

Concrete Evidence for the Book of Mormon

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Helaman 3:7 "The people who went forth became exceedingly expert in the working of cement."

Helaman 3:7-11 reports that Nephite dissenters moved from the land of Zarahemla into the land northward and began building with cement. "The people . . . who went forth became exceedingly expert in the working of cement; therefore they did build houses of cement," "all manner of their buildings," and many cities "both of wood and of cement." The Book of Mormon dates this significant technological advance to the year 46 B.C.

Recent research shows that cement was in fact extensively used in Mesoamerica beginning largely at this time. One of the most notable uses of cement is in the temple complex at Teotihuacan, north of present-day Mexico City. According to David S. Hyman, the structural use of cement appears suddenly in the archaeological record. Its earliest sample "is a fully developed product." The cement floor slabs at this site "were remarkably high in structural quality." Although exposed to the elements for nearly two thousand years, they still "exceed many present-day building code requirements."¹

After its discovery, cement was used at many sites in the Valley of Mexico and in the Maya regions of southern Mexico, Guatemala, and Honduras. It was used in the construction of buildings at such sites as Cerro de Texcotzingo, Tula, Palenque, Tikal, Copan, Uxmal, and Chichen Itza. Further, the use of cement "is a Maya habit, *absent* from non-Maya examples of corbelled vaulting from the south-eastern United States to southern South America."²

Mesoamerican cement was almost exclusively lime cement. The limestone was purified on a "cylindrical pile of timber, which requires a vast amount of labor to cut and considerable skill to construct in such a way that combustion of the stone and wood is complete and a minimum of impurities remains in the product."³ The fact that very little carbon is found in this cement "attests to the ability of these ancient peoples."⁴

John Sorenson further noted the expert sophistication in the use of cement at El Tajin, east of Mexico City, after Book of Mormon times. Cement roofs covered areas of seventy-five square meters! "Sometimes the builders filled a room with stones and mud, smoothed the surface on top to receive the concrete, then removed the interior fill when the [slab] on top had dried."⁵

The presence of expert cement technology in pre-Hispanic Mesoamerica is a remarkable archaeological fact, inviting much further research. Cement seems to take on significant roles in Mesoamerican architecture close to the time when the Book of Mormon says this development occurred. It is also a significant factor in locating the Book of Mormon lands of Zarahemla and Desolation, for Zarahemla must be south of areas where cement was used as early as the middle first century B.C. Until samples of cement are found outside of the southwest areas of North America, one may reasonably assume that Book of Mormon lands were not far south of the sites where ancient cement is found.

Footnotes

1. David S. Hyman, *A Study of the Calcareous Cements in Prehispanic Mesoamerican Building Construction* (Baltimore: Johns Hopkins University, 1970), ii, sect. 6, p. 7.
1. George Kubler, *The Art and Architecture of Ancient America*, 2nd ed. (Baltimore: Penguin, 1975), 201; italics added.
3. Tatiana Proskouriakoff, *An Album of Maya Architecture* (Norman: University of Oklahoma Press, 1963), xv.
4. Hyman, *A Study of the Calcareous Cements*, sect. 6, p. 5.
5. John Sorenson, "Digging Into the Book of Mormon," *Ensign* 14 (October 1984): 19.