

texture are the best, for they take the oil better. Creosote has the advantage also of preserving timbers not only from *Teredo*, but from other destructive agencies, for it is a good antiseptic.

This method has been tried and found good in our own waters, as the following passage from Mr. Murphy's paper proves. Speaking of Sidney harbor, Cape Breton, he says: "Here the *Teredo* is seemingly as destructive, if not more so, than at any point on our coast, and here, about ten years ago, a coal-loading pier was erected, sufficiently large that three ocean-going steamers could load coal at the same time. The pier runs out into the harbor. It was erected entirely of pine trunks, creosoted in Great Britain, and sent out here. It has most effectively withstood the ravages of the *Teredo*, whilst all other piles in the neighborhood had to be renewed twice." Mr. Murphy points out the desirability of the establishment of a creosoting apparatus in Nova Scotia, and of a careful study of means of overcoming the *Limnoria lignorum*.

There are other methods of protecting marine works from *Teredo* which have their value. A timber completely sheathed with metal is safe; hence copper-bottomed ships are not troubled. Docks and wharves have been sheathed with different metals, but these are efficacious only so long as the surface is unbroken. Accident, the action of the water on the plates, etc., will not, however, as a rule, long permit this. A modification of this method consists in covering the timber with short iron nails having square, flat heads. But these must be placed close together, with their edges touching, and this is very expensive. In the *American Naturalist*, Vol. XVI. 1882, p. 367, another method is described as follows: "His machinery cuts out a cylinder two inches thick from between the core and the outside of a log, and of any desired caliber. By retaining the core and filling the cylindrical excavation around it with a special cement, it is thought that the ravages of the *Teredo* could be confined to the outer part of a pile so treated, and the core, which is expected to sustain the needed weight, would be protected by the cement, which in its turn would be preserved from friction by the outer