

THE DISCOVERY OF THE TISHOMINGO, OKLAHOMA, SIDERITES

On January 14, 1965, Glen Orr, 15, of Tishomingo, Oklahoma, took advantage of the last day of the bird hunting season. As he was crossing a neighbor's land, he stumbled over something projecting from the ground. He decided to inspect the object over which he had nearly tripped.

There was a second area projecting from the soil a few inches away, and scooping out the dirt in between revealed a large shallow area which reminded him of a dinosaur track.

He dug around it further, and finding a very hard mass, got a pick and shovel and went about the business of excavating his find. There was a considerable extension beyond the first two projections revealed, and he found himself working around an area roughly two feet or more in diameter. What he first took to be a single mass turned out to be two, the smaller one being just to the southwest of the main mass. Two two pieces were next to each other but separate when finally dug out. A crowbar was used to probe the ground around the hole for more pieces, but none was found.

The irons were fortunately only some 40 feet north of the fence line on the section road, along which an REA line ran. The REA maintenance crew used the winch line on their truck to drag the irons to the fence, load them and haul them off.

Mr. R. C. Orr weighed the larger one on some cotton scales at 365 pounds, and making a 5 pound allowance for the supporting trace chains derived an approximate weight of 360

pounds. The other piece was taken to a neighboring college temporarily and reported to have been weighed at 214 pounds, but this has not been checked or verified.

The point of find is 5.8 miles north of Tishomingo and 0.8 miles east of Highway 99, about 0.3 miles west of a running creek which drains into Lake Texhoma just south of town. There is another creek drainage about 0.5 miles west of the location, which thus lies on the east side of a mild ridge, well drained. It is near the south edge of the SE quarter of Section 3, Township 3 South, Range 6 East of Johnston County, Oklahoma. This is latitude $34^{\circ} 19' N.$, longitude $96^{\circ} 38' W.$

The soil is granitic and coarse, with a clay-like hardpan at a depth of a couple of feet.

A local paper published an article about the finds on March 4, 1965, identifying them as meteorites and stating that tests at the college had shown a 50% nickel content. I was informed of the situation on March 8 and went to verify it next day.

Only one piece was available for inspection on that occasion, but in general appearances it had all the earmarks of an iron meteorite, and I had no doubt but that it was one. I recommended that the owner get the other piece back in his possession, and that more digging be done in the hole. Following my advice, the Orr's found two more pieces about 12 or 18 inches to the north^{east} of the larger masses and somewhat deeper. These two smaller pieces did seem to fit together but were relatively flat and shapeless, not nearly so impressive or typical as the larger masses. They weighed $5\frac{1}{2}$ pounds and 2 pounds, 6 ounces, respectively.

On a subsequent trip, the other large piece had been returned. While these heavy masses are difficult to handle, we did succeed in making a probable fit of the two larger pieces along a concavity where each piece is thinner. The finder thought they originally lay in this attitude. This match resulted in a sort of crude butterfly formation, and while possibly not a unique way of fitting the pair together seemed the most likely. A fit of the two smaller pieces into the bigger pair was more ambiguous but possible in several ways.

Whether the meteorites separated just before or immediately upon impact is an intriguing but indeterminate problem. There is also the possibility that the entire mass was one and oxidized sufficiently to separate into the four parts subsequent to the fall, but the amount of overall oxides in the form of iron flakes and rusty material in the ground immediately surrounding the finds was relatively slight-- much less, for example, than in the case of the Lake Murray, Oklahoma, find reported in 1952. This was only some 28 miles from the Tishomingo find, but the two are quite unrelated, being of very different types, as will appear from a later paper today. The writer visited the site of the Lake Murray find about a year later and much oxide was still in evidence there in the erosion ditch where the piece had lain. That meteorite was in an open drainage. The Tishomingo find was covered until discovery and the high nickel content (which also will be discussed later by those who determined it more pre-

cisely) may have helped prevent oxidation. The irons turn out to be practically steel of the composition of invar.

The finders kindly allowed me to have the smallest piece cut and etched and gave me a 360 gram piece of it. I have lent this to the U. S. National Museum for investigation and experimentation on which they will report. I also obtained for them the temporary loan of the $5\frac{1}{2}$ pound piece for some test checking. All pieces except the small specimen given to me are still in the hands of the original owners, who have agreed to give me prior rights on disposition. I am announcing the finds so that the work done on them can be publicized, but I ask all of you to respect my efforts and claims.

We have publicized the matter locally in school talks and canvassing of neighbors; we have made some searches with a Hedden metal detector and plan further work along such lines. It does not seem too likely that anything more will be found, but the possible late breakage of these undoubtedly related pieces all in one hole, and their odd shape as a reassembled group, give hope for other similar "hests" in the vicinity. Much of the nearby land is pasturage for cattle, like that where the irons were found. Since this has never been plowed, the situation is favorable in some respects. There is a small gravel pit within 0.3 of a mile and larger ones in the region, but apparently nothing has been found in these excavations.

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