

taken by Mr. Saville. The most important of these is the sculptured human figure which is here reproduced as Plate VI. On Plates VII. and VIII. are photographic reproductions of numerous objects found in the cave, and referred to in the text. A few other cave specimens of peculiar interest are shown in the text by drawings made by Mr. C. C. Willoughby.

The discovery of filed teeth in the cave is of particular interest, owing to the fact that these teeth are filed in the same manner as those in a skull found under one of the ruined buildings at Labná. Similarly filed teeth have been found in several other places in Mexico, and they evidently represent a peculiar custom of a certain group of the ancient Mexicans. The ethnic importance of the several styles of filing and ornamenting teeth, as shown by specimens in the Museum, will be considered in a special paper.

As the manuscript for this report was prepared by Mr. Thompson in 1891-92, it is thought best to print it without any reference to the recent explorations in this cave by Mr. Henry C. Mercer. It will be seen that Mr. Thompson was the earlier explorer, although the publication of his report has been so long delayed. It is due to Mr. Thompson to state that, owing to his residence in Yucatan, he has not had the opportunity to revise the proof of his report.

F. W. PUTNAM,
Curator of the Museum.

HARVARD UNIVERSITY, CAMBRIDGE,
MAY 26, 1897.

SUBSCRIBERS

TO THE PEABODY MUSEUM EXPLORATIONS IN YUCATAN
1888-1891.

HENRY ADAMS,
FREDERICK L. AMES,
JOHN F. ANDREW,
STANTON BLAKE,
CHARLES P. BOWDITCH,
ERNEST W. BOWDITCH,
J. INGERSOLL BOWDITCH,
ALEXANDER COCHRANE,

52

F. H. CUSHING,
WILLIAM H. FORBES,
MARY HEMENWAY,
FRANCIS L. HIGGINSON,
AUGUSTUS LOWELL,
ARTHUR T. LYMAN,
CHARLES J. PAINE,

STEPHEN SALISBURY,
MRS. PHILIP H. SEARS,
MISSES STOKES,
NATHANIEL THAYER,
ELIZABETH C. WARE,
MARY L. WARE,
MRS. SAMUEL D. WARREN

CAVE OF LOLTUN.

REPORT OF EXPEDITION OF 1888-89.

AFTER a week of preparation in Merida, the members of the expedition* went on to Ticul where they were heartily welcomed by Don Antonio Fajardo whose genial face and kind courtesy are most pleasing remem-

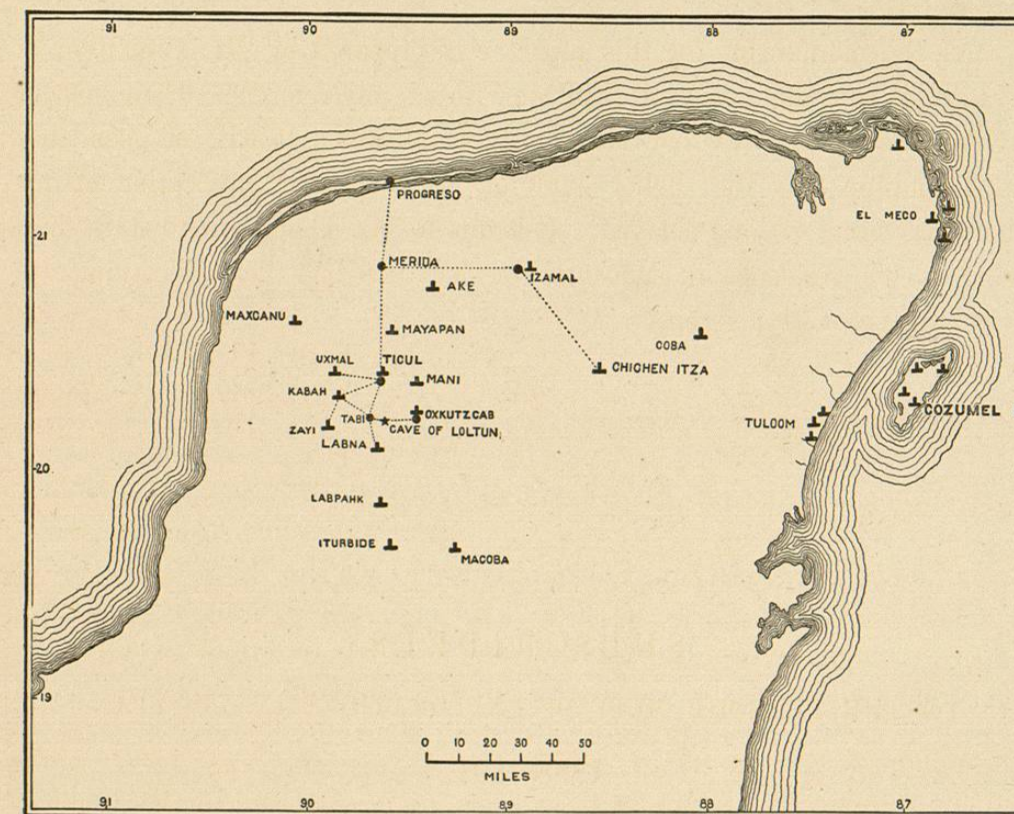


FIG. 1.—MAP OF YUCATAN.

The dotted lines show routes taken by the Peabody Museum Expedition of 1888-1891.

brances of the winter's work. Having partaken of an excellent dinner with his pleasant family, we entered the volans, each drawn by a trio of mules, and were soon on our way to the frontier hacienda of Tabí, whose

* Consisting of EDWARD H. THOMPSON, *Director*; H. N. SWEET, *Photographer*; CLIFTON H. PAIGE, *Civil Engineer*.

long fields of sugar-cane fringe the line between civilization and the wild lands.

Arriving at Tabí, sixteen miles to the south of Ticul and sixty-eight to the south of Merida, where the kindness of Señor Fajardo had placed everything at our disposal, a midnight lunch was served, and hammocks were called into requisition. During the night there were heavy showers. The next morning the cloudy skies promised more rain, but although the forests paths were flooded, we were unwilling to lose valuable time and determined to press on. The Cave of Loltun, situated a league to the east of Tabí, was one of the places to be investigated. Once in the cave, the state of the weather would be a matter of indifference to us. The work could go on without loss of time. Candles, ropes, and provisions were therefore packed, all due preparations made, mules obtained, and before many hours the members of the expedition were at work, each in his department, nearly a hundred feet underground.

Loltun, or the cave of the flowers of stone (Plate I. Fig. 2), is the poetic name given to this cave by the natives. In a region more accessible to tourists it would be world-famed. Its long passages, buried in the depths below, dark as a tomb and as silent, suddenly open into roofless grottos, sun-lit from above, framed in by huge tree-roots and vines, and perfumed by thousands of flowers, that, nourished by the rich, damp soil below, are quickened into fragrance and beauty by the hot sun's rays descending from above.

Several of these grottos, when the sun's rays have the right inclination, are suffused with tints of pale green or rose, rivalling in beauty the famed Blue Grotto of Capri. There are, it is said, eleven of these openings, or mouths, through which the sunlight descends and creates a veritable fairy land.

Entering a mouth, an ancient entrance (Plate I. Fig. 1), as is evidenced by the much-worn stone path-way, the descent is made by primitive ladders,—tree-trunks felled and placed in position, with rounds made from the tree limbs which, placed in notches cut in the tree-trunks by the aid of machetes, are firmly bound in place by the running vines or bejuocos that grow in profusion around the spot.

Arriving at the bottom, after the eyes are accustomed to the twilight effect of the surrounding atmosphere, various evidences of man's previous occupation are seen in the *haultmes*, or water troughs, hollowed out of stone boulders, some holding a quart, others several gallons of the water that, drop by drop, percolates through the roof of the cave. On several sides are constructions that tell of defence and war, barricades roughly built but strong and admirably placed to defend the entrance and prevent surprise to those within (Fig. 2).

This cave, the natives tell me, was used as an occasional refuge

by the Indians during the "War of the Races" in 1847, and these barricades may have been constructed by them at that period, but I doubt it. I believe that, while they may have been made use of by these refugees, they were constructed at a much earlier date, probably by the same people who inscribed the hieroglyphs and symbols upon the walls and boulders of the Inscription Chamber (Chamber 3) to be described further on.

I find the lowest stones of these barricades to be, on an average, buried about eight inches below the present floor. This was not because a slight excavation had been made within which to place the foundation stone, and that a comparatively slight subsequent accumulation had served to give the depth, for careful examination showed that the stones had been simply laid upon the surface and the barricade erected with a front filling of stone rubble. The material which accumulated above and around these base stones may safely be said to have accumulated since their construction, not, as in the case of the ruined edifices, since their disuse or destruction.

In this accumulation are found quantities of potsherds. The first four inches from the level of the present floor contains comparatively few, except where the action of running

water had changed the natural order of things. The remaining four inches, extending down to the ancient floor upon which the barricades rest, contains large quantities of them. Most of these potsherds are undeniably of ancient origin.

These barricades were probably garrisoned by persons constantly on guard to prevent surprise. This garrison, naturally, used clay vessels for many purposes; their food was cooked and probably brought to them in clay vessels; these, by accident, became broken, and the larger fragments were used as receptacles, as is the custom to-day; the remainder were trampled underfoot as refuse, and became a part of the general accumulation. When the cave was abandoned, the accumulation went on, but free of potsherds, and only by agencies in which the hand of man had no part.

Thus we can believe that the layer of material plentifully mixed with

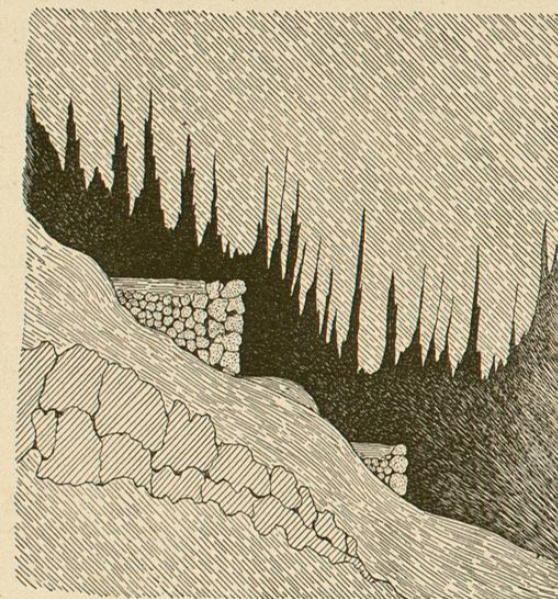


FIG. 2.—VERTICAL SECTION, SHOWING BARRICADES.

potsherds represents the intervening period between the construction of these barricades and their abandonment as a defence; and, as I have noted, this act was probably coeval with the abandonment, as a habitation, of the cave itself. The layer free from potsherds would then represent the intervening period between the date of abandonment and the present day.

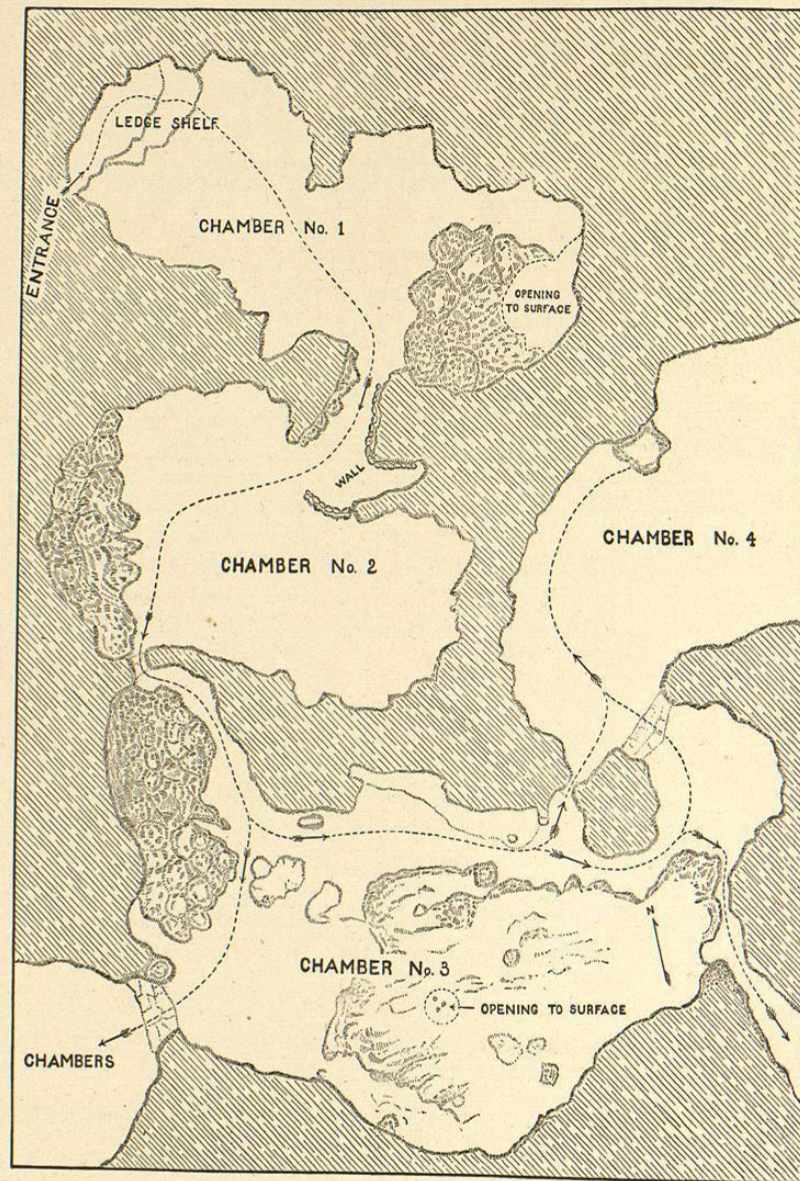


FIG. 3.—PLAN OF THE PRINCIPAL CHAMBERS OF THE CAVE OF LOLTUN.

It is to be remembered that while the two portions of the accumulation before mentioned are of equal thickness, each four inches, it does not follow that equal periods of time were necessary to produce them. As a factor in the process, man would undoubtedly, by his movements and the pressure of his feet, render the accumulation more dense and compact

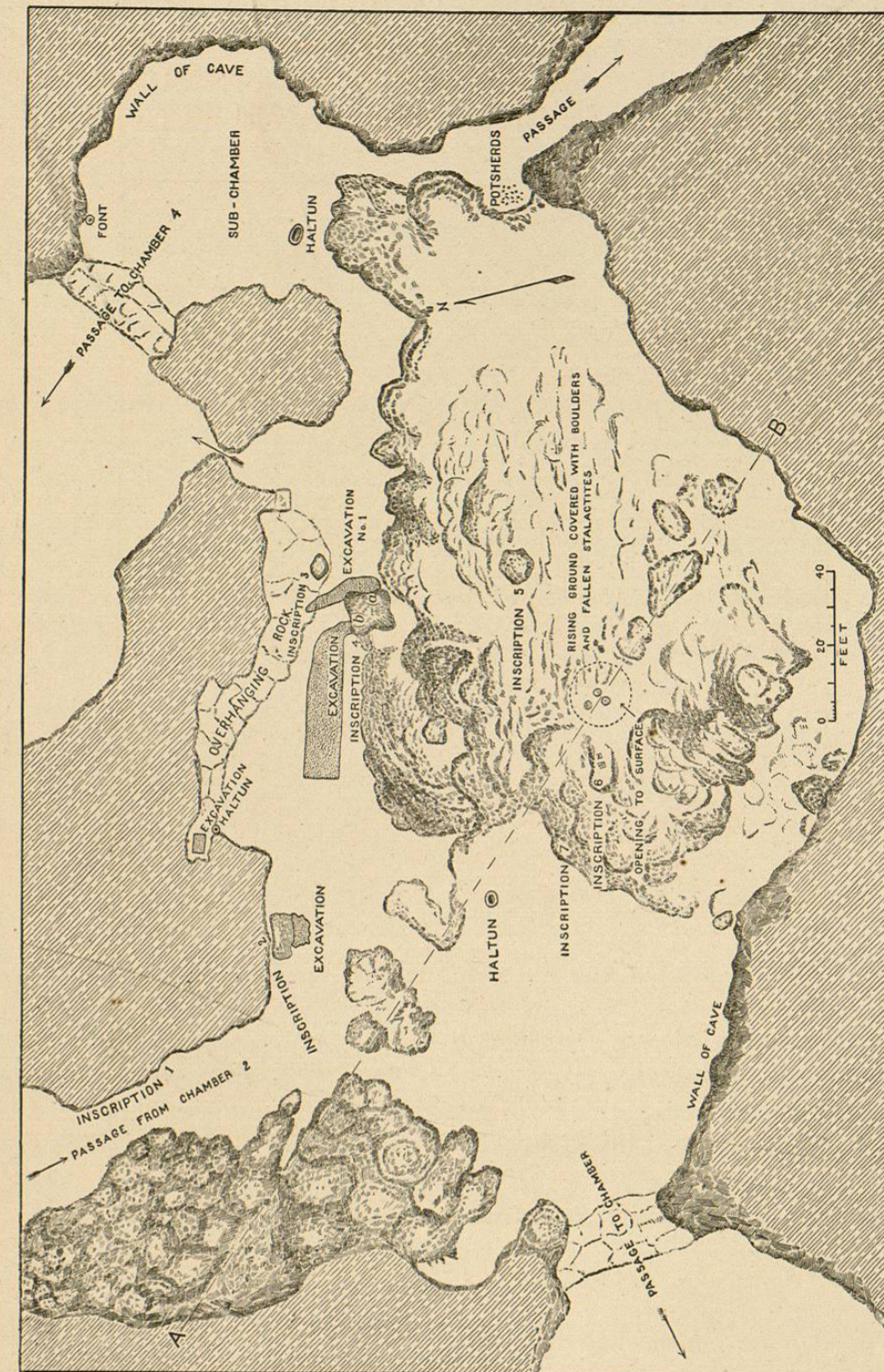


FIG. 4.—PLAN OF CHAMBER 3 (INSCRIPTION CHAMBER), CAVE OF LOLTUN.