SCIENTIFIC MINERALOGICAL COLLECTIONS: PAST, PRESENT AND FUTURE

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All mineral specimens are acquisition to Fersman Mineralogical Museum, Russian Academy of Sciences (FMM) from famous private collections.

All mineral specimen photos: M.B. Leybov.

Introduction

"The Mineral Collecting", a book by the famous contemporary popularizer of mineralogy and an experienced collector Boris Zinovievich Kantor[1], ends in a very sharp and all-encompassing statement by Aleksey Alekseevich Sidorov (1891–1978), a notorious graphics collector: *"Collecting can be like a sport for which one needs skill and luck. Collecting can be a passion for which one needs persistence and good fortune. Collecting can also be an art. For a collecting to be artistic one would need all of the aforementioned: ability to discover, luck, persistence of search, love for one's subject matter and, indubitably, knowledge of the subject. Collecting can also be a science where a sense of purpose is a primary requirement"*[2]. This is where we shall begin as the last two sentences of this quote could indeed make an epigraph to the present paper. These sentences are key to an understanding of the pivotal features of the mineral collecting paradigm which has become commonly known as the systematic approach, but is perhaps best referred to here as the scientific collecting approach.

Who is the addressee of this paper? Primarily a reader who might be yet not very familiar with this mineral collecting branch, but is potentially interested. We do not give tangible advice or practical tips but nevertheless hope that, in one way or another, the facts and reasons included in the paper will help those still considering which approach to take for their own mineral collection development. May the term "scientific" not put the reader off as even an amateur can create a serious mineral collection of genuine scientific importance. Moreover it is amateur scientific collections and their significance that shape a substantial part of our paper.

Subject and Approach

A systematic mineralogical collection

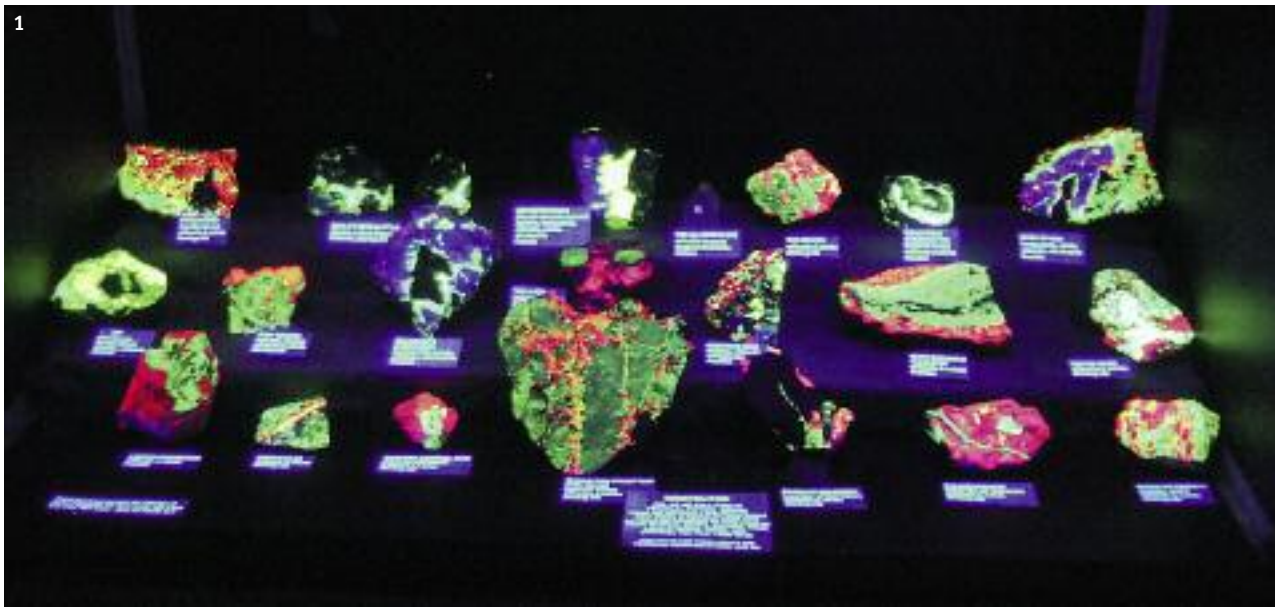
Let us begin with collections that followed a classical systematic approach. In its most traditional and commonly used understanding, a systematic mineralogical collection is a collection of mineral samples which develops based on a founding principle of systematics of mineral species

[it should be noted that in the modern nomenclature the terms "mineral" and "mineral species" are generally identical; mineral species is the main taxon in mineralogy, while all other classificatory units, both of the higher category, namely classes, families groups of minerals, etc., or of the lower category, such as sub-species and varieties, are of secondary importance].

This is how the term "mineral" shall be used here. **When a systematic mineralogical collection develops**, efforts are primarily directed at the increase of the diversity of the mineral species. In other words, the top-priority task lies in finding and adding of

[1] *Kantor, B.Z.* (**1991**) The Collecting of Minerals. 2nd edition. Nedra Publishing, Moscow. 189 pp. (in Russian).

[2] *Sidorov, A.A.* (**1969**) Proceedings of a Collector. A Book on Old and New Pictures. Khudozhnik RSFSR Publishing, Leningrad. 240 pp. (in Russian).



1. Showcase with UV luminescent minerals. Exhibition in The Sterling Hill Mining Museum, Franklin, New Jersey, USA. Photo: I.V. Pekov, 2011.

2. Museum showcase of the exposition *"Caves"*, one of the most spectacular expositions in the Fersman Mineralogical Museum, Russian Academy of Sciences. Author of exposition is Victor I. Stepanov. Photo: M.B. Leybov.

8. Crystal crust of **barytocalcite**. 7 x 8 cm.
Alston Moor, Cumbria, England.
Collection of P.A. Kochubei. FMM # 30714.
Outstanding specimen from type locality.

In practice this way of cognition is often the most effective. The knowledge grows with the collection development and with it an interest in further steps both on the way to knowledge and indeed collecting itself as one reaches a new level of competence. Hence a mutually reinforcing process of development is started. We know cases when an amateur mineralogist became a professional, not only in level of qualification, but also through a formal career change towards an occupation devoted to an in-depth study of minerals, or otherwise a successful combination of two jobs. **It is very valuable that the process of learning is in tune with creativity, which is an indubitable part of a scientific collecting**.

Indeed a collecting itself cannot be a universal undeniable motivation for one's development in the field of knowledge. A purely formal doctrinarian approach is also possible when forming systematic collections: a sample with a ready label is acquired – a tick off the list – "I have this mineral" and that is it, the interest towards the sample stops there. As elsewhere a superficial approach does occur, where the key priority is to make an impression at minimum cost for acquisition and organization of knowledge. Indeed, a society of serious collectors is sensitive to these issues and treats them with appropriate attitude: there is little respect for such individuals in the eyes of colleagues.

Who is behind a scientific mineral collection?

Why does one become infatuated with scientific collecting of minerals? It is impossible to list all reasons, yet a sketch of essential components can be made: an active interest in the world of minerals unrestricted by a mere aesthetic aspect, an undying need to recognise novelty on top of a mind that not only seeks systematic knowledge. This kind of mind seems a truly necessary prerequisite for a tendency towards this type of collecting is not correlated with age (some become infatuated with collecting being teenagers or even children for the rest of their lives, often determining their career choice; others are affected at a mature age, often after the age of 40, in which case the development is especially rapid), status or occupation. According to more than two centuries statistics, captivated and serious collectors of the scientific trend occur amongst the highest aristocracy and amongst working class, miners especially; remarkable such collections were collected by engineers, teachers, doctors, clergymen, businessmen, military men, policemen, state officials and people of a wide series of other occupations. Scientists naturally take up a substantial place amongst these, however mineralogists and geologists do not dominate but stand on par with the others. Amongst other things this much loved hobby brings great pleasure to all these people, which is one of the most important triggers of progress.

9. Crystals of **pyrosmalite**. 4 x 6 cm.
Nordmark, Filipstad, Sweden.
Collection of P.A. Kochubei. FMM # 31923.
Fine specimen with very large crystals of pyrosmalite from classic deposit.

10. **Clausthalite**. 2.5 x 2.5 cm.
Tilkerode, Harz, Germany.
Collection of P.A. Kochubei. FMM # 30155.
Old classic specimen of selenide rather rare as large grains from classic deposit.

21. Yurii S. Kobyashev (1935–2009).

22. Sergei V. Tsaregorodtsev (1953–1986).

23. Alexander A. Kanonerov (1955–2003).

24. Paul E. Rickert (1907–1971).
Photo publishes with kind permission of *"Gornozavodskoi Ural"* Reserve Museum, Nizhny Tagil, Russia.

25. Mikhail F. Korobitsyn (1928–1996)

26. Nikolai M. Manaev (1936–2012) *(left)* and Alexander S. Podlesny (1948–2010). Kovdor, Kola Peninsula, 2007.

27. Alexander E. Zadov (1958–2012). Lakargi, Northern Caucasus, Russia, 2008.