

and his brother set forth on their lonely quest.

From Edmonton, four tons of stores were freighted a hundred miles to the Athabasca River, where canoes were launched for their long voyage. For fifteen hundred miles to the Arctic Ocean this great river, excepting its two rapids, is regularly navigated by large Hudson Bay steamers. It is one of the extraordinary fea-

scribes in popular language the geological character, vegetation, and fauna of the country. He gives in an appendix a classified list of no less than 233 species of plants found in these Northern wilds. Many of them, however, are dwarf willows, mosses, and lichens.

Nearly three hundred miles north of Edmonton he found the watchful members of the Mounted

Police carefully searching the steamboats to detect and confiscate illegal consignments of the white man's "fire-water," which is such a bane to the red man of the wilderness.

Among the strange phenomena of the Athabasca Valley were remarkable tar sand beds extending over an enormous area. The river banks, from three to five hundred feet in height, in warm weather present the appearance of running tar, which is employed for calking the scows on the river. Striking instances of glacial action are also shown, and long sand ridges as level and uniform as a railway embankment. These are attributed to fissures, or splits, in ancient glaciers.

A veritable iron mountain, and that of the most valuable kind, hematite, was found on the banks of the Black Lake, also plenty of wood in the forest to smelt it.

Another strange phenomenon was vast areas of frozen bogs, or glaciers, with the moss still growing on the top, somewhat like the tundras of Siberia.

On Lake Daly, in a severe storm, water-spouts were whirled



MAP SHOWING TERRITORY OF THE TYRRELL EXPLORATION. THE DOTTED LINE SHOWS THE ROUTE.

tures of these northern rivers to see a stern-wheel steamboat puffing its way through these lonely wilds. At the rapids scores of bronzed and busy figures transfer the cargo on tramways over the portage, which in a few hours becomes again an uninhabited wilderness.

Mr. Tyrrell's lucid narrative is marked by the keen observation of a trained, scientific eye. He de-