

atively sound. Old Savoy Place, in the city of London, is sustained on piles driven more than six hundred and fifty years ago, and they are yet perfectly sound. The ancient and historic city of Venice consists of brick and stone structures resting upon wooden piles which were driven in the seventh and eighth centuries. One of the piles taken up from the bridge built by the Emperor Trajan across the Danube was found petrified to the depth of three quarters of an inch, while the remainder of the substance was unchanged after an interval of sixteen hundred years. The timber maul-handles, shovels, and other wooden implements found in the ancient mines of Lake Superior still remain in a good state of preservation in cases where they have been immersed in water; and the wheels employed in draining some of the ancient Roman mines in Spain are represented to be in a perfect state of preservation after the lapse of fourteen hundred and fifty years. The ancient piles in the lake habitations of Central Europe retain a remarkable degree of soundness, though driven before the epoch of written history.

Passing beyond the range of human records, we remark the existence, along the Atlantic borders of New Jersey, of extensive buried swamps, in which the trunks of the white cedar (*Cupressus thyoides*, not the "White Cedar" of the West) are found in such a state of preservation that the inhabitants work them up for lumber. So extensive are these deposits of buried tree-trunks that the "mining of timber" has long been a prominent branch of business along some parts of the beach (Fig. 87). They lie from two to fifteen feet beneath the surface. We may form some conjecture in reference to the antiquity of these fossil cedar swamps from the age of the trees which have evidently grown upon spots that had been occupied by still earlier generations of trees. Professor Cook informs us