

It seems desirable that a *Special Commission* should be appointed to investigate into, and from time to time report upon, all matters which affect the sea fisheries of Canada. The commission suggested should have power to make such necessary regulations as other countries have found desirable for the protection and development of their resources in this direction. As great attention has been directed by scientific men in the United States, of late years, to all questions connected with the sea and river fisheries, it would be very desirable to ask some of these gentlemen to form part of the proposed commission, and to give us the benefit of their experience. If this body were composed of an equal number of representatives from Canada and the United States, it is reasonable to infer that the authorities of the neighbouring republic would acquiesce in such measures as the common sense of all might suggest for adoption. Of course, it would be of little use to make a new code of regulations, however excellent these might be in themselves, unless they are to be properly enforced. The present small fleet of Government steamers would be no more than sufficient to see that they are effectually carried out, and to preserve order along such a large extent of coast.

Since my last report was written, I have examined all the ship worms I have been able to procure from Canadian waters. The Gaspé Bay species, dredged by Principal Dawson, in water-logged wood, is *Xylophaga dorsalis* of Turton, a genus new to America. It must be of very rare occurrence at this locality, for I have dredged in upwards of twenty localities in the Bay without finding it. *Teredo navalis*, Linn., occurs at St. John, N. B., and at Pictou, N. S., I have seen specimens from each of these ports. This is the same species which made such ravages among the piles in Holland, in the years 1731 and 1732. Ship worms of large size are said to be found at Halifax; and Mr. J. J. Fox informs me they are frequent in the hulls of vessels anchored among the Magdalen Islands. I shall be glad to examine and report upon any specimens that may be sent to me from any part of the Dominion. The worms may be best preserved in alcohol, or pieces of the wood burrowed into by them may be forwarded. These latter often contain the valves and pallets of the mollusc, which are sufficient to identify the species.

The use of the dredge throws some light on the feasibility or otherwise of a project which has been much talked of, viz.: that of laying submarine telegraph cables in the Gulf of St. Lawrence. A much better idea of the nature of the bottom of the sea can be got by dredging than by merely using sounding lines. As I have elsewhere shown, the deep-sea mud is not unfrequently dotted over with large and often irregular stones, with ragged edges, and these might ultimately chafe and cut such cables. The approximate temperature (in summer) of the deep-sea mud, and of depths varying from 30 to 313 fathoms, has been ascertained as far as possible. It is highly probable that this temperature is pretty uniform throughout the year. And lastly, by means of such investigations as the present, it is quite feasible to ascertain whether such marine animals exist along a given line as might injure a submarine cable, by boring into it or otherwise.

Montreal, 14th January, 1873.