

PRELIMINARY NOTES ON CLEBURNE AND KIRBYVILLE METEORITES

By Oscar E. Monnig

Acting upon Mr. H. H. Nininger's dictum that every county has its meteorite, which might be found if only enough interest in the subject can be aroused, the writer began giving the topic as much publicity as possible in this immediate region of Texas in the fall of 1933. The results in 1934 were two heretofore unrecorded Texas meteorites. In each case the possessors knew the true character of the objects, which were being properly preserved, but neither meteorite had ever been scientifically recorded or studied.

The first of these was found in Johnson County, Texas, not far south of Ft. Worth. The location of the find is at about $32^{\circ} 23'$ N. latitude, $97^{\circ} 23'$ W. longitude, a point on the J. W. Haynes Survey, about one-half mile east of Noland's River and 5.5 miles northwest of Cleburne by road. It has been deemed advisable to name it the "Cleburne" meteorite because Cleburne is the nearest town of any consequence, and because the meteorite has been there and known there for some years.

On a fall day in 1907 (perhaps a year earlier or later), Mr. Rufus Anderson set out to clear a "cluster of set rocks" on his $64\frac{1}{2}$ A. farm. The locality is in the stratigraphic subdivision known to geologists as the Main Street Limestone, a formation in the Lower Cretaceous, and the abundance of the limestone rocks made the field in question unfit for cultivation until at least the worst of them had been removed. He used a heavy crowbar, and after most of the rocks had been taken out, his 14 year old son, Chester, continued knocking around the hole with the crowbar, when his attention was attracted by a

"black rock". The father was sitting on the opposite side of the large, shallow hole they had dug, with the sun to his back, and as Chester struck at the "black rock" and hit it with his crowbar, Rufus Anderson saw a flash of steel in the sunlight. The surprising object was at once excavated.

When the meteorite was found, it was barely protruding from the general ground surface, with perhaps two-thirds of its upper faces showing. In shape it is a low cone, and the base (the side to the rear in flight?) was downwards. The sides of the cone are irregular, and one especially large, flat side was laying just south of and in contact with the bed of rocks being removed.

At first there were excited thoughts of the strange object perhaps being a part of or a marker to a treasure. Noland, an adventurer said to have gone thru this region on his way from Florida to California during the gold rush, and slain near here on his return journey, was thought by some to have had riches with him, and the nearby river is named for him. Accordingly, Anderson used a pick and a crowbar to dig a further hole around the spot where the meteorite was found, two to three feet deep, but nothing further was discovered. It was ^{not} long until he realized that the object was probably an iron meteorite, and Chester Anderson, proudly claiming it as his "meteor rock", displayed it to all the neighbors. Anderson farmed the land for about 10 years afterwards, and estimates that he hauled away 40 or 50 additional loads of rocks, all the while watching for other meteorites, but none was found. He has since always lived near the community, but has heard of no further finds. On a field trip which the writer made to the point of fall, inquiries from present inhabitants brought out the same negative results. The region is fairly intensively

cultivated, but there are some wild spots. The foregoing circumstances militate against the probability of other related meteorites being found.

Chester Anderson, the actual finder of the meteorite, died the following spring. His father has kept the object ever since. Shortly after its find it was exhibited at a Johnson County Fair, but took only second prize, being exceeded in interest by an ancient family Bible in the eyes of the judges. In later years, Anderson made contacts with two universities in Texas and with a national institution which collects meteorites, but because of peculiar circumstances did not dispose of his find to them.

The mass is an iron with the shape of a poorly-formed, low cone. The base to some extent follows the lines of a triangle with sides of about 13 cm., and the height of the cone is about 8 cm. Thumbs-marks are present, but are smooth-edged and not very conspicuous. Originally the object is claimed to have weighed 15 pounds, but some portions were once cut off with a cold chisel and much labor by a local blacksmith; the fragments were apparently used, in the main, for submission to a buyer of old gold and precious metals, who never reported further. These deductions result in a present weight of 14 pounds, 9 ounces. (6.6 kgs.).

The scars inflicted by the blacksmith reveal the octahedral structure of the iron by natural cleavage. One little isosceles triangle with sides of about 5 mm. is a particularly neat exhibit in this respect. Other artificial deformations of the object consist of several battered corners, including the peak or top of the cone, which were severely hit with a hammer in efforts to break the iron shortly after it was found; and several small flat areas on the natural base,

where the crust has been worn away and the metallic interior revealed by constant sliding of the iron on surfaces where it has stood. One of these small areas, a little less than one square centimeter, was polished and etched, and shows a fine octahedral structure, with lines about one-half millimeter wide. The iron will therefore probably be classified as a fine octahedrite. (Of).

The crust is in general not a deep black, but rather a moderately dark brown. It is relatively thin, as is shown by the easy wearing away of the flat spots mentioned above, and as further shown by an area of several square centimeters where a tin-white color is quite noticeable, almost certainly indicating the presence of schreibersite.

In as much as the exact location of the famous Red River (sometimes called "Cross Timbers") and Wichita County (or "Brazos River") meteorites of Texas has never been ascertained, but has been placed by some authorities in the region of the present find, it is worth pointing out that if classification on the basis of interior structure is taken as a guide, the Cleburne meteorite cannot be related to these old finds, as they were medium and coarse octahedrites, respectively, while the Cleburne iron is clearly a fine octahedrite.

The second meteorite to be treated, while obtained as a result of local publicity, came from a more distant region of Texas. Mr. Gordon Grimes, of Ft. Worth, having seen a display of meteorites here and knowing our interest in the subject, recalled a meteorite in the possession of his relatives in East Texas. This turned out to be a small but almost perfectly preserved stone meteorite from Jasper County, Texas. The exact point of fall is on the J. W. Morgan 40 A.

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