

Split Mountain Canon,
Imperial County, Cal.

Visited April 22-23 1929 and May 19 1929,

This canon is $2\frac{1}{2}$ or 3 miles long. The walls are high and the canon is crooked in places. The strata dip at various angles, mostly 20 to 35 degrees, principally south or southwesterly and are of various thicknesses, from very thin to several feet in thickness. At the foot of the cliffs in places a buff or yellowish sandstone is exposed. This is overlain by a coarse conglomerate of graniteoid boulders, these being often a ton or more in weight. The boulders are angular with but little rounding of the corners and edges, and evidently had not been transported far. The cementing material is mud and it is not very difficult to detach a small block from the strata yet the walls are quite steep, perpendicular in places. I suppose the blocks came from the west, where granite mountains are not far distant. The strata exposed must total a thickness of 1500 or 2000 feet. The general direction of the canon is N. 60° N. E. and S. S. W. I saw no gypsum west of the canon, but on the east side there are a number of beds of a few acres in extent to a hundred or more. These beds are on the surface and are inclined in various directions according to the slope of the surface; mostly dipping north or south. Some are on the summit of the range others well down the sides or even reaching the edge of the valley. One bed a mile or so east of the north end of the canon is being worked by a company that has built a 30 mile narrow gauge railroad from Plaster City. The rock is blasted and loaded on the cars by a steam shovel direct from the quarry.

Split Mountain Canon passes entirely through the range, to Carrizo basin and drains a small part of the western edge of the basin as well as the south side of the range. At the head of the canon two large washes come from the west. On May 19th we drove the car 5 or 6 miles up the outer wash, which heads on the eastern end of Piñon Mountain several miles further on. Along this wash the bordering, comparatively low, cliffs were sandstone dipping strongly south to southwest. About half a mile south of the head of Split Mountain Canon are cliffs capped by a stratum of hard rock composed principally of small oyster shells and a chain of these hills extends east-south-east two or three miles, each with its fossil-bearing rock cap. These "bad-land" hills are similar to those bordering the eastern and south-eastern sides of the Carrizo basin.

We examined the hills bordering the wash we went up. We found fragments of fossilized wood in several places, but no shells. The wood fragments were weathered out of the edges of the sandstone strata, which were coarse there, and dipped strongly

In a small gulch entering Split Mountain canon at its upper end on the east side are some impressions that have been reported as "dinosaur" tracks, or "ground sloth" tracks. The sandstone strata in the gulch have a considerable slope southwesterly, and water from heavy rains has worn away the overlying rock exposing the impressions. These occur for perhaps a hundred yards up the gulch. Above them lies a pile of weathered-out concretions round or flattened; some the size and shape of a canter. Similar concretions were scattered through the upper surface of the sandstone strata, and the running storm waters have ~~worn~~ worn down the surface exposing more or less of the concretions. In most cases the outer surface of the concretions on the inner edge of the surrounding rock were a little softer than the main body and wore away into a ~~so~~ circular groove, irregularly pitted in places leaving an impression like a huge cat track, but nearly always with the middle part higher than the groove around it, contrary to the shape of a cats track. One could easily imagine the circles were tracks of some huge pre-historic animal if he did not study them.

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