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ARCTIC TEMPERATURES AND EXPLORATION.

By STUART JENKINS.

AT the recent annual meeting of the Association of Ontario Land Surveyors, held in the city of Toronto, the statement was made that, if the Canadian Government determined to run a meridian to the north pole, Canadian surveyors would carry the work through. As a proof of the faith that is in them, they have appointed a committee to consider and report upon the matter.

The assertion is not as wild as it may seem, and I think it will prove interesting to the public to show what Canadian surveyors have already done, and compare their methods and experience with those of arctic explorers.

The extreme cold of the arctic regions is generally looked upon as the principal bar to exploration in that direction, notwithstanding the fact that men have endured its rigors for years without injury. Take some of the cases on record. In 1743 four seamen went ashore on the island of Spitzbergen from a Russian vessel. A heavy storm drove the ship away before they could rejoin her, and they were left with nothing but a gun and enough ammunition to kill twelve deer. That was their entire outfit, yet they managed to live and keep their health for six years, when three of them were rescued, the fourth having died. No properly organized polar expedition would have to submit to the hardships which they must have endured.

In 1819-'20 Parry wintered on Melville Island in latitude $74^{\circ} 26'$. The greatest cold was experienced in February, when the thermometer fell to -55° F., and for fifteen hours was not above -54° F. The expedition was absent eighteen months, and out of two ships' crews only one man died—of a disease in no way referable to the hardships of the voyage.

Between 1853 and 1855 Dr. Kane passed two winters in Smith's Sound in latitude $78\frac{1}{2}^{\circ}$, and he records the mean temperature of the three summer months as $+33^{\circ}$ F., and of the nine winter months as -16.8° F. As to the possibility of traveling under the conditions existing in these high latitudes, it may be considered as established by the experience of McClintock, who in 1851 reached one of the western points of Melville Island, distant from his winter quarters three hundred and sixty miles in a direct line, a journey which required eighty days going and returning for its accomplishment. Among the things said to have been experienced by arctic explorers three may be mentioned: 1. That men issuing suddenly from their shelter into a temperature of -60° F. fell senseless. 2. That a man rushing out bare-handed