COLLECTION

By Roy E. Starkey

in association with the Natural History Museum, London.
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Sir Arthur Edward Ian Montague Russell, 6th Baronet, dedicated the majority of his life to building what is regarded as the finest ever collection of British and Irish minerals. It is preserved at the Natural History Museum (NHM), formerly the British Museum (Natural History), London. Roy Starkey's latest book provides a detailed and lavishly illustrated account of Russell, his family, and the collection.

It is a monumental piece of work, showcasing superb examples of specimens from localities both famous and obscure. It describes a man of great humanity and compassion, someone with the common touch and, despite the grandeur of his title and collection, a person we as mineral collectors can readily relate to.

Always alert to a forthcoming anniversary, in 2014 Roy Starkey produced a web-based tribute: *An Appreciation of Sir Arthur Russell on the Occasion of the Fiftieth Anniversary of his Death - 24 February 1964*. In the same year Roy's first book, *Crystal Mountains Minerals of the Cairngorms* was published. It was followed, four years later, by *Minerals of the English Midlands*. Both volumes feature specimens from the Russell Collection.

Many authors would have been content after shedding so much light on Sir Arthur and his collection. But Roy is not one to rest on his laurels! His research had revealed that a much bigger story remained to be told and what could be better than to produce a book about Sir Arthur's life, his family and his collection, to coincide with the fiftieth anniversary of the formation of The Russell Society. This gave four years in which to execute an ambitious project and so a plan was drawn up.

The one component which could not be accounted for was not even in our vocabulary in 2018: coronavirus. With almost two years of disruption to travel, closure of museums and research facilities and extended periods of lock-down, one would have expected the publication to be delayed. But Roy is not one to allow a global pandemic to get in the way! And so, *Making it Mine Sir Arthur Russell and his Mineral Collection* was launched according to plan at the Oxford Mineral and Fossil Show on 8 May 2022.

This review considers the chapters sequentially. The book begins with a Foreword by Mike Rumsey, Principal

Curator, Earth Sciences Department, NHM, London, there follows the Preface, Acknowledgements and a two-page Introduction. This describes how the author's became interested in Sir Arthur in 1982 after joining The Russell Society and the subsequent influence of Peter Embrey and Bob Symes of the NHM [formerly the British Museum (Natural History)], both of whom had met Sir Arthur and worked on his collection, and Bob King who had been a close friend of both Sir Arthur and Roy.

Making it Mine can be broadly split into three sections: Chapters two to eight provide a detailed background to the Russell family and Sir Arthur's life; Chapters nine to thirteen describe the mineral collection and how it was assembled; and Chapters fourteen to twenty-one examine particular facets of the collection.

Chapter Two, The Russells of Swallowfield, details the family history, beginning with Thomas Russell, Town Clerk of Dover, who died in 1688. It was his grandson, Henry, a highly respected lawyer working in India, who became the 1st Baronet (Bt.) in December 1812. A baronet is the lowest hereditary titled British order, with the status of a commoner but the right to use the prefix 'Sir.' A fascinating story of the social ascent and financial decline of the Russell family ensues. We become privy to the lives and loves of Sir Henry Russell (II), 2nd Bt., Sir Charles Russell (II), 3rd Bt., Sir George Russell (I), 4th Bt. and Sir George Arthur Charles Russell (II), 5th Bt., the protagonist's elder brother. Almost six pages are dedicated to Sir Arthur's mother, Constance Charlotte Elizabeth (née Lennox), Lady Russell (1839–1925), affectionately known as 'Mano', whose lineage can be traced back to King Charles II.

The illustrations throughout the second chapter set the tone for the book. Wherever possible, the author has included an image of the person under discussion, be it a photograph or a painting. A fine likeness of every key figure in the Russell family is provided as far back as Thomas Russell's son, Michael Russell (II) (1711–1793). In later chapters this approach is maintained (wherever possible) for every mineral collector mentioned. This unstinting dedication provides a superb illustrated who's who of important British mineral collectors as far back as the eighteenth century; a delightful resource in its own right.

Chapter Three describes Swallowfield Park – The House, which is situated 60 km west of London and about 8 km south of Reading. Construction began between 1689 and 1691, replacing a Tudor mansion that had been the residence to four of Henry VIII's wives. Past and present photos illustrate its beautiful grounds together with shots of the house both inside and out. Swallowfield was purchased by Sir Henry Russell in 1820 and remained in the family until 1965 when Sir Arthur's widow Marjorie decided to downsize. One delicious gem is that in 1972, some five years after being sold to a private company, Swallowfield featured in the BBC science fiction series *Doctor Who*. Roy includes a great photo of actor Jon Pertwee in his iconic car 'Bessie' outside Swallowfield House while filming a storyline entitled *The Time Monster*. Look at this if you dare!

Chapters four to eight guide us through Sir Arthur's life, from his birth in Folkstone on 30 November 1878 to his death at Swallowfield on 24 February 1964. We learn of his childhood and upbringing, of his three marriages, four children and career, including his military service in World War I. After being invalided home following serving in the Red Cross as a military ambulance driver in France, he was recruited by the Ministry of Munitions to examine and report on metalliferous mines around the British Isles. Such resources were essential for the war effort and what more perfect wartime role could there have been for such an enthusiastic collector of minerals! The text describes the gentle, caring and genial personality of a man who loved all things associated with the natural world including birds, animals, trees and astronomy, not forgetting his beloved pets. Many modern mineral collectors share these passions and values.

The brief and cerebral Chapter Five, *Goniometry and Crystal Drawing*, is an unexpected diversion which explains the fundamentals of this almost forgotten skill. Sir Arthur was highly accomplished in the use of the optical goniometer and the necessary mathematics required to interpret the measurements and hence produce accurate three-dimensional crystal drawings. This, the only technical chapter, reveals Sir Arthur's deep understanding of crystallography.

The background to Sir Arthur's life concludes in Chapter Eight with his participation in the attempted revival of New Consols Mine at Luccombe in East Cornwall. This project began in 1946, with Sir Arthur becoming gradually more involved and finally being appointed as joint Technical Director. The venture was unsuccessful and the mine eventually ceased working, with equipment being removed by September 1954.

Chapter Nine, *Building the Collection*, begins on page 98 and describes how Sir Arthur's interest was kindled and encouraged by his mother, Lady Constance, who from an early age herself had been captivated by minerals. Sir Arthur was collecting by the age of seven and some self-collected pieces, found when he was fourteen, remain in his collection.

A captivating diversion describes the mineral room at Swallowfield, a place we probably all wish we could travel back in time to explore. The next best thing would be a photograph or two, but sadly none is known to exist. Not daunted, Roy has included a reconstruction based on its dimensions, the cabinets now in the NHM, furniture and objects known to have been present and Christopher Russell's remarkably clear memory. The result of this exercise is a stunning ink drawing by artist Pippa Sweeney, an illustration you can pour over for considerable time delighting in the minutiae only a collector can. During the many iterations of the picture Christopher's recurring comment was "make it more-untidy!"

Chapter Ten describes Sir Arthur's lifelong passion for Field Collecting, conveying his unbounded enthusiasm and finely honed tactical approach. His collection contained around 6,100 self-collected specimens of which 3,500 were well labelled. Field trips were meticulously planned. Sir Arthur would research the literature, published and unpublished, and study specimens if these could be traced in private collections, universities or museums. Two of his favourite localities, Millclose Mine in Darley Dale, Derbyshire and Greenside Mine in Patterdale, Cumbria are described together with his lifelong love of collecting in Ireland, a country he visited about twenty-five times.

Chapter Eleven, the longest in the book, describes *Old Collections*. If I were forced to choose one as my favourite it would have to be this. Sir Arthur amassed his collection through the integration of self-collected material with purchased specimens or, in his case, entire collections. This account describes 38 collections in chronological order of acquisition. It begins with 160 specimens from the collection of John Hawkins (1761–1841) in 1905 and ends in 1958 with specimens from the Philip Rasleigh (1729–1811) and Alan Penrose Coode (1872–1958) collections. We discover more of these collectors and their collections and how Sir Arthur went about tracing them and of his negotiations to purchase them. Not all his missions ended in success, the collection of Sir Walter Synnot (1742?–1821) being one of the few that got away.

The variety of specimens showcased is breathtaking. Roy photographed every specimen on location in the Russell Room using a somewhat Heath Robinson portable studio. Call it what you may, it has delivered high quality images. The choice of specimens is careful, avoiding those which already feature in the literature. There is for example a quartz amethyst sceptre from Copper Hill Mine, Okehampton; two stunning Carn Brea Mine fluorites from John Ruskin's collection and a spectacular galena after pyromorphite from Wheal Hope. To this is added a remarkable calcite pseudomorphing ikaite from the River Clyde; a rather brooding yet gorgeous pyromorphite from Belton Grain Vein, Wanlockhead and a ridiculously fine chalcocite from St Ives Consols Mine, originally in the Williams Collection. Then there are two spectacular inky-blue fluorites from the Donald Bain Collection, one from

Wheal Mary Anne, the other from Holmbush Mine and finally, an exquisite, concentrically banded goethite from Restormel Royal Iron Mine, Lostwithiel.

Chapter Twelve, Mineral Dealing, is just five pages. A natural consequence of regular field collecting and the acquisition of so many old collections was a surplus of specimens. Every penny counted (towards buying further collections), so Sir Arthur put time and effort into selling the spare material. This chapter profiles some of his most distinguished customers, giving an insight into what they bought and how much they spent. Like many dealers he was adept at buying at the minimum price and selling for the maximum, but compared with today's prices (allowing for inflation) Sir Arthur now appears quite reasonable!

Chapter Thirteen, Colleagues and Contacts paints a fascinating picture of Sir Arthur's network of contacts, from the rich and famous through to dealers, miners and what we might term more ordinary collectors. Sir Arthur's intellect as well as his kind and affable personality naturally endeared him to all levels of society, enabling him to connect with and sincerely befriend anyone. The modern idiom is networking and it was through his web of contacts that he was able to keep a finger on the mineralogical pulse. On the first whisper of a secreted old collection or a newly discovered find, word would rapidly wend its way. Many of his important contacts were at the BM(NH) and the Mineralogical Society, both within easy reach because of Swallowfield's close proximity to London. He also had extensive connections in the mining industry and many additional museum and university contacts including his great friend Arthur Kingsbury. Brief biographies of his key contacts together with the typical range of specimen material each supplied are provided. There are several splendid group photographs, for example, the BM(NH) Department of Mineralogy in 1961; a group including some famous names having lunch above Virtuous Lady Mine in 1955; and a charming colour photo of Sir Arthur and Lady Russell in the grounds of Swallowfield Park with Department of Mineralogy staff on the occasion of the retirement of Jesse Sweet in 1961. Sadly, Jessie does not appear in the photograph as she is thought to have been the photographer.

Chapter Fourteen, The Bequest, explains in five succinct pages Sir Arthur's long-term ambition to pass the collection to the BM(NH) after his death. He first expressed this wish in March 1936, at the age of 57 and through successive correspondence and meetings over the ensuing years agreement was reached between both parties. However, the story is not without a strange twist, for unbeknown to the BM(NH) who now rightly assumed the collection was to be theirs, Sir Arthur opened discussions with the University of Oxford. The ensuing confusion is a real eye-opener, leaving us to wonder why Sir Arthur even contemplated muddying the waters in this way. The eventual bequest was, of course, to the BM(NH), but this left Oxford disappointed and more than a little bewildered.

Chapter Fifteen, The Collection, describes the transfer to the BM(NH) and subsequent curatorial input. In April 1964, W. A. Ferguson, Secretary of the British Museum, wrote to Christopher Russell stating that the Trustees of the BM(NH) had agreed Sir Arthur's terms for accepting the collection. A very young John Fuller and Bob Symes were despatched to Swallowfield and over many weeks carefully wrapped every specimen. The mineral cabinets and paper archive including journals, notebooks and every loose bit of paper containing jottings were also packed.

The stand-out name in this chapter is Arthur Henry Luckett, who joined the Department of Mineralogy in December 1969 and dedicated the best part of eight years to sorting and cataloguing the Russell Collection. The chapter ends with some interesting analyses. The statistics provide a useful appreciation of the collection's contents and shed light on how it evolved. One histogram tallies the total number of self-collected specimens for each year between 1897 and 1961, with a colour-coded breakdown of those collected in each of the four British nations and Ireland. Another chart reveals the top twenty species represented which, rather surprisingly, account for a little more than 50% of the total. At number one is fluorite (the collection's most common species) followed by calcite, baryte, cassiterite, quartz, galena, sphalerite, witherite, pyromorphite and, in tenth place, apatite. Another histogram plots the number of self-collected and purchased specimens which were accessioned into the collection each year. Acquisitions from collections certainly represent the lion's share. It is interesting to note that it grew steadily through both World Wars. As a self-confessed mineral geek, these statistics have got me thinking about my own collection: I am itching to perform similar analyses.

By the end of Chapter Fifteen, the main narrative is essentially complete, with every aspect of Sir Arthur's family history, life and legacy exquisitely covered. However, having built what Paul Desautels described as "probably the finest regional collection ever made", many outstanding specimens remained to be included. These are the subject of two major chapters: Specimen Gallery and Featured Locations. The selection criteria for inclusion in the Specimen Gallery are those of scientific and historic interest, visual impact, unusual associations or localities, and personal choice. Forty-five breath-taking pages ensue, featuring 136 specimens arranged in an anionic classification sequence, as they are in the Russell Collection. Choosing a few to highlight is like being asked to pick a favourite child, but here goes: chalcocite, Levant Mine (425); chalcopyrite, Tincroft Mine (429); sphalerite, Rampgill Mine (432); greenockite, Bishopton Railway Tunnel (435); galena, Wheal Hope (436); millerite, Cow Green Mine (439); fluorite, Wheal Mary Ann (444); fluorite, Glengowla East Mine (457); cuprite var. chalcotrichite, Old Gunnislake Mine (458); brookite, Twll-maen-grisial, Prenteg (471); calcite, Fuchslas Mine (483); apatite, Maen Quarry (497); topaz, Diamond Rocks (525);

kyanite, Banffshire (528) and connellite, Poldice Mine (556). Heartfelt apologies to the 121 that have been omitted!

Most of us have favourite localities and Sir Arthur was no different. During his research, Roy identified sixteen localities throughout Great Britain and Ireland which were high on his list, judging by the number of specimens he had and the frequency with which he visited. Locations range from Wheal Gorland and Virtuous Lady Mine in southwest England to Wanlockhead and Leadhills in southern Scotland, Benallt Mine in north Wales and Laharran Quarry in Ireland. There are six famous mines in Northern England and it is at this point we get to see some of the Russell Collection's iconic green fluorites from St Peter's Mine at Sparty Lea, Northumberland. Two specimens which sum up these sumptuous descriptions for me are the Philip Rashleigh clinoclase with olivenite (Fig. 724) and cubic fluorite crystals of rich inky blue with bevelled edges (Fig. 729) from Wheal Gorland.

Chapter Eighteen, Unpublished Work, succinctly describes some of Sir Arthur's uncompleted research. An early ambition had been to produce an updated revision of Greg and Lettsom's *Mineralogy of Great Britain and Ireland* which had been published in 1858. Sadly, the project never gained the required momentum and as time went on it must have become increasingly clear that it would never come to fruition. Sir Arthur had an interest in antimony mines and minerals and produced a monograph describing 52 localities in Great Britain and Ireland. He also had a great interest in gold from the British Isles and we are treated to two photographs of wonderful specimens, one from Hope's Nose, Torquay (self-collected in 1923) and one from Clogau (St Davids) Mine, Bont-ddu.

The Russell Archive is regularly referred to and Chapter Nineteen summarises its contents. The Russell Archive is an unofficial term which embraces three separate sources of information, each held in the NHM and all originating from Swallowfield. The information provided will be useful to future researchers and includes links for on-line searches. A selection of documents provides the reader an indication of the contents. The eclectic mix includes an invoice from W.J. Bennetts & Sons of Camborne for the photography of a grotto at Pendarves and the supply of prints; a coloured sketch showing the location of blue fluorite in the Ullcoats-Florence mine and, my favourite, an old postcard of the inclined tramway at the Alderley Edge copper mines in Cheshire.

Mike Rumsey (Principal Curator, Earth Sciences Department, NHM) has written the penultimate chapter, An Enduring Legacy. In just four pages he eloquently conveys the importance of the Russell Collection, providing a thought-provoking insight into its past, present and future curation and describes how it is made use of every day in a myriad of ways we could never imagine. Mike's text provides much food for thought.

Referring to the tragic loss of the Wheal Gorland mine dumps and subsequent building over of this famous Cornish locality, he writes "Many mineralogical finds are 'one-offs', once they have been mined or quarried away this may be all the Earth has to offer." This chapter gives the reader an appreciation of the importance of mineral collections.

Making it Mine ends with a one-page Epilogue, reflecting on the unanticipated joys Roy experienced while working on the project. This addresses current policy towards UK museum funding, declining in-house expertise and the role of knowledgeable volunteers. Finally, and on an optimistic note, the potential revival in British mining is considered: polyhalite in North Yorkshire, Scottish gold, lithium, tin and tungsten in Cornwall and Devon and even copper, lead and zinc at Parys Mountain. *Making it Mine* ends with 18 pages of references, four useful appendices and a detailed 17 page index.

So there you have it. A lengthy review, but anything less would have been an injustice. I hope it conveys a feel for the depth and diversity of information in the book. Yes, it's all about Sir Arthur Russell, his family, his life and his celebrated collection, yet it is so much more.

I too would like to include some statistics. *Making it Mine* is beautifully illustrated, featuring 754 figures plus a full-page frontispiece, the well known black and white image of Sir Arthur armed with trilby, pipe and shovel on Bulmer's vein at Leadhills, Lanarkshire. No other photograph could be more fitting. There are 452 new, high quality mineral photographs representing some of the best specimens Britain and Ireland have produced (that's less than ten pence per photo). Of the remaining 302 figures, 95 are of people, 41 feature mineral localities, and 38 are of historic buildings. Various scenes comprise 24 figures and examples of documents from the Russell Archive account for a further 28. The remainder are of maps, charts and 68 miscellaneous photos which add richness and colour to the story.

Making it Mine is packed full of salient historic, technical and mineralogical information; yet it also includes countless delightful anecdotes and fascinating facts. The reader ends up armed with a wealth of absorbing information, at first seemingly unrelated to Sir Arthur and the mineral world, but every bit an essential part of the story. Such facts are often added as footnotes, some quite detailed. For example, I now know exactly what a Grade II listed building is, the basics of how an Atmos clock works, and that 90% of flying bombs were destroyed while still airborne using a radio proximity fuse, invented and manufactured in Salford. Don't even think about skipping a single footnote, everyone is a gem!

For anyone with a passion for minerals and/or mineralogical and mining history, *Making it Mine* is an absolute must. Priced at just £40 it is exceptionally good value; £40 will never be so well spent or bring so much

pleasure. *Making it Mine* may reflect on the past, those halcyon days when Britain and Ireland were awash with metalliferous mines, when your underground safety gear was a tweed jacket and suitably doffed trilby, and when out collecting brookite and anatase at Prenteg, a little light blasting was not amiss! Yet it is also a book which constantly stimulates new ideas for future research projects.

In the very final paragraph, Roy generously gives the last word to Sir Arthur. I in turn feel it only appropriate to return the compliment to Roy. In the Epilogue's

penultimate paragraph he signs-off "In drawing this book to a close and reflecting on all that I have learned about Sir Arthur Russell during its preparation, it is my sincere hope that you have enjoyed reading it and looking at the beautiful specimens as much as I have enjoyed the background research and pulling the story together".

We have indeed Roy and more than you could ever have hoped for.

Philip Taylor