

Review of

F. Fontan and R.F. Martin (2017): **Minerals with a French Connection**. The Canadian Mineralogist Special Publication 13, joint publication of the Mineralogical Association of Canada (Québec, Canada) and the Société française de Minéralogie et de Cristallographie (Paris, France). ISBN: 978-0-921294-59-7 and 978-2-903589-08-0, x + 577 p., € 72 (in Europe), US\$ 125 (outside Canada), Can\$ 125 (in Canada).

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A good meal takes time, and so did this book. Nevertheless, when I finally held it in my hands, I was impressed. Not only by its weight (almost 5 pounds), but also by the 588 pages of glossy paper in full letter size that were nicely bound in a solid hard cover with a pleasant feel. Time to sit down, relax and give the book a close-up view.

The table of contents in the beginning of the book immediately shows the major sections:

<i>Préface – Preface</i>	p. ix–x
<i>Introduction</i>	p. 1–11
<i>Hold the presses: new arrivals!</i>	p. 11–12
<i>Minerals with a type locality in France</i>	p. 13–265
<i>Minerals discovered elsewhere and named after French citizens</i>	p. 267–523
<i>Six irregular cases</i>	p. 525–537
<i>Appendices and indexes</i>	p. 539–576

As mentioned above, the preface is in French and in English (both one page). Besides the bilingual back cover, the rest of the book is written exclusively in English.

The introduction gives a brief historic overview of how mineralogy evolved as a science in France. After the *Early discoveries*, the origin and evolution of the three mineral museums in Paris is described. Next are the explanations of the topics covered in the descriptions of the mineral species. A bibliography for this part is followed by a long list of people that are acknowledged for their help during this project.

The purpose of this book is clearly mentioned in the preface and introduction: to show the world that France (also) was the cradle of crystallography and mineralogy. This is well illustrated with a detailed description of all minerals that have their type locality in France (122) or New Caledonia (4), followed by similar descriptions of all minerals named after French citizens (128). It is evident such lists do not remain up to date. Right before the book went to the presses, the new mineral giftgrubeite was approved by the IMA and so it was included in the book at the very last moment: as a “New Arrival” at the end of the introduction, becoming “number 123 for France”. The mineral verneite, named after the famous writer Jules Verne and meanwhile also approved, was at that time still “in the pipeline” of the IMA and was too late to make it in the book as “number 129 for French citizens”, even though it is mentioned briefly on page 11.

Both parts of the descriptive mineralogy are ordered alphabetically by mineral name. Two pages are devoted to every species that has been included in the book. All descriptions start on the left page (the even page numbers) and end on the right page, making all information visible at once, no matter what mineral you are looking at. That is a very user-friendly approach, to say the least. Aerinite comes first on pages 14–15, and that actually surprised me, since I vaguely

remembered aerinite was first found in Spain. Apparently the mineral was poorly defined and thought to be a mixture, until new specimens were found *in situ* in France. Since that neotype material was used to revalidate the species, aerinite “earned” its rightful place in this book.

Adamite is the first in the list of minerals named after French citizens. Not because the authors think the first man on earth had French connections, but because the mineral was named after Gilbert-Joseph Adam (1795–1881), an important French mineral collector. It is good to see the authors were not too shy to include humor in some of their descriptions. In the “Comments” for adamite one can learn that Moore (1968) described the isostructural mineral eveite “to allude in a serpentine way to the famous couple in Christo-Judaic mythology”.

All descriptions follow the same style sheet. Below the name, formula, symmetry, space group and unit-cell parameters, two photos (almost always in colour) of the mineral can be found. Underneath is information about the type locality and about the occurrence (geological environment of formation). Next is a short description of what it looks like and what structure it has, how it got its name (in most cases illustrated with an appropriate photo of the corresponding person or locality) and some information about the type material. Additional comments, the IMA-status and a very useful chronologically ordered list of references is at the end of each description.

After these 255 “regular” minerals, six “irregular” cases are described: asbolane, “biotite”, lechatelierite, plombièreite, rosièresite and wattevilleite. The IMA-status of these six minerals is questionable (or should be); besides “biotite”, nowadays a group of mica minerals instead of a single mineral.

The eight appendices summarize all the previous descriptions in tables, ordered in different ways and as such offering interesting information. One can easily deduce from Appendix 2 that plumbogummite was the first mineral ever discovered and described in France (Démeste, 1779). A nice map shows the geographic distribution of the minerals discovered in France. The Var department holds the record with no less than 16 new minerals. Mineral collectors who know their French geography will most likely not be surprised: Cap Garonne is located in the Var department and is the type locality for 14 of these new minerals.

Many other things can be deduced from these appendices. Appendix 5 shows us dolomite was the first mineral named after a French citizen. Eugène Péligot is “the last French citizen” to be honoured with a mineral named after him, even though the publication of the official description still had to appear (Kampf *et al.*, “2017” and “in press”). The geographic distribution of the type localities of minerals named after French civilians clearly shows the importance of Italy and Germany, besides France itself of course.

Appendix 7 is an up to date table of the top 21 countries ranked according to the number of new species discovered. The USA holds

first place (780), closely followed by Russia (750); France is 12th with 114 species. Unfortunately nowhere is mentioned why the number is only 114, since after reading this book one would expect 123 (or 127 including New Caledonia). Most likely this number was not updated.

Appendix 8 is an alphabetic list of almost three pages of obsolete names (and the corresponding valid mineral name) the authors encountered in the preparation of this work. I was actually surprised the list was not longer. Unfortunately not all obsolete names encountered have been listed, not even all who have been used in this book. For example, the following obsolete names are mentioned for epidote (p. 82–83): ‘green schorl’ (since Romé de L’Isle is mentioned as the source, ‘schorl vert’ is more likely), ‘delphinite’, ‘ancanthicone’, ‘arendalite’ and ‘thallite’. Only ‘delphinite’ is mentioned in Appendix 8.

Multiple alphabetical indexes are at the end of the book. Besides the Mineral Index (that unfortunately does not list giftgrubeite and verneite) and an index of Very Important Persons, there is also a Locality Index, where localities mentioned in the book are listed alphabetically by country.

The final page talks about the authors. François Fontan (1942–2007) was a scientist working at the University of Toulouse (France) and only two months shy of his retirement when he suddenly passed away. The project he had been working on vigorously for the last two years was taken over by his colleague and good friend Robert (Bob) Martin, now Professor Emeritus at the McGill University in Montreal (Canada). Robert was also the 4th editor of *The Canadian Mineralogist* and the initiator of the *Special Publications of The Canadian Mineralogist*. This book is the 13th in the series and the third of its genre in this series (after SP6 (2003), *Mineral Species Discovered in Canada* and SP8 (2005), *Mineral Species first described from Greenland*).

The cover of the book has been illustrated appropriately by a beautiful photo of an exceptional specimen of haiÿne, made by Belgian mineral photographer Eddy Van Der Meersche. Eddy also

had the honour to see another photo of his, of the cotype of fontanite, published on the back cover (as well as many other photos inside the book). The haiÿne specimen is a real eye catcher, not only by its beautiful blue colour, but also by the shape of the rounded crystals, staring at you like two giant faceted eyes.

It is obvious the illustrations in this book are also of key importance. Robert Martin tried to find at least one photo of each mineral from its type locality. Whenever that was not possible, he chose alluring photos that best illustrated the mineral. Many photographers have contributed to the book, and that also resulted in a wide range of photo quality: from average to excellent. Fortunately the last category strongly prevails, thanks to the many photos of some of the best mineral photographers around. And since this project took twelve years to finish, it is also important to realize micromineral photography at the same time evolved tremendously, from a single analogue photo to a composite “perfect” digital image made from multiple shots using stacking software.

This project took years of intensive research from both authors. The fruit of all their labour has ripened into this really impressive book, a book any author would be truly proud of. Can it be read as a novel? I don’t think so, but then again that was not the goal. The book is an encyclopaedic work of art and will remain a reliable source of information for years to come. The “personalized” comments for each mineral provide a wealth of interesting facts and invite the reader to read on and learn some more. It’s like a good bottle of French Calvados or Cognac: you don’t finish it in one evening, but enjoy it on many occasions.

Thirty pages of the book can be viewed online, on the website of the *Société française de Minéralogie et de Cristallographie*. With an online pdf-viewer, you can not only page through the book, but also zoom in or out. Make sure to visit: http://sfmc-fr.org/?page_id=1129

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