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## NOTES ON UNUSUAL MASSES OF PLATTNERITE

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PLATTNERITE, lead dioxide, as a mineral species was first identified from Leadhills, near Wanlockhead, Scotland. A number of specimens were described from this locality between the years 1837 and 1889, the mineral in all cases occurring as black botryoidal crusts associated with pyromorphite and cerussite. In May, 1889, W. S. Yeates identified as plattnerite a specimen from the You Like lode in the Coeur d'Alene District, Idaho. Study of material from this occurrence revealed minute prismatic crystals of tetragonal symmetry.<sup>1</sup> This paper contains the most complete statement of the history and properties of this species that has yet appeared.

Apparently a considerable number of specimens of the mineral from the Idaho locality were obtained by collectors, as it is represented in almost every large collection in the country and several specimens are still in the hands of dealers. The mineral seems never to have been certainly identified heretofore in the numerous other American localities for lead minerals. It has been reported from the Black Hills, the Castle Mountain District in Montana, and from several other places in this country, but the report has in no case been verified. The dioxide is doubtless one of the rarer natural compounds of the metal and for that reason the following notes are considered worthy of record:

Among the men who were active in placing the original find of American plattnerite within the reach of collectors was J. Rand Sanborn, late of Coeur d'Alene City, who did a considerable business in plattnerite specimens from the You Like locality at the time it was first described. Mr. Sanborn in 1914 told the

<sup>1</sup> *Am. J. Sci.* [3], 43, 407, 1892.

writer of the largest single mass of the mineral known to have been obtained from the You Like lode. This mass, found in 1892, was a single flat nodule weighing in excess of 200 pounds, and very pure with a cavity in the center several inches in diameter, lined with brilliant crystals of plattnerite, some of which were said to be half an inch in length. This mass was merely broken into two pieces, carried a short distance from the portal of the tunnel in which it was found and "cached" in a hole dug in the ground to receive it. It was planned to sell this find entire to George L. English & Co., then of New York, but when the owners returned to claim the mineral they found that it had been stolen. Probably the thieves simply rehid the mineral a short distance from the original hiding place and never returned for it as no part of it has ever appeared on the market. Judging from the fact that a small specimen showing crystals one fiftieth of an inch long recently changed hands at a price of \$40, the market value of this mass must be considerable. The existence of crystals of such size has not been demonstrated. In all probability this mass will never be refound. The You Like locality has produced none of this mineral for many years, the stopes from which it came having long since been worked out and abandoned.

A story which relates to a second large nodule, emphasizing the unusual tenacity of the mineral when in pure masses, is told by Mr. James Porter of Spokane. During a visit to the upper workings of the Mammoth Mine, in the early days of the Coeur d'Alene District, Mr. Porter observed a lump of a heavy black mineral "as large as an office wastebasket and weighing hundreds of pounds." The miners shot this mass down and after breaking the handles from two heavy hammers in trying to crack it up, the foreman concluded that it was "only worthless iron anyway," and with difficulty, owing to its weight, it was loaded on a truck, hauled out, and rolled over the dump. One chip from this mass, preserved in the Porter collection in Spokane, is pure massive plattnerite.

During the years from 1908 to 1913, the writer kept a keen watch on all mines producing oxidized ore, without finding a trace of the mineral. In May, 1913, Mr. Henry Savage of Wardner, Idaho, while visiting a lease on the upper tunnel of the Mammoth Mine, recognized the high specific gravity of a black mineral which was being discarded as "iron" and brought specimens to the writer. These were immediately recognized as

plattnerite. A number of small masses from this find were later obtained through the courtesy of Mr. Savage.

Mr. Drew Peeples of Wardner remarked, upon examining specimens of the mineral, that he "didn't know what it was, but it was good lead ore, and he had seen quite a lot of it in the Bunker Hill open cut."

In 1914 certain pieces of heavy black material were picked from the sorting belt at the Arizona tunnel of the Last Chance Mine. An argument arose among the ore sorters as to whether this material was "zinc" or "iron." Pieces referred to the author by Alva Brown consisted of pure plattnerite.

In September, 1915, there was found on the dump of an abandoned tunnel of the Hercules Mine, at Burke, a very fine botryoidal piece of plattnerite having a brilliant submetallic luster. Search failed to reveal any more of this material but a man familiar with the oxidized ores of this mine, who examined the specimen, said he had often seen it there.

In January, 1916, Mr. Frank Grooms of Gilmore, Idaho, sent the writer a box of specimens of very pure minium from the Idaho-Democrat Mine in the Gilmore District. One specimen of this lot consists of about equal parts of plattnerite and minium. This locality is far distant from those previously described. There are several other interesting minerals associated with this minium, and it is planned to incorporate descriptions of these in a subsequent paper.

The indications are that plattnerite occurs widely in the lead mines of the Coeur d'Alene District and the suggestion is warranted also that it may have been overlooked in a number of western mining districts because of its resemblance to oxides of iron and manganese. The hardness and high specific gravity, however, are distinctive characteristics, as are its ease of reduction and low fusing point.

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By a curious coincidence the first names of all of the contributors to this number begin with an E. This impels us to remind our readers that we will be glad to receive articles from anyone, even tho his name begins with some other letter! Brief, non-technical accounts of trips or descriptions of collections will be especially welcome. We also again call attention to our standing offers to print exchange notices and to identify specimens for subscribers, without charge.

THE EDITORS.