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destruction than has been ascribed to its ally *Limnoria lignorum*, which Murphy¹ states can, when abundant, destroy soft timber at the rate of half an inch or more every year. Stearns² has recorded two interesting examples of the work of Tereido. He states that "upon the seafront of San Francisco I have known piles of Oregon pine and fir over a foot in diameter rendered worthless in eighteen months." Dr. Dall is quoted by Stearns as having noted a case of the destruction of the supports of a small pier made of piles 6 to 8 inches in diameter near the entrance to Chesapeake bay in six weeks. Prof. A. E. Verrill writes that "*T. naealis* is very abundant and destructive on the southern coast of New England. At my summer home on an island near New Haven it will reduce 2-inch planks and 4-inch stakes to a honeycomb condition in one season—1st July to September—as I have often proved by experience."³ Although only a very thin film of wood separates the innumerable burrows, they in no case intersect or cut into each other.

The time of year at which timber is cut, according to Mr. Miller, is an important factor in determining the extent to which it is subject to or immune from the ravages of the Tereido. "Trees cut during the months from October to January give much greater resistance or are less attractive to the Tereido than the trees cut from February to May. The Tereido is practically inactive during the cold of winter."

One of the peculiarities of the boring habits of Tereido is its aversion to boring from one timber to another, no matter how firmly attached and adjusted they may be. "Over a shipbuilding experience of fifty years our general foreman of works, Mr. John White, observed only two cases where worms had worked from the hull planking into the timbers of vessels."

"Spawning time appears to be about July. Vessels launched in spring and hauled out before July, and those launched in October are practically free of the Tereido; those exposed during the latter part of June and during July, if not protected, being very freely attacked."

"To a great extent the Tereido will attack unprotected vessel hulls as freely as fixed timber, particularly if remaining idle for any length of time. Constant motion through the water, however, appears to hamper the attachment of the spawn to some little extent. Such protection, however, as tarring, copper or marine painting and creosoting proves an effective measure as long as the protecting agent remains intact."

"The point of entry of the borer spawn into the timber is below half-tide mark. A peculiarity is that standing timbers show a severed condition (very much after the fashion produced by the beaver), at from one to two feet above low-water spring tide mark in localities where spring tides have a range of 9 to 11 feet. From this point down the borers work entirely within the timber, not passing the line of the bottom, where this is muddy, but not having the same objection to sand, as shown by the specimen forwarded."

"Mr. Crandall, of the Crandall Engineering Concern, Boston, Mass., has made the statement to me, that if timber could be kept covered with a film of mud, it would be kept immune through the entry of Tereido spawn being prevented. Certain it is, that all other things being equal (particularly temperature and saltiness) the Tereido is much more prevalent and destructive where the surrounding shore and bottom is sandy. In twenty years' experience this office has never observed a creosoted stick affected by the Tereido. The impregnation used is fourteen and sixteen pounds to the cubic foot."⁴

A small amount of creosote appears to be not very effective, since Stearns states that at Christiania, where the Tereido is very destructive, he was told that "all the

¹ Proc. and Trans. N.S., Inst. Nat. Sci., Vol. V, 1881, p. 365.

² Stearns, R. E. C.—The Tereido or Ship-worm. American Naturalist, Vol. XX, 1888, pp. 184-185.

³ Verrill, A. E. Letter to the author, February 21, 1917.

⁴ Letter from H. E. Miller, to the author.