

DESCRIPTION OF A BOULDER NEAR THE SOUTHERN LIMIT OF GLACIATION IN ILLINOIS

CLARENCE BONNELL, TOWNSHIP HIGH SCHOOL,
HARRISBURG, ILL.

The boulder to be described is of significance only on account of its size and of its location near the southern limit of glaciation in America. The published maps of the glaciated areas show "farthest south" in glacial movements to be in Saline county on a line curving southward to follow approximately the east and west trend of the Saline river, which in turn follows rather closely the northern base of the Ozark hills.

It should be noted that boulders are not a prominent feature of the southern Illinois drift as they are north of the Shelbyville moraine in the later deposits. The earlier geologists mention granite boulders in Saline county as large as the two fists, but I have not been able to find specimens during a residence of eighteen years. It has been necessary to import a few from the old home farm in central Illinois for class room demonstrations.

Reports from students, of what was supposed in their neighborhood to be a "meteorite" lying in a field just southeast of the village of Carrier Mills, led me to this boulder. It lies on a low ridge in a cultivated field owned by Mr. Marshall Thompson who lives on the place. The exact location is near the middle of the south line of the SW $\frac{1}{4}$ of the NE $\frac{1}{4}$ of Sec. 2 Twp. 10 South, Range 10 East of the 3d Principal Meridian. About ten years ago, Mr. Thompson, while plowing deeper than usual, scraped the top of the stone which was covered with earth. Curiosity led him to uncover it and, later, to dig under and set two sticks of dynamite with which he raised it to the surface, or nearly so, at the same time breaking it into three pieces. It differed so much from the ordinary stratified rock fragments which are more or less abundant in the county that the "meteoric" theory of its origin arose. In fact, people were found who "had seen it fall" sometime in the dim past. Mr. Thompson has

the smallest of the three fragments in his yard. I have samples from this smaller one and pictures of the two larger ones which now lie partly out of the ground.

The part of the field where the boulder lies is slightly higher than the part to the north. Also, the ground slopes gently to both the east and west and more abruptly to the south toward the edge of what was once a great cypress swamp extending two miles farther south to the Saline river. It is but a few hundred yards to the edge of the swamp. Beyond the Saline, the foothills of the Ozarks begin within a mile or two, and the altitude increases rapidly within the next two miles. There seems to be no possibility that the ice sheet could have extended more than four or five miles to the south of this boulder; and I have found nothing in the nature of the soil or topography to indicate that it even went beyond the present location of this rock, though it could have done so as has been indicated. That is, it could have gone four or five miles farther at this particular point without the necessity of climbing the mountain to the south.

The surface soil about the boulder is described by Mr. J. E. Whitchurch, Saline County Farm Advisor, as a yellow or yellowish-gray silt loam such as is common to much of the hill land of the county. Mr. Thompson says that the soil immediately surrounding the rock at the very top of this low ridge will raise more kinds of crops than will the soil on the slopes but a few feet lower down. This lower slope soil which evidently underlies that at the crest is very acid and is described as a deep gray silt loam. The same kind of soil outcrops along the roadway and ditches to the northeast of Mr. Thompson's farm. Mr. Thompson says that a well dug and drilled about 200 feet south of the boulder came to the No. 5 coal at a depth of about 45 feet. He thinks that shale and sandstone would be found at about 20 feet below the boulder, basing his estimate on their known depth at other places near. The elevation above sea level is approximately 380 feet.

The stone is a light red granite. Careful estimates of the size, made after some excavating, and of the density

of small fragments, give 4,725 pounds as the approximate weight of the three fragments. There are no evidences of striation or other glacial marks.

The size, position, and elevation of the boulder are such that there is no possibility of its having been transported from its original bed except by natural forces. It should be of interest on account of its nearness to the southern limit of glaciation in America. There is strong probability that it may remain as a monument marking the point of the most southern migration of its kind.