

utterly worthless, it is believed, save for its fish and furs. West of this line is a broad belt of country including all of Great Bear Lake and generally bounded on the west by the great chain of lakes extending from Great Slave Lake to Lake Winnipeg. This is the wooded belt of the Canadian Northwest, containing much spruce, tamarack, and sub-arctic trees, a rocky and swampy area with some regions of good land. Between this region and the Rocky Mountains is another great belt quite narrow in its northern part along the middle Mackenzie but very broad at its southern limit, the northern branch of the Saskatchewan. This is an area of great plains with considerable timber, and a large extent of the country some day may be valuable for pasturage. Then south of the North Saskatchewan, extending from the Red River valley to the Rocky Mountains, is a land of prairie and plain, one of the finest wheat growing and grazing countries in the world. The general characteristics of most of British Columbia are those of the wooded belt above referred to, and here and there all over the country between the lakes and the Pacific have been found riches in the shape of petroleum, coal, and gold which have developed into or bid fair to become large sources of wealth.

It really is amusing to see the changes that Canada's surveyors and explorers have been making in the maps of twenty years ago. They have been finding new water-ways and changing the courses of the old ones. They have whittled off parts of that wonderful system of lakes and added other parts which once figured as dry land. Lakes as near civilization as Lake Winnipegosis in Manitoba have taken on quite a different appearance, and Lake Mistassini in the Canadian Northeast, once reported almost to rival Lake Superior in size, has been forced to abate its lofty pretensions and now cuts a very humble figure. Within the past three years, Dawson and others have made a running survey of over 100,000 square miles of territory along the head streams of the Yukon, hitherto a *terra incognita*, and Ogilvie's conclusion that the gold diggings on the Yukon are in Canadian instead of Alaskan territory was interesting reading for us and hastened the sending of our expedition which is now locating the 141st meridian, the international boundary line.

We cannot describe here the many notable

explorations recently carried out by the Canadian Geological and Land Departments; their studies in the region between Hudson Bay and Lake Winnipeg, showing the uselessness of that country; their complete surveys of the Frazer, Athabasca, and Churchill Rivers, the mapping of the Cariboo mining district, where much of the country is so rough that pack animals cannot enter it; the exploratory labors east of Hudson Bay; and other important enterprises; but all students of Canadian exploration are grateful for the invention of dry plates in photography, which have enabled the government to embellish its geographical reports with striking and beautiful pictures from regions almost unknown. "No record of exploration," says a report of the Interior Department, "is now considered complete unless it is accompanied by illustrations." Canada also is using the camera in a very interesting way to facilitate her explorations in the Rocky Mountains.

The government is mapping this tangle of lofty summits, and all Alpine clubs and devotees of mountain climbing have been greatly interested for three years past in the graphic reports of these surveyors. Their scrambles above the snow line, clambering far up the slope of great moving glaciers, their toilsome progress as they cut their way through dense underbrush or crawl along the edge of dizzy precipices, their little mishaps, sometimes ludicrous, as when a pack-horse rolls hundreds of feet down the side of a cañon and is found wedged between two trees not at all hurt but painfully astonished, and above all, the splendid panoramas they see upon which no human eye ever rested before, and the order they evolve from this jumble of ranges, spurs, and valleys, have made the Canadian survey of the Rocky Mountains, still in progress, one of the most interesting of recent geographical studies. Now the usual processes of topographical surveying are far too expensive in this difficult and for the most part uninhabitable region, where the aim of the survey is chiefly to perfect the map. Using triangulations, therefore, as the basis of the map, the surveyors work in the topographical features by means of photographs taken on mountain peaks. This process has been used for some years in the Alps at about one-tenth the cost of the ordinary methods of topographical surveying.

Nestled among the mountains are lovely lakes, some of them thirty or forty miles long,