

8 GEORGE V, A. 1918

Dr. Martin Murphy who made a special investigation of the distribution of *Teredo* in Nova Scotia stated that at Sydney Harbour, Cape Breton island, Nova Scotia, *T. navalis* is "as destructive if not more so than at any of the points on our coast."¹ It is abundant along the coasts of Northumberland strait as far west at least as Shediac.² How much farther northwest its range extends is not known but probably not much farther. Murphy states that the zone of *Teredo*'s operations on the east coast of Nova Scotia begins about Musquodoboit harbour and extends from there to Whitehaven.³ He found that it became scarce on the Atlantic coast between the strait of Canso and Halifax. From Halifax southwest along the Nova Scotia coast only traces of *Teredo* are found and they are neither numerous nor destructive according to Murphy. The writer has not observed *Teredo* on the Bay of Fundy coast of Nova Scotia and Murphy does not appear to have seen it there. Dr. A. G. Huntsman of the St. Andrews biological station informs the writer that "we obtained it once near one of the Western isles, that is very close to Frye's island, in some sunken timber, and at another time we obtained it from some floating blocks which had, quite evidently, drifted in from outside, probably from the Gulf Stream. It is very probable therefore, that *Teredo* is not indigenous to the Bay of Fundy, but comes in periodically in floating wood." Professor Ganong reported in 1885 that "a broad and strong tide-dam was completely undermined and destroyed by them (*T. navalis*) within the space of six years,"⁴ at Frye's island which is located in the lower and wider part of the bay. This author at a later date however modified this statement by saying that the destruction of Frye's island was the combined work of *Teredo* and the crustacean *Limnoria lignorum*. It is possible that it was altogether the work of *L. lignorum* as suggested by Verrill. Whiteaves⁵ records *T. navalis* from St. John in a ship's hull. But that this record represents exotic specimens appears certain from Professor Ganong's statement that in St. John harbour the *Teredo* is not only absent but "ships which enter the harbour infested by them are free from them within two days."⁶ The testimony of Professor Verrill regarding the occurrence of *Teredo* in the Bay of Fundy is important because of his intimate knowledge of the Bay of Fundy fauna. He writes that "so far as I remember I did not find *Teredo navalis* in Bay of Fundy during the seven summers I collected there. I think I did find *T. norvegica* a few times in buoys." . . . "At Eastport, Me., I found *Laminaria* very abundant in piles, fish-weigher stakes, etc., but found no *Teredo* with it there."⁷

At least three factors are probably active in excluding *T. navalis* from the Bay of Fundy. Temperature is doubtless one of these. The area in which *Teredo* is most abundant is, speaking broadly, essentially the same as that of the isolated colonies of oysters in the waters about the southern shore of the gulf of St. Lawrence. Although the waters in winter are much colder than those of the Bay of Fundy, during the critical period of the spawning time they are warmer. Professor E. W. McBride⁸ has pointed out how the existence of the oyster in this region depends upon the warming of the water in the shoal areas where alone they can exist during the spawning season. Whiteaves⁹ still earlier called attention to the special temperature conditions which afforded on the south side of the gulf of St. Lawrence a congenial environment for a northern colony of the Acadian fauna.

¹ Murphy, M. On the Ravages of the *Teredo Navalis* and *Limnoria lignorum* on Piles and Submerged Timber in Nova Scotia and the means being adopted in other countries to prevent their attack. Proc. and Trans. Nova Scotian Inst. Nat. Sci., Vol. V, Part IV, 1882, pp. 357-376.

² Murphy, M. Supplementary Notes on Destroyers of the Submerged Wood of Nova Scotia, Proc. and Trans. N.S. Inst. Sci., Vol. 8, p. 218.

³ Ganong, W. F. The Economic Mollusca of Acadia, N.B. Nat. Hist. Soc. Bull. No. VII, 1888, p. 111.

⁴ Catalogue of Marine Invertebrates of Eastern Canada, 1901, p. 151.

⁵ Ganong, W. F. Nat. Hist. Soc. N.Y. Bull. 4, p. 89, 1885.

⁶ Verrill, A. E. Letter to the author, February 21, 1917.

⁷ The Canadian Oyster, Can. Rec. Sci., Vol. IX, 1905, pp. 154-5.

⁸ Catalogue of Marine Invertebrates of Eastern Canada, p. 15, Can. Geol. Survey, 1901.