

the ship. She was iced up so much that it became difficult to get around with her, and if she had iced up much more, they might not have been able to get about with her.

The object of the expedition was to ascertain if there was not an earlier period of opening of navigation and a later period of closing than Captain Gordon suggested. There was no doubt about the centre months of the summer. The idea was to get in earlier, and remain later than Captain Gordon, and they did get in earlier. Wakeham said he thought if he had not yielded to Mr. Fisher, and had taken his own way, he would have got in a day or two earlier. He made four round trips altogether, two of them going into Hudson bay, and one of them into Churchill. He also went north into Cumberland Gulf.

The *Diana* got to the bay ahead of the trading ships. They did not go until some time in August, and they went out long before the expedition did. They go out in September. When the *Diana* went to Fort Chimo to pick up Mr. Low, they found the Hudson bay ship had left. They only make one trip. They come down to Churchill and lay off at York. At that time the company had a sailing vessel. Now they have a steamer to serve James bay.

The harbour at Churchill is a good harbour, easy of approach and safe. It is not a very large harbour. Captain Gordon surveyed it, and his report on it is very definite and distinct. There is a strong current running through it. The witness saw no ice in it, and saw no ice in Hudson bay. He did not think the ice in Hudson bay will count for very much. The ice there drifts from shore to shore. With an easterly wind it is on the west side, and with a westerly wind it is on the east side. He does not think much of the ice of Hudson bay ever goes out through Hudson strait at all. The ice that gives trouble in Hudson strait is the ice from Fox's channel and the Baffin's bay ice that is blown in there.

#### THE CLOSE OF NAVIGATION.

There is no doubt, when the strait is properly surveyed and lit, it will render navigation safe, but the climatic conditions are such that you cannot expect navigation there after the end of October. That is on account of the hazardous weather, and that cannot be overcome by lights. There are snowstorms and freezing up to contend with. There is nothing a captain dreads more than a snowstorm at sea. It is worse than a fog. With a fog you generally have calm weather, but with a snowstorm you have a sea and wind. There is considerable tide at Churchill, but not nearly as much as there is in the centre of the strait.

Commander Wakeham said he did not think the Hudson Bay Company sailing vessels are bothered now with ice, and in the olden days the ice that troubled them came from Ross Welcome. It came down along the west shore of the bay and got jammed there.

In Hudson strait the tide is very rapid and strong, and off the mouth of the bay the tide ripp is very heavy. Off the Welcome the ice bothered the sailing vessels in July, the witness understood, but he saw nothing of it. But the agent who was at Churchill, Capt. Haws, who was drowned at Winnipeg the other day, sailed vessels there a good many years, and the witness got a great deal of information about it from him. The navigation will be improved if there are lights in the strait, and if the strait is properly surveyed. It will be a great assistance to vessels if they establish the wireless telegraphy, so that they could get information about the condition of the straits with regard to ice. Of course they have snowstorms down around Halifax and other places.

There is plenty of sea room in Hudson strait, and the shores are fairly bold. There are a few islands close along the south shore. The northern shore is not so good. There are reefs extending out, and one or two places isolated rocks. Apart from the ice the witness considers it an ideal inlet.