DULANY CAVE.

BY H. K. RHODES,

High School, Chambersburg, Pa.

Locally, Dulany Cave has a fair amount of fame; yet its fame has not "gone abroad in the land" as has that of Luray Caverns and similar grottoes. Although its size and calcareous formations are not to be compared with Luray, it is more than a cave, and on account of its many ramifications might well be called the more dignified name of caverns. I do not know of any attempt to make a thorough and complete exploration; considering the number of interesting facts connected with it, I think the cave would bear further investigation.

The region in which the cave is situated contains many interesting things for the geologist and for the lover of nature. The relief, the coal measures, the peculiar formations of rocks, the fossiliferous limestone, the rivers—all make this section of the state of Pennsylvania worth a visit.

Dulany Cave is located in Fayette County, in the Uniontown quadrangle, seven miles south of Uniontown and three miles southeast of the village of Fairchance. It is easy of access, the trolley running from Uniontown to Fairchance every hour. From the latter, a private or secondary road runs up into the mountains towards the cavern, but does not lead to it; so that a trail has to be followed for about a mile. Fairchance has an elevation of 1,055 feet; the caverns, 2,640 feet. The end of the trail brings us to a little plateau from which an excellent view can be had toward the west and northwest. From this point, there is another rise to 2,714 feet. The rocks on the surface of the plateau are mainly blue, sandy limestone, or sandstone grading downward into calcareous limestone, and usually containing sandy shale.

On the western edge of this plateau are the two entrances to the cave, the larger being about the size of a coal mine entrance. Progress from the mouth is continually and gradually downward. From all appearances, the roof is not far from the surface and continues thus for some distance. From the entrance and throughout the main cavern, there is an indentation or groove about two inches deep in the centre of the roof. On both walls from the floor up to about three feet, long shallow grooves, one-fourth inch deep, run parallel two inches apart; this is especially noticeable through the main cavern. Also,

near the mouth, a stream of clear, cold water rises from the floor and runs through the main cavern.

Evidently, this stream is the remnant of a larger surface stream. The rock being of a shaly nature, the vertical and the lateral erosion may have been fairly rapid and a deep channel soon cut. Reaching out on each side, the stream encountered softer rock; the walls of the channel collapsed, forming a tunnel-like structure with a fissure through its roof. The sediment constantly washed down may have formed an obstruction which retarded the water. The stream then flowed at a certain level indefinitely, thus causing a groove in the walls. After a time the obstruction broke, the water fell to another level, another obstruction was made, and another groove cut in. This process continued until the stream was diminished, due to its source diminishing.

The main cavern has been explored for two and a half miles. There are several rooms, large and small. The first one is about three hundred feet from the entrance, and is large enough to encompass a house. In this room and in other parts, stalagmites and stalactites have been found, some a foot in length.

The number of bats which hibernate here is great. They have been observed hanging from the roof in circular masses, six feet in diameter. Three species have been captured: *Myotis subulatus*—the little brown bat, *Vespertilio fuscus*—the big brown bat, and *Lasiurus borealis*—sometimes called the white bat, the hairs being tipped with white.

THE FREEZING POINT OF MERCURY.

The Bureau of Standards has just completed a very careful determination of the freezing point of mercury, using platinum resistance thermometers to measure the temperature. The result of this work gives -38.87°C . (-37.97°F .) for this temperature.

It is interesting to note that as far back as 1862 the English Government, recognizing the importance of an accurate knowledge of this point appropriated £150 to have it determined. The value then obtained, -38.85°C . (-37.93°F .), is in good agreement with that obtained at this Bureau. However, other determinations, made previous to and after this early work, cast some doubt as to its accuracy. It can be seen that knowledge of the freezing point of mercury is of great importance to thermometer makers, as it marks the lower limit to which a mercurial thermometer may be used, and furnishes a method for calibrating or pointing the scale below 0°C . (32°F .).