

ART. XVI.—*Note on the Depth of the Champlain Submergence Along the Maine Coast;* by PHILIP W. MESERVE.

It has been noted frequently that a submergence to a depth of about 200 feet took place along the coast of Maine during the Champlain period. Raised sea beaches are found along the coast on the seaward flanks of low hills such as Black Strap Hill and Poplar Hill, a few

FIG. 1.

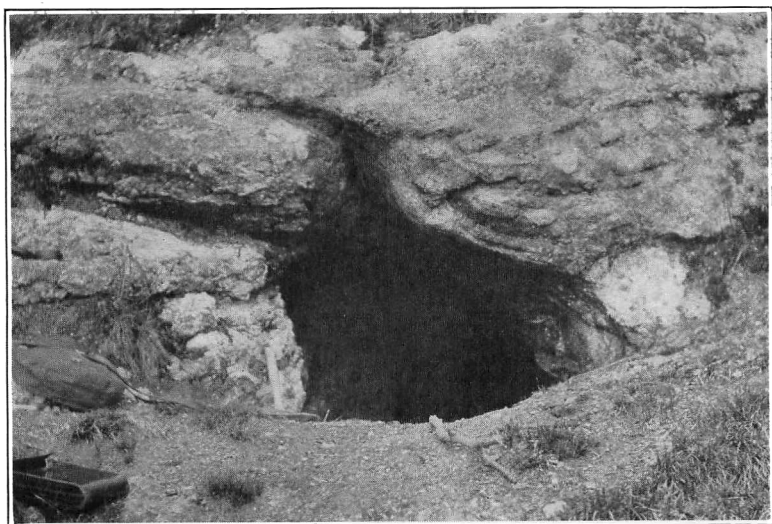


FIG. 1. Champlain Sea-cave, Mt. Ararat, Topsham, Maine.

miles northeast of Portland, Maine^{1, 2} and fossil-bearing marine clays are found widely distributed along the coast at a height not greater than 100 feet.²

The depth of the Champlain submergence can not be told exactly from the height of the raised sea beaches, for subsequent erosion has frequently removed or remodeled the sands and gravels of the beach crests. For this reason, the author desires to place on record a

¹ W. M. Davis, *Physiography of the Coastal Plain of Maine*, in the "Guide to the Vicinity of Boston," Fiftieth Anniversary Meeting of A. A. A. S., 1898, p. 5.

² George H. Stone, *Glacial Gravels of Maine*, U. S. G. S. Monograph, vol. 34, pp. 49-59.

brief description of what he believes to be a sea-cave, formed during the Champlain period. This cave is located on the southeast slope of Mount Ararat, a hill 255 feet high in the town of Topsham, Maine, mapped on the Bath sheet, U. S. G. S. Topographic Atlas. As measured several times by an aneroid, this cave stands 216 feet above the present sea-level. The mouth of the cave is about four feet in diameter: the cave extends horizontally into the rock for a distance of about fifteen feet. The rock of Mount Ararat consists chiefly of highly metamorphosed quartzites and quartz-schists, with associated pegmatites.

In view of the fact that there is good evidence for the former submergence of portions of the coast of Maine to a depth of about 200 feet, it appears quite probable that this cave was eroded by wave action. Two hundred and sixteen feet can be assigned, then, as the depth of the Champlain submergence in the Casco Bay region of the Maine coast.

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