

## BOOK REVIEW

**Minerals first discovered in Switzerland ... and minerals named after Swiss individuals** by Philippe Roth. (2006) ISBN: 3-980-7561-8-1, 239 pages, about \$43, Kristallographik Verlag, Achberg, Germany.

At present about 4200 mineral species are accredited by the International Mineralogical Association (IMA). Sixty-four of these have been first described from localities in Switzerland. Philippe Roth, a geophysicist from ETH Zurich, has composed a complete anthology of all minerals first discovered in Switzerland. As an extra bonus he also compiled all minerals named after Swiss individuals. The result is a carefully investigated and beautifully illustrated book presenting all minerals that have an affiliation to Switzerland. Compared to its surface area, Switzerland has the highest density of minerals discovered and described. This certainly reflects the longstanding tradition of mineralogical research in this small Alpine country. A result of this tradition is also that Swiss mineralogists and other individuals were honored by naming minerals after them.

On the other hand one might ask: Do minerals have a nationality? What justifies a focus on national borders? Is it pure chauvinism? Well, in the case of Philippe Roth's book it is definitely not. The book is fun to read and very enjoyable. It is a book that you read leisurely.

The book also has scientific merit. It presents comprehensive data on the geology, petrography, and mineralogy of the type locality of each mineral, the origin of the name, location of the type material, later finds of the mineral worldwide, some chemical and crystallographic data and comments and interesting information based on an extensive bibliography.

The book initially presents a brief history of the mineralogical sciences in Switzerland. This is interesting reading, and the chapter wisely ends with R.L. Parker (Deceased 1973). The book continues with some pages of explanations about the information in the next chapters. The majority of the book is taken up by the section "Mineral species first discovered in Switzerland". This section begins with comments and data regarding the temporal evolution and spatial distribution of mineral finds in Switzerland. The Lengenbach quarry in Binntal (Valais) contributed 27 new minerals of the total of 64 Swiss minerals. The hydrothermal mineralization of Triassic dolomitic marble produced an amazingly rich and unique sulphosalt mineral assemblage with rare arsenic and thallium minerals, many of them unique to the Lengenbach locality. A second group of special localities are four small manganese deposits in the Grisons that produced 10 new type minerals. The geological framework of the main deposits is briefly but competently explained on the following pages.

The book continues with the main catalog with the 64 Swiss type species. Each mineral is given two facing pages containing a wealth of interesting and valuable data, excellent illustration, curious particulars about the minerals, enjoyable vitae of honored persons, generally mineralogists. Did you know that Italy and Switzerland

share the type locality for antigorite, because the ultimate source for the type specimen that is kept in the Wise collection at ETH is not known? It is very likely that it came from the Geisspfad serpentinite body that is located at the Swiss-Italian border. The Italian side is the Antigorio valley that donated the name to the mineral, which is luck, since "geisspfadite" would not have sounded particularly elegant. Another misnomer is Val Tremola, the name-giving valley for tremolite on the south side of Gotthard pass. There are no tremolite occurrences in the valley, but rather the spectacular tremolite marble of Campolungo, a white dolomite marble of Triassic age, contains large centimeter-sized radial bundles of pure tremolite. The Campolungo locality just a few kilometers south of Val Tremola is the very likely source of the tremolite type specimens. So, we could have had "campolungoite" instead of tremolite?

Each mineral description contains the type locality, the mode of occurrence and assemblage, the origin of the name including a short biography if named after a person (including a picture of the person), a photo of the mineral, a computer drawing of the mineral forms and faces, the IMA number, location of the type specimens, further worldwide finds of the mineral, various special remarks about the mineral and a list of references. Special remarks, for instance in the case of the mineral jordanite, include the information that jordanite ( $\text{Pb}_{28}\text{As}_{12}\text{S}_{46}$ ) forms a solid solution series with the isomorphous Sb-bearing analog geocronite. Structural information is given that explains the limited replacement of As by Sb. Also included under "remarks" for jordanite is that the described 125 forms from morphological studies can be transformed to modern indices with a specific transformation matrix.

The section on "Other mineral species named after Swiss individuals" is, with a few exceptions, a compendium on Swiss mineralogists and includes outstanding scientists such as Paul Niggli, Alfred Rittmann, Robert Parker (the first IMA president), Hans Eugster and others. This catalog is organized the same way as the one on Swiss minerals. It contains a wealth of meticulously collected data and biographic information on the minerals and the honored persons. There is also an extensive appendix that presents a chronological catalog of species first discovered in Switzerland, a geographical catalog of species first discovered in Switzerland, a catalog of new minerals by author, a list of varieties and obsolete names and a list of type specimens in Swiss institutions. I, personally, enjoyed the attractive combination of serious scientific correct information and data with anecdotic stories about people and rocks. The book is very well written and a great pleasure to read. I highly recommend the book for anyone interested in mineralogy and Alpine minerals in particular.

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