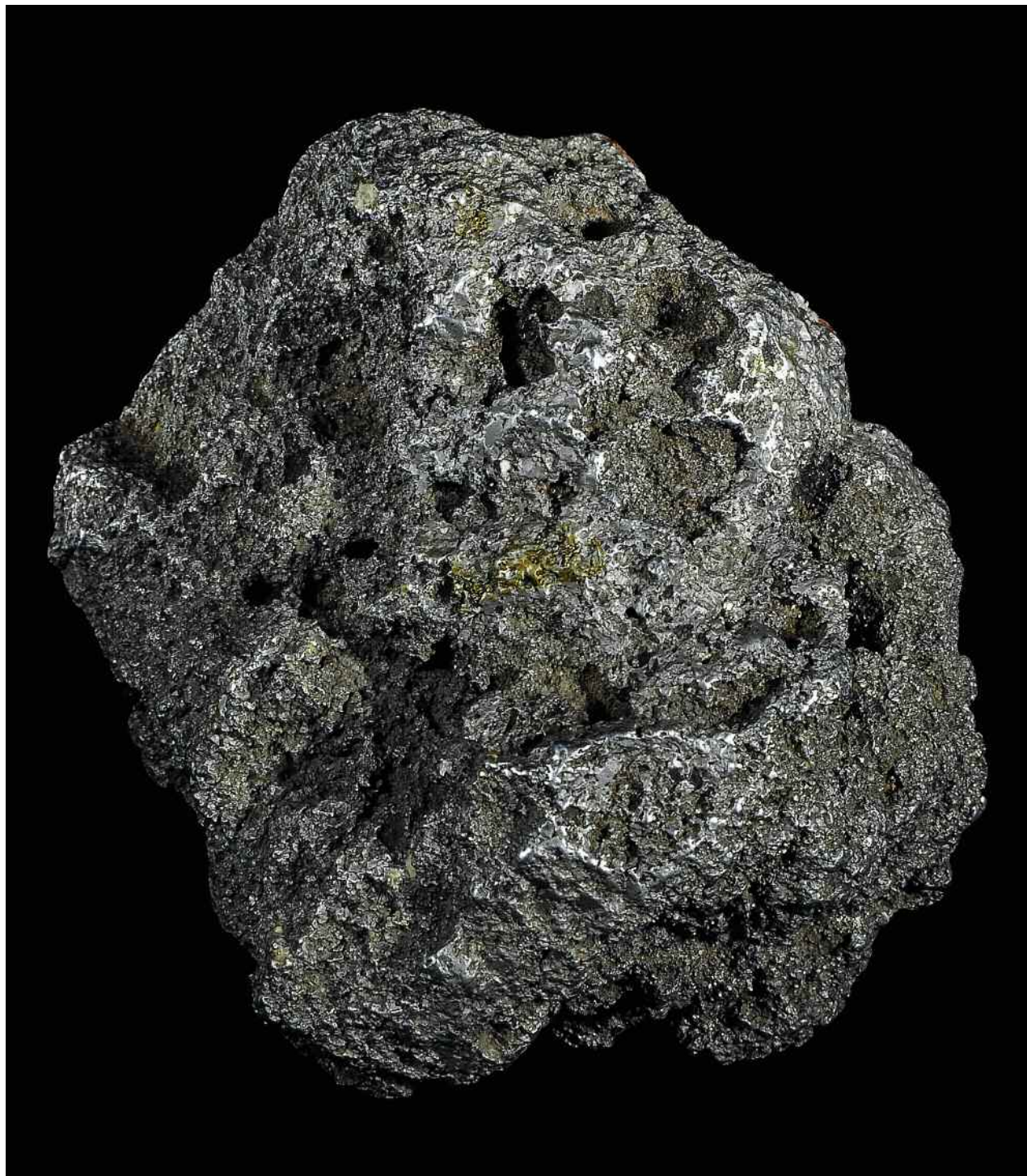


Photo 1. **Platinum** nugget *Uralian Giant*. 12.7 x 12.4 x 9.9 cm, 7 860.5 g. The Diamond Fund of the Russian Federation, No 20.



PLATINUM NUGGETS FROM THE DIAMOND FUND OF THE RUSSIAN FEDERATION: Witnesses of History

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Photo: Michael Leybov.

In the central show case of the Diamond Fund of the Russian Federation are the 20 platinum nuggets, found during the first half of the 19th century and first half of the 20th century. This platinum nugget collection is perhaps the only one of its kind in the world, with literally each exhibit being unique. What for do we need the nuggets? In 1824, Vasiliy Mikhailovich Severgin, academician of the Russian Imperial Academy of Sciences, wrote that *'in regularly arranged collection of the natural objects, we observe the products of the entire Globe with variations, climate differences, deposit affiliation, etc. ...Natural object should be regularly inspected, compared, and studied to find similarities and differences, to define permanent and occasional characteristics, variations in habit, colour, fracture, weight, hardness, and whether they are simple or complex'* (Severgin, 1814).

The history of platinum is interesting, with many unexpected events.

The humankind knows platinum approximately as long as it knows gold and silver, because platinum was found during mining of gold placers. Platinum was known to the aboriginals of South America and, perhaps, to the ancient Egyptians as the platinum artefacts could be sometimes found in the graveyards (Trifonov, Trifonov, 1980; Sobolevskiy, 1983).

Sobolevskiy reported that *'people knew the outstanding properties of platinum for more than 4000 years ago. The Indians of pre-Colombian South America knew its alloys with silver and gold, as well as its native form'*. He also cited technology, known to the Indians of South America, which allowed producing the forged platinum, from which one can make jewellery and life objects (Sobolevskiy, 1983).

Further investigations of platinum history revealed that some related events are much more interesting and comprehensive. They happened mostly on the territory of present Columbia.

Introduction to platinum can be started from a beautiful legend of the Muisca-Chibcha Indians, who lived in present Columbia since the 2d millennium BC, before Inca invasion. The legend tells about a 'gold-plated man' or a 'golden king' (*«el hombre dorado»* in Spanish). The Spanish adventurers quickly transformed this name into Eldorado, a legendary mythical country, rich as in fairy tale and literally full of gold.

A legend was born near the sacred lake Guatavita, located some 50 km from Bogota. It tells about a ceremony of coronation of a new chief of the Indians. The legend exists in several versions, but all of them describe an initiation of the chief.

In one story about a real ceremony, a 'gold-plated man' is graphically described by Juan Rodriguez Freile, the 17th century chronicler. The ceremony took place at the circular sacred lake Guatavita. *«On occasion of the coronation of the new leader, people*

¹ This article employs for simplicity the commonly used terms platinum and platinum nuggets, because their composition was not studied. However, in most cases such nuggets consist of curcubic isoferroplatinum mineral species Pt₃Fe –
Note of Author and Editor.

Photo 10. **Platinum** nugget.
10.0 x 7.2 x 5.9 cm,
1 951.4 g. The Diamond Fund
of the Russian Federation,
No 18.

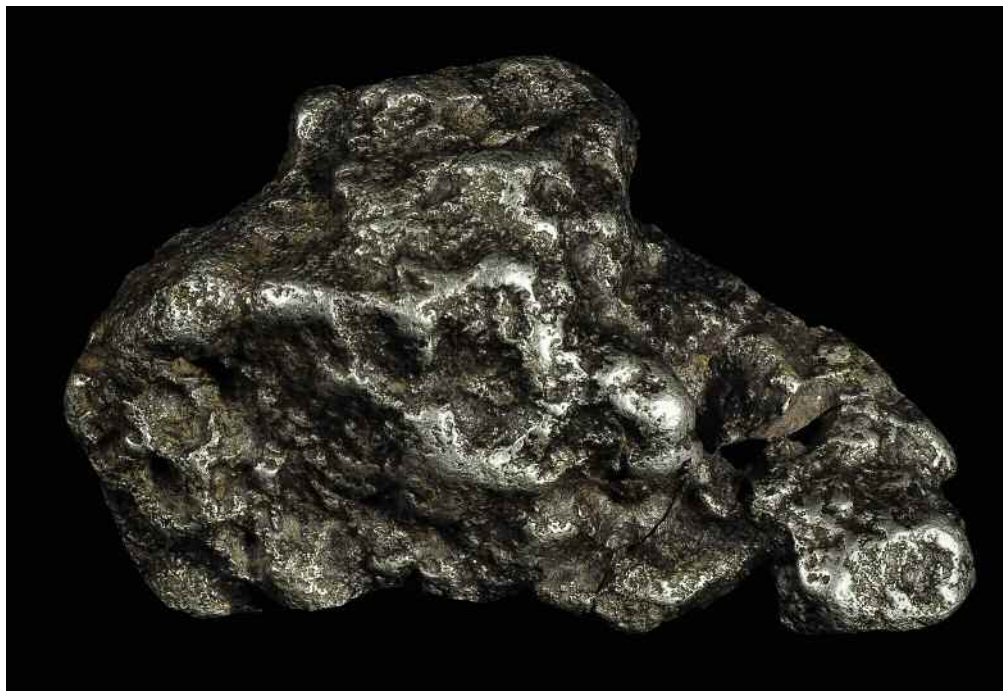


Photo 11. **Platinum** nugget.
13.3 x 10.5 x 6.7 cm,
5 918.4 g.
The Diamond Fund of the
Russian Federation, No 1



Photo 12. **Platinum** nugget.
10.7 x 8.2 x 5.2 cm,
2 992.1 g. The Diamond
Fund of the Russian
Federation, No 3.



it is rhombic; in long and cross section view, it is trapeze-shaped – inequilateral cut pyramid with four facets and saddle-shaped top. The surface is smoothed, coarse-hilly, ridgy, with cavernous fragments and singular prints of host rock crystals. Caverns are distributed irregularly. They are of variable round, angular, amoebiform, elongated, channel-shaped, and niche-shaped (from 2 x 2 to 36 x 18 mm in size, from 1 to 23 mm in depth).

Platinum Nugget No 12 (4,760.4 g, 151 x 113 x 65 mm, Photo on First Cover) is well rounded. The shape is flat and elongated, angular, with gentle meandering outlines. It is V shaped in plan. The size of the branches is 57 x 54 x 39 and 74 x 47 x 42 mm, with lumpy swelling at the junction. The surface is smoothed, slightly wavy, locally hilly-wavy, cavernous, and nostrilled. The caverns are isometric, amoebiform, united into chains, sometimes elongated (from 5 x 3 to 32 x 25 mm in size, from 1 to 12 mm in depth). The external part of the split has a large cavern-shaped depression. Today the nugget is called *Jaws* («Chelusti»).

Dmitry Petrovich Shorin, connoisseur of the Nizhniy Tagil platinum nuggets, described in details their shape to Mamin-Sibiryak in 1890, when the latter visited a Nizhniy Tagil mining district. He said that the most outstanding nugget is kept somewhere in the Tagil Plant Administration. It is a fork-shaped, like the spread thumb and index fingers on the palm» (Mamin-Sibiryak, 1892).

Platinum Nugget No 3 (2,992.1 g, 107 x 82 x 52 mm, Photo 12) is well rounded. The shape is flat-lumpy, slightly elongated, and angular with rounded tops and gently meandering outlines. It is ellipsoidal in long projection. The surface is smoothed, partly cavernous, nostril-shaped. The caverns are distributed irregularly. The largest number of caverns is at the butt-ended elliptical facet. Their shapes are variable: isometric, amoebiform, elongated, angular, oval (from 4 x 3 to 26 x 33 mm in size, from 2 to 11 mm in depth).

Platinum Nugget No 11 (4,097.0 g, 104 x 80 x 72 mm, Photo 13) is well rounded. The shape is lumpy, rounded, slightly elongated with gentle meandering outlines, locally angular. The caverns are of