

THE MART METEORITE

The fall of a meteorite is, in any locality an event of rare occurrence. The flight of shooting stars is a common sight, but the descent of one of these heavenly bodies to the surface of the earth is so very exceptional that the finding of one in our own state ~~ex-county~~ may well arouse ~~the~~ general interest. As Baylor University has recently secured one of the few meteorites which have been found in Texas, a brief statement regarding it seems appropriate at this time.

Some ~~two or three~~ four years ago, Mr. Watts Vaughan while plowing on a farm near Mart, Texas, found a mass of heavy material which he supposed to be iron. It weighed 15 pounds, $9\frac{1}{4}$ ounces. Efforts to break off a piece were unsuccessful. Last summer Mr. Henry T. Vaughan of Mart sent it to the Smithsonian Institution at Washington for examination. Soon thereafter he transferred the ownership of it to Baylor University, after which the Smithsonian Institution was authorized: 1. To make a plaster cast of it. 2. To photograph it. 3. To cut off and keep a slice of it on condition that they should polish and etch the new cut surface of the principal mass. 4. To make a chemical analysis of it.

The cast, the principal mass with the newly cut surface etched, and the photograph of the iron before and after cutting have arrived and can now be seen in the museum of Baylor University. In the figure given herewith the size of the iron is indicated by the nine inch ruler beside it. It shows well the pitted surface so common in meteorites. The pitting is possibly due to burning out of spots more readily combustible or to the inequalities in the pressure of the hot condensed air on the surface. The newly cut and etched surface shows beautifully the lines of crystallization known as "Widmanstätten Figures". These figures ~~are~~ seen in nothing but meteorites and some volcanic iron. Their presence in the mass of iron found remote from volcanic outflow is in ~~general~~ certain proof that it is a meteorite.

I wish very much to learn whether this meteorite was seen during its fall, and shall be glad to have any information helping to fix the date of its fall. Several years ago, a meteor said to be as "large as a barrel" was seen by J.W. Wortham and others about 9 p.m. to pass over Patrick in the direction of Mart. (Ed. Note: The original said "During the winter of 1897-8" instead of several years ago.) After two and one half minutes a loud explosion was heard. About the same time, I think, a very large meteor was reported in the papers from Valley Mills. Could they have been one and the same?

The origin of meteorites has been a subject of prolonged and interesting study. It has been found that the meteors of several periodic star showers are derived from long processions of innumerable small bodies traveling around the sun in elongated orbits identical with those of certain comets. While few or no meteors of these star showers have been known to reach the ground, it is

thought that the bodies which do reach the ground have also been revolving about the sun in orbits of their own, and with velocities equal to those of the comets or of the earth. The velocity of the earth in its orbit exceeds 18 miles per second, 50 times that of the modern cannon ball. When one of these meteoric bodies is drawn to the earth, it strikes our atmosphere with a velocity which may even exceed that of the earth. Usually the friction of the air thru which it passes and the resistance of the air condensed in front of it so heat it that it burns rapidly and is changed to dust and smoke while yet 20 miles or more above the ground. Occasionally one reaches the ground, and quite rarely one is seen to strike the ground. Some 10 years ago in the daytime (1 p.m.) a stone meteorite of about 200 pounds was seen by hundreds of people to fall near Washington, Kansas. It sank into the stiff gumbo soil about six feet. Recently one was seen to fall in Michigan and has been secured for the Smithsonian Institution.

Meteorites may weigh hundreds of pounds, or even several tons. Yale College had, and may now have, one of 1635 pounds which fell in Texas in 1808. One weighing several tons was brought from Greenland by the Peary (sic) Relief Expedition. It is told of one in Kentucky that a local blacksmith worked it up into horseshoes, and at least one reputable gentleman declares the story to be credible.

The selling value of meteorites varies from a few dollars to several hundred dollars. The Kansas meteorite mentioned was sold by Prof. Cragin to ~~George Kuntz~~ Henry M. Ward of New York for ~~\$1200.~~ \$1050. Several meteorites found on a farm in southwest Kansas by Professors Snow and Cragin netted the owners of the farm enough to clear it of debt and leave a handsome surplus. In various museums are several hundred meteorites. No year passes without the discovery of new ones.

Baylor University.
December 26, 1899.

O. C. Charlton.

(First copy had this note in longhand: For the Foreman: This is accompanied by cut of meteorite 3 x 4 inches. The inscription beneath the cut should read

The Mart Iron
Photographed by Sanders

The cut should be returned to Baylor Univeristy care O. C. Charlton or held subject to his order.

O. C. Charlton,
531 South Fifth St.
Waco Tex.

Dec. 26, 1899.)

Charlton said 1937, Oct. 9, that above statement was prepared for newspaper. The Kansas fall referred to is Farmington, Washington County, 1890, June 25.

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In the Baylor Museum there is a cast of the iron, showing two very conspicuous troilite nodule holes, one $1\frac{1}{2}$ " deep and 1" across (est), with photographs taken by Sanders, 503 $\frac{1}{2}$ Austin, Waco, Tex.

A piece has been cut off one end of the iron since the U. S. National obtained its slice; Ward bought this?

The original file of Charlton's was sent to the University recently and is being kept by the Museum curator. In the catalog (?) entry

159. Meteoric iron (?) Found on farm of Mr. _____ Gill about 5 miles S. of Mart, Texas, by Mr. Watts Vaughan while ploughing breaking raw prairie. It was near the surface and turned out by the plough. 1895 or 6, May or June. Efforts to break it with ledge or anvil failed to break any of it. A small portion had been filed off. Wt. about 17 pounds. Loaned by Henry T. Vaughan, Mart, Tex. June 20, 1899.

(in other handwriting) ~~XXXXXXXXXXXXXX~~ Purchased for \$35.00. Sept 1899.

Above information obtained in fall of 1936 trip. Dr. O. C. Charlton was later City Forester of Dallas and is there now at 1736 Bennett Ave., 3-6806. A later placard gave the total weight as "15 lbs. 9 $\frac{3}{4}$ ounces, orig wt.", and U. S. National kept 456 grams.

Also in the Baylor Museum are Nos. 1009-1010 according to cards, "Fayette County, Limonite, Stone meteorites", of which apparently only 1009 is left. Other piece possibly traded to Nininger for some Kiowa County meteorodes on display?

In the basement Indian room is a hammer head marked "Made from meteoric stone. Found in attic of home in Dallas, Tex., loaned by Grady Moore, Lake View Tex." (just north of Waco); apparently a hematite concretion.

Dr. E. M. Thorp is the geologist at Baylor. (or curator of museum?).