Division of Palaeontology

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The Caves and Potholes at Rockwood, Ont.

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The following is the full text of the paper read by Prof. Panton on the above subject at the meeting of the Gaeiph Solentifia Society on the 13th lust:-Some time ago while on a trup to Rock-

wood, with studen's of Geology from the Agricultural College, for the purpose of showing them some examples of how water acts upon limestone I was forcibly impressed by a most interesting series of Potholes found in that district, not far from where the somewhat well known caves are seen.

So impressive were these phenomena, that for three consecutive holidays, the students made their way to Rockwood, and on two of the occasions, were accompanied by myself.

A thorough examination of the locality was made, and data collected, which I purpose placing before you this evening, and which should be interesting to a Society that has been established for the purpose of developing the history of our neighborhood whether it be written upou the rooks or pages of a more perishable character.

In treating the subject, the following the origin of the phenomena, that caused their formation.

1-LOCATION.

Rockwood is a small village on the line of the Grand Trunk Railway, situated ahout 8 miles east of Guelph, and 42 west of Toronto. Leaving the station and pro-oceding in the direction of the village, you very soon observe that you are in a place well named -- Rockwood, from the amount of rock in the vicinity. Along the river, which passes through the village are striking exposures of rock, at some places escarpments 50 to 70 feet high made up largely of massive layers of Magnesian limestone, belonging to the Ningara forma-tion of the Silurian system. Fossils are not numerous, Orinoil stems are by far the most common ; a few shells occur, and some fragments of coral, especially the genus Facosites. The fragmentary regenns Faoosites. mains of the Orthoceras are seen at some places, but the fossils are neither common enough, or so well defined as to work up the zeal of young geologists. However, after you have passed over the bridge that leads to some mills and the large quarries and lime kilns near by, you reach localities well suited to arouse enthuciasm in the mind of young students in science. The presence of three large lime kilns demonstrate, that this stone produces excellent lime, exceeding s' ong and well adapted for building phrposes.

As you pass westward, along by the quarries, you obtain a fine view of the escarpment on both sides of the so called river land grand monuments of denudation are before you. In the distance about half a mile is the "Pinnacle" a large isolated piece of high rock, standing midway iu the upper part of the mill pond. But at your side on the south side of the road along which you are travel-ling, your attention is arrested by a great hole at the base of the rocks. This is the entrance to a cave, which on examination proves to be of more than passing interest. In a line almost southeast of this and only a short distance away, but on the top of a short discalce away, but in the top of the bluff, you reach a pothole which rivals some that for years have been a great source of attraction to touriets stopping at Lucerne, Switzerland. Woodcats of these are snattered in every direction, and no one can say that he has made a proper visit to Lucerne unless he has visited the "Glacier Garden" and observed the seven potholes, that are silent monuments of glacial phonomena long since ended-Yet bere at Rockwood we can get a series of potholes larger in some respects and more potnoies larger in some response and many unique than those at which so many thousands gaze in wonder each passing year. The formation and origin of these year. we will consider subsequently.

2 -DESCRIPTION OF THE CAVES.

The entrance to the main cave is 15feet high and obstructed by great masses of rock, which have fallen from the roof. From the top of the cave to the summit of the overhanging rock is 40 feet of solid dolomitic limestone. Proceeding into the overn you observe that the roof is very irregular, sinking at times to 5 feet, then rising to 7 and sinking again. At the mouth it is 29 feet wide and narrows to a width of 161 at a distance of 36 feet from the entrance. Here it is only 5 feet high but on passing this point you reach anoth-er chamber, which widens and has at the left side a small chamber eight by eix feet, but seen narrowing and dipping down till the cave seems to terminate at a point 30 feet farther than the narrow part and 66 feet from the entrance. This is as much of the cave as most visitors see, but bsing accompanied by students of more than or. dinary pluck, endurance and zeal I was successful in securing data which will en-able you to form some interesting con-