

the year. Under the circumstances the choice between drowning and escaping would be a matter of taste as to the manner of exit from life. The Professor crawled ashore, pale, panting, and scared, with not an atom of conceit left in him, and meekly remarked, "Well, I guess I ain't the man I thought I was; and I'll let 1500 weight canoes alone after this." Poor fellow, that object lesson, lasting less than twenty seconds, was worth more to him than a twenty hour lecture; so I did not add to the measure of his confusion, and remained silent.

The last twelve miles we made was in a canyon twelve to fourteen hundred feet deep. For six or seven hundred feet above the water the accumulation of debris made a steep slope up which one could climb with difficulty; but above that was precipitous sandstone cliffs six to seven hundred feet high. Our progress was so slow, and the work so difficult, that I determined to abandon the river route and make our way overland to St. John, taking what we could carry on our backs and caching the rest. Gladman and I spent one day trying to find a way out of the canyon and get a look at the country on top, but we failed and had to go farther up. At noon, on the 6th of October, after making a mile and a half that day, we came to a small creek flowing down a ravine on the east side. I determined to find if exit could be made by this, and after dinner sent Gladman and the Professor to examine it, while I went to a point about a mile further up where I fancied I could see a way out.

About 750 feet of this canyon consisted of clay shale, the upper part of a soft yellowish sandstone, very massive. In places it was of a grayish color, finer in the grain and harder. In this canyon the bed of the river was much obstructed by great blocks of this sandstone which had become loosened and had tumbled over and rolled hundreds of feet into the river. This occurred so frequently that at

no place in the canyon was there more than a hundred yards of the stream free from such obstruction; at one point we saw where a block which would measure at least thirty feet by fifteen by twenty had rolled down the slope, sweeping bush and trees before it for seven or eight hundred feet, and, stopping in the middle of the stream, stood on end like a pillar. From the fresh appearance of the fracture it had made in the timber, I would judge the fall to have occurred only a few days before our arrival. At many points we saw similar masses, all ready for such a plunge, and while musing thus were not a little anxious lest some disturbance should start them down on us.

For several miles I noticed bits of lignite coal in the river, and kept a look-out to find the vein in the shale above, but did not until my climb on the afternoon of the 6th when I found it well up in the shale, not more than one hundred feet below the sandstone or say five to six hundred feet above the river; but the seam is only a few inches in thickness, and therefore practically useless.

Before resuming our journey, I wish to call attention to the similarity of the geological features here to those seen on Peace River at the Ramparts, above Vermillion, and on the Athabasca, from Grand Rapids down, but more especially between here and Peace River. All the way from Nelson up, the lithological character is generally the same as that on the Peace from Vermillion up, excepting in the absence of fossils on the East Branch and Sicannie Chief.

Finding my fancied exit impassable, I returned to camp, when, in a short time, I was joined by my companions.

"Well, what did you find, boys?"

"Oh, we got up; but ——"

"Well, that will do; I did not. We will set to work on our cache at once."

So, selecting four trees standing in the form of a rectangular oblong, we cut them off about eight feet high, and