

BORIS Z. KANTOR: A PERSONAL APPRECIATION

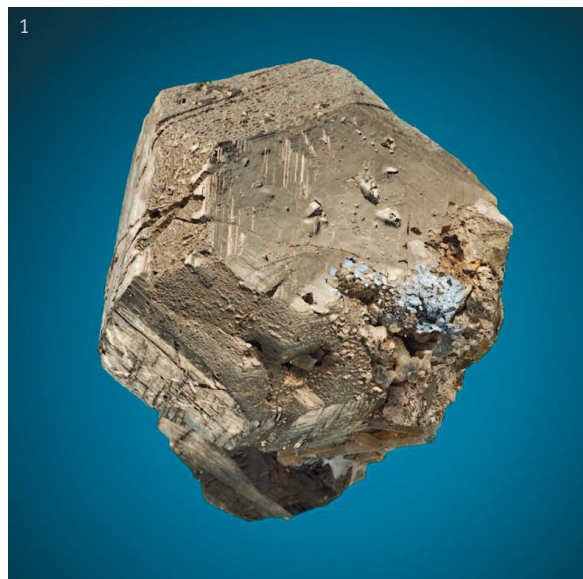
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The mineral community, which is vast and diverse, has been growing for several centuries and spans the globe. It is divided in various ways including, for example, by degree of formal training, geography, language and, unfortunately, politics. Communication through publications is essential to transmit knowledge across distance and time. During the Soviet period little information was available in English about Russian minerals. Russian readers can hardly imagine the ignorance of Americans regarding everyday life in Russia. For example, it never occurred to the writer that Russians of that period were permitted to own or collect minerals. However, “*Mineral collecting in Russia*” by Kantor (2001) corrected that misimpression. By publishing in English as well as in Russian and distributing the magazine at prominent trade fairs in Europe and America, the *Mineralogical Almanac* has bridged the geography and language divides.

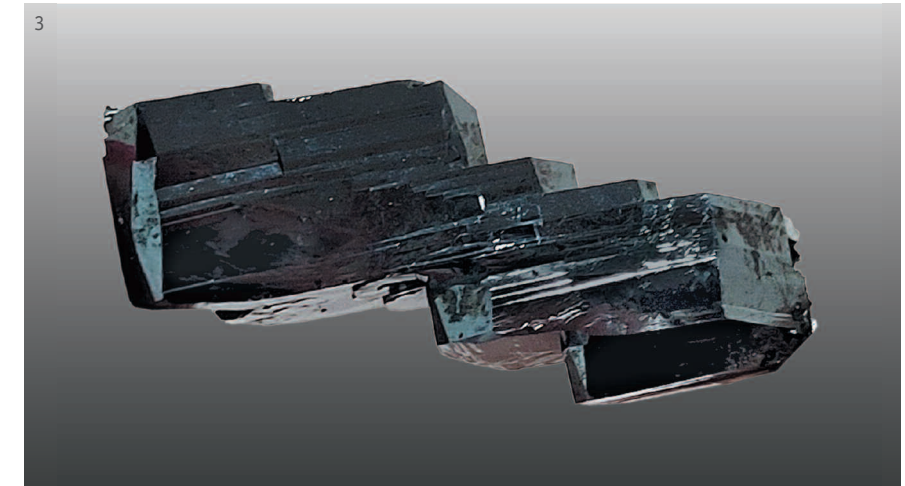
Boris Kantor, an esteemed member of the *Mineralogical Almanac* editorial board, was a prolific contributor. Kantor trained in chemistry. Mineralogy was a passion. He befriended and was mentored by the famous mineralogist Victor I. Stepanov (1924–1988). Consequently, Kantor was able to bring a

1. **Pyrrhotite** crystal showing rough pyramidal form. 3 cm. Nikolaevskiy Mine, Dalnegorsk, Primorskiy Krai, Russia. Specimen: Carl A. Francis. Photo: Jeff Scovil.

2. Rare specimen of a North American faden **quartz**. 9.2 cm tall. Ron Coleman Mine, Blue Springs, Garland County, Arkansas. *The uneven development of the crystals is more typical of faden worldwide than the very columnar Pakistani specimens.* Specimen: Carl A. Francis. Photo: Angela Kosnar.



3. A stairstep-like aggregate of brilliant **hematite** crystals (4.8 cm across) from Aktas, Kazakhstan, which Kantor speculated might be faden growth. Specimen and photo: Carl A. Francis.



sophisticated understanding of minerals to collectors, thus bridging another divide. His articles, especially his series *Guide to the Ontogeny of Minerals*, are a valuable contribution to the literature of specimen mineralogy.

Ontogeny refers to the science of the growth of mineral crystals and their aggregates. It is an aspect of mineralogy extensively developed by Professor Dmitriy P. Grigor'ev at the Saint-Petersburg Mining Institute. An English translation of his book *Ontogeny of Minerals* (Grigor'ev, 1961) was published in 1965, but it is not widely read in America. Crystal growth is not included in mineralogy courses in American geology departments. Kantor brought ontogeny, especially the insightful notion of split crystals, to his readers in “*Aesthetics of Imperfection*” (Kantor, 2009) and again in “*On the Splitting of Crystals*” (Kantor, 2021). In addition to these, two of Kantor's other articles are of particular interest to the writer.

Having synthesized and studied pyrrhotite in graduate school (Francis and Craig, 1976), Kantor's recent article on the outstanding pyrrhotite crystals from Dalnegorsk (Kantor, 2022) offers numerous photographs of specimens from his personal collection that are interpreted as mosaic crystals and split crystals. In contrast, the writer's example (Fig. 1) was selected for its strong development of dipyramidal faces – a strictly geometrical crystallography perspective.

Like Kantor, the author is a writer and editor. For a review of faden quartz (Francis, 2023), those curious aggregates of “*quartz with a white stripe*,” (Fig. 2) Kantor's article describing and explaining the fine and abundant specimens from South Waziristan, Pakistan (Kantor, 2013) was an essential reference. Significantly, Kantor added new morphological observations and concluded, “*the above facts require a professional revision of the models*” for faden formation. He noted that several other species including adularia, clinozoisite and fluorapatite form faden crystals and, interestingly, he speculated that hematite “*pigtails*” from Aktas, Kazakhstan (Fig. 3) are also faden. Because hematite is opaque, this speculation is difficult to test.

Finally, as a career curator it was gratifying to learn (L. Cheshko, pers. comm. Feb. 2023) that Kantor has bequeathed his mineral collection to the