VII. A GRANITE "MUSHROOM" ROCK.

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During the summer's field work of 1927 in searching for Cretaceous fossils and remnants of Cretaceous material along some joint planes in the Arbuckle Mountains in the vicinity of Tishomingo, some peculiarly interesting erosional forms in the Tishomingo granite were found.

Outstanding among these was a granite "toadstool," fig. 1, located just east of the highway going north of Milburn, in the SW. 1-4 sec. 26, T. 2 S., R 7 E. This "mushroom" rock has the following dimensions: height, 9 feet; 3 1-2 feet in diameter at the base; 8 feet in diameter at the widest part of the portion above the pedestal base; with a distance from the overhanging part of the mushroom rock to the ground of 4 or 5 feet. Pink Tishomingo granite is the rock which has been weathered in this manner. The granite is very coarse, some of the feldspar crystals being over one-half inch on an edge; but the surface is relatively smooth.

In this same area, including parts of sections 26 and 27, some large granite inliers (resistant granite ridges and knobs surrounded by soil) were noted as having concave surfaces and rounded termina-

FIG. I

tions. (See figure). This would indicate that possible wave erosion had been the agent which brought about this phenomenon. The seacliff-like appearance of these surfaces is very striking. As the illustrations would indicate, the granite escarpments are close to ten feet in height above the soil surface.

Three other areas which had granite inliers, similar to the ones described in the preceding paragraph, were visited. Concave gougings or groovings were nearly always approximately on a horizontal

level; and where observed at the four different localities separated by intervals of 1, 3, and 7 miles respectively, occur on a level topographically, the elevation being about 750 feet in all occurences.

These erosional features were noticed on an east-west level about six to eight miles north of the Trinity sand-Tishomingo granite contact. The over-hanging appearance of the upper portions of the granite masses strongly suggests a former sea cliff attacked by waves; the uniform undercutting, which is so noticeable, indicates that the erosion was accomplished by waves.

With this setting in mind, it requires no great imagination at all to picture these present features as forming small islands in the Lower Cretaceous (Trinity) sea.

FIG. II
Effect of wave action (?) on granite north of Milburn, Johnston County, Oklahoma