

## ON MALACHITE AND AZURITE FROM KAMENUSHINSKOE DEPOSIT

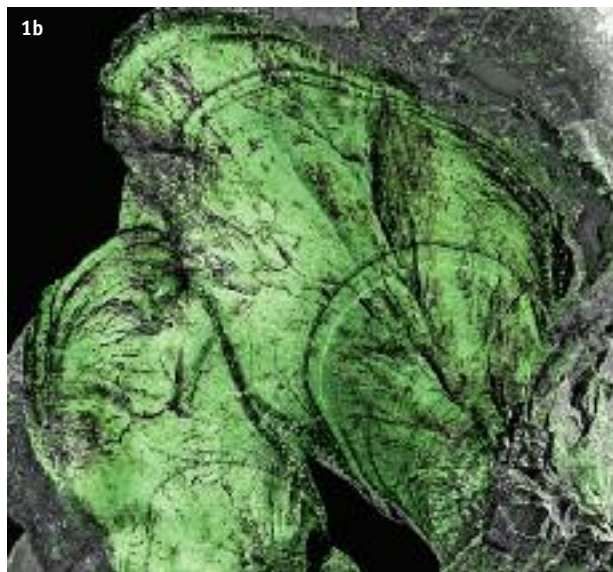
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**Specimens:** Oleg S. Bartenev,  
if not specified.

**Photo:** Boris Z. Kantor

**All specimens:**  
Kamenushinskoe deposit,  
Salair mine, Guryevsk district,  
Kemerovo oblast,  
Southern Siberia, Russia.

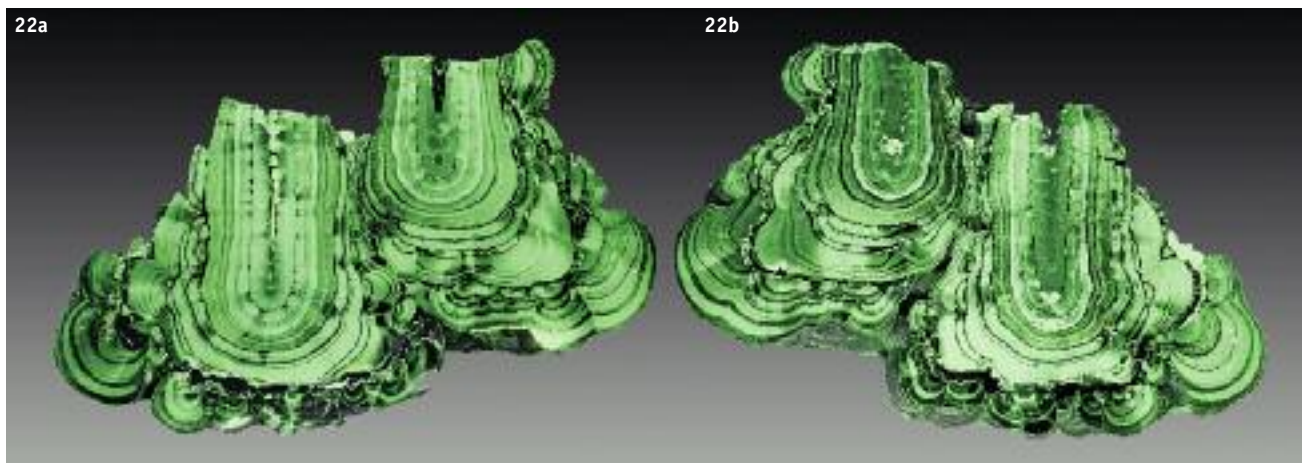
1. **Malachite** spheroidolites.  
4.5 x 7 cm.  
(a) general view,  
(b) fragment, 4 cm wide.



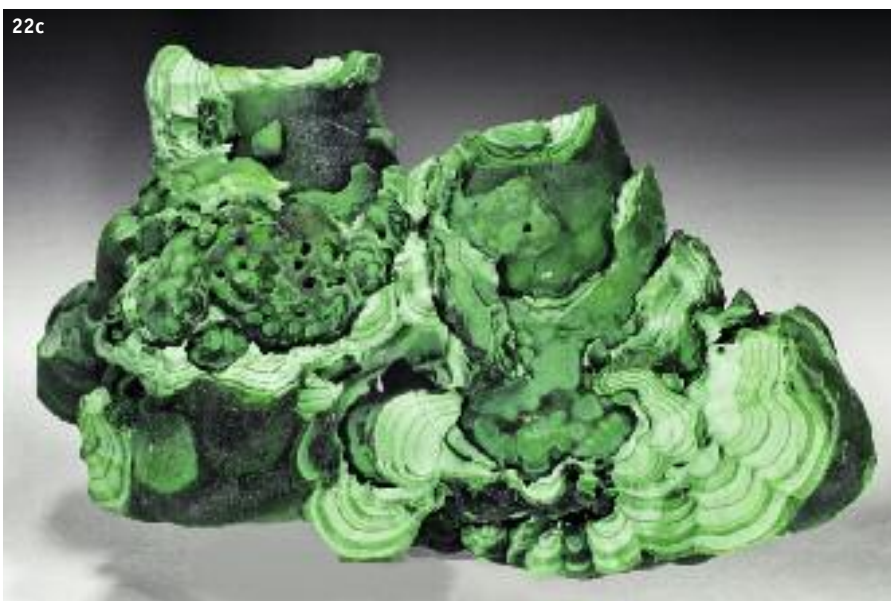
In 2014 and 2015, Oleg S. Bartenev, a Moscow mineral collector, has collected a significant assemblage of malachite and azurite specimens (more than six dozens of them) from the Kamenushinskoe Deposit (Guryevsk region, Kemerovo Oblast, Southern Siberia, Russia). A number of showy pieces were already published in the *Mineralogical Almanac* (Malachite..., 2015). Having been examined in details, the collected material proved to be much of interest and worth attention of our readers as well as professionals of mineralogy.

The malachite ledge itself that has resided, according to the Vladimir Lednev's data, within a paleokarst zone, is wholly destroyed by now; so, unfortunately, none of the specimens could be found *in situ*. By this reason, the restoration of the Deposit history is embarrassed extremely. Some information was also lost as a result of use, by the owner, of orthophosphoric acid for specimens cleaning.

The aim of this paper is the specimen description in the accepted terms of mineral morphology and within the possibilities of the amateur simplest facilities (binocular microscope MBS-1 type, 30x lens, macrophotography). Professional methods as well as additional opening of hollows, breaking or cutting specimens (in order to see what is there inside) did not used. The author tried to confine genetic interpretations to minimum.

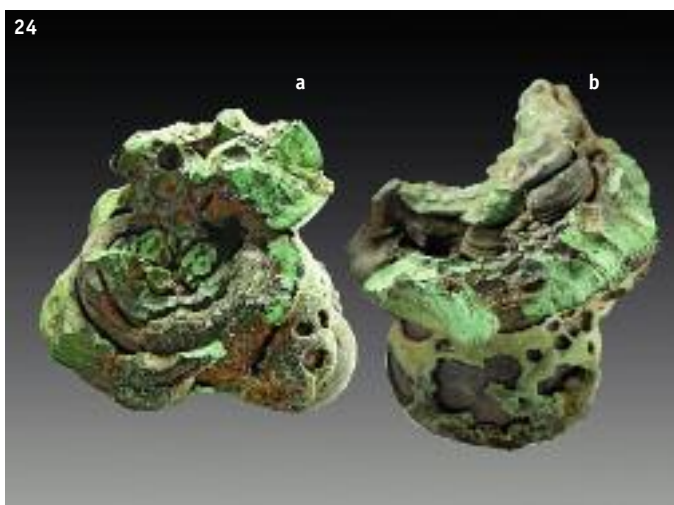


22. Pseudostalactite of *type 1* (cut in vertical direction and polished from inner part of specimen). 14.5 x 8 cm. (a) and (b) polished inner parts of specimen; (c) outer part of specimen.



23. Pseudostalactite of *type 2*. 5 cm high. Views from top (a) and from bottom (b).

24. Lower termination of pseudostalactite of *type 2*, ironshotting and conchoidal structure of spherulitic crusts can be seen. 4 x 2.5 cm. Views from top (a) and from side (b).





25a



25b



25. Pseudostalactite of *type 2*.  
4 x 3.5 cm. Views from top (a) and from  
bottom (b).

26. Membrane tubes of pseudostalactites  
of *type 2*. 3.5 x 3.5 cm.

27. Pseudostalactite of *type 2* termination.  
3.5 x 1.6 cm.

28. Pseudostalactite fragment with relic of  
membrane tube. 4 cm wide.

29. Pseudostalactite of *type 2*,  
upper end with membrane tube relic.  
Image 2.5 cm wide.

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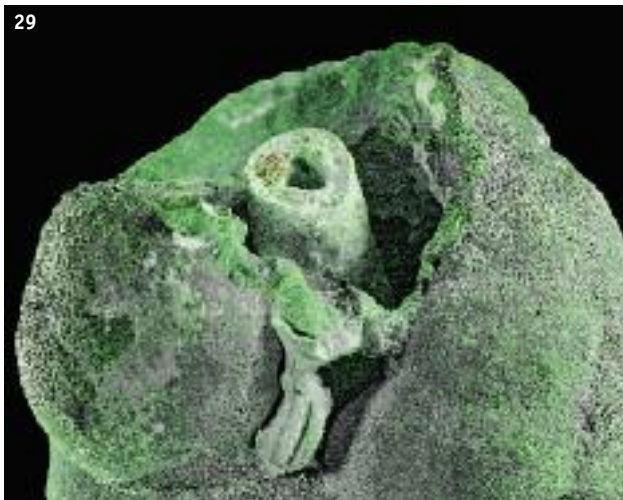
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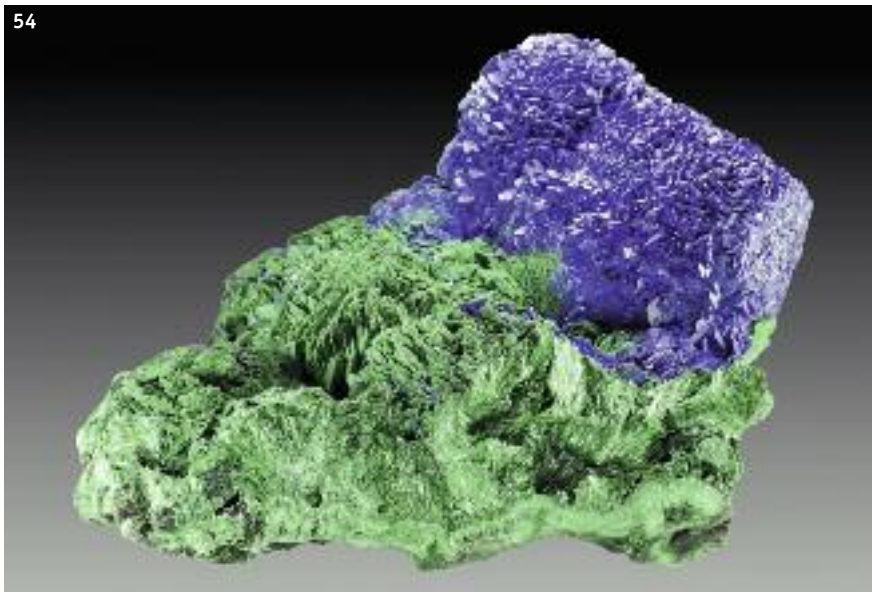
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50. **Azurite** concentric deposition around **limonite** grains. Image 3 cm wide.

51. **Azurite** conchoidal capsule (0.8 cm in diameter), with **malachite** overgrowing spherulites. Image 2.4 cm wide.

52. **Azurite** pseudostalactite. 5 x 3 cm.

53. **Azurite**, partly replaced with **malachite**. Image 4 cm wide.

54. **Malachite**, **azurite**, deposition of azurite on malachite. 10 x 7 x 8 cm.