

ART. XV.—*Meteoritic Iron from Jenny's Creek, Wayne County, West Virginia*; by GEORGE F. KUNZ.

[Read at New York Academy of Sciences, Nov. 30, 1885.]

DURING the early part of last April a 9-ounce piece of mineral, supposed to be silver, was sent to Dr. H. G. Torrey for determination, by Major Delafield Du Bois, of Charleston, West Virginia. Dr. Torrey found it on examination to be an iron of meteoric origin, and kindly loaned it to me for description. The piece delivered to me was supposed to be all of the fall, and on this supposition it was described as the Charleston, Kanawa County, West Va., meteorite, in a paper read at the Ann Arbor meeting of the American Association. Through the

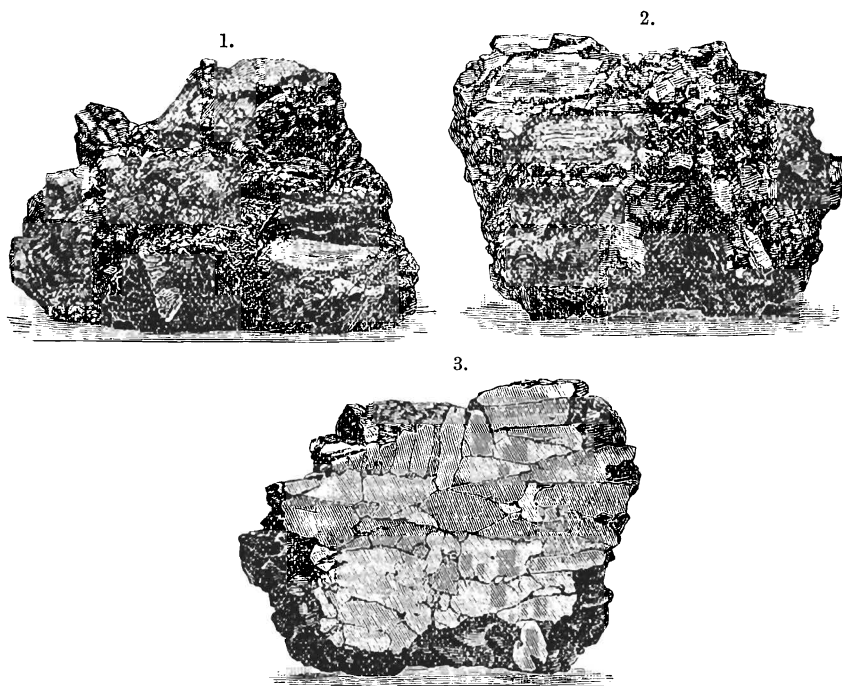
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kindness of Major Du Bois, Mr. J. F. Hoard and Dr. John N. Tilden, who went to considerable trouble in ascertaining it, I am able to announce the true locality.

Mr. Hoard writes that the iron was found on land belonging to Maston Christian, situated on the "Old Fork" of Jenny's Creek, a tributary of the "Tug Fork" of Big Sandy River (Tug Fork being the boundary line between West Virginia and Kentucky), in the upper end of Wayne County. The pieces were all found in the creek bed, i. e. the ravine or gulch through which the creek flows. The first piece, weighing probably two or three pounds, was found by Christian's wife sometime earlier than the spring of 1883. It was supposed to be simply a rich "kidney" of limonite, and was soon lost sight of. In the spring of 1883, however, a second piece was found by Christian himself while drifting staves in the creek. This piece, which weighed about twenty-three pounds, created considerable excitement and speculation. It is even stated that a shrewd speculator, who had in his possession a lump of the metal, had realized largely by burying it on different lands, digging it up again, and then selling the pieces of property successively as being silver-bearing. The rumor was current that the vein was from nine to sixteen inches thick. It was broken up and distributed among several parties interested in the find, and as it was friable, much of it was lost in this manner. About the first of December, 1885, a third fragment was picked up by Mr. Christian in a pool of still water, only about fifteen or twenty feet from where he had found the other. It weighs 535 grams (about seventeen ounces), is all broken except one side which is altered to limonite and has no visible trace of unaltered crust. Its measurements are 88^{mm}, 57^{mm}, and 46^{mm}. The total amount found thus far in the three pieces is probably twenty-six or twenty-seven pounds. Both of these latter pieces were found in water and had a coating of rust or earthy matter similar to that found on "kidneys" of ore, which was removed easily with the hands or by washing.

The iron is octahedral and made up of crystalline blocks of plessite and kamacite, irregular in shape, brittle, having rounded ends and cleaving readily. Between these are also thin, springy and flexible folia or plates of schreibersite, some of which are 6 or 8^{mm} square. The latter mineral was also observed in two other small pieces sent to me. Troilite was also observed in these. The original weight of the piece loaned me for description was 275 grams; one small slice of 34.5 grams weight had been removed to show the internal structure, so that the larger piece, fig. 3, now weighs 228.2 grams. The three cuts show the exact size of these pieces, and the markings on the etched surface as well as the octahedral structure

on the exterior of the iron have been accurately reproduced by photography direct from the iron. (Original size as follows: length, 66^{mm}; width, 40·5^{mm}; height, 33·5^{mm}.) The exact date of the fall of this iron is not known, and the surface



where not cracked off is altered to limonite to a depth of 2^{mm}. It belongs to the “grobe Lamellen” of the new classification of Dr. A. Brezina. The Sevier County, Tenn., and the Arva irons nearest approach it in structure. The following analysis was kindly made by Mr. J. B. Mackintosh, E.M., of the School of Mines, New York:—

Iron	91·56
Phosphorus	0·13
Nickel and cobalt (by difference)	8·31
	100·00

The specific gravity of the figured mass is 7·344. The iron does not show any Widmannstätten figures, the crystalline structure being really brought out in relief by the schreibersite between the crystalline surfaces of the iron.

Since this iron was broken and scattered in small pieces, we may expect to see them turn up as a number of different falls,

but the coarsely crystalline structure, and the broken appearance of the pieces which are characteristic of this fall, will at once identify them.

The late Judge M. J. Ferguson, while residing at Louisa, Ky., communicated to Mr. S. Floyd Hoard, that one summer about five years ago, at about 1 A. M., he witnessed a meteor of wonderful brilliancy falling in the direction of the spot where these fragments have since been found; and that he predicted at the time that one would probably be found in that vicinity. The windows facing that way were open, and the curtains drawn back. The light was as brilliant as noon-day, and of sufficient duration for him to step to the window and see the meteorite fall, as he thought a short distance away, and surely within the limits of Wayne County.

There is, therefore, a strong probability that the pieces now being described are fragments of the identical meteorite which startled Judge Ferguson on that night. The fact that these masses of meteoric iron were found in water, and that all the branches of the creeks in this county are subject to strong floods of a few hours' duration, but while they last, sufficient to float logs, may account for the finding of these three pieces (evidently fragments of one piece of very friable iron), scattered as they were, and also for the oxidation of the crust of the iron, which might have remained intact for a much longer period, had the meteorite buried itself in the earth. Of the twenty-six or twenty-seven pounds which were found, only about two pounds have been preserved. I am under obligations to Major Delafield Du Bois, S. Floyd Hoard, and Dr. John N. Tilden, for obtaining information and material.