When Did Cement Become Common in Ancient America?

“The people who went forth became exceedingly expert in the working of cement; therefore they did build houses of cement, in the which they did dwell.” Helaman 3:7

The Know

In the mid-first century BC, Mormon reported that some Nephite dissenters “did travel to an exceedingly great distance” into “the land northward,” where they found “large bodies of water and many rivers” (Helaman 3:3–4). There was “little timber” in the region, and these people “became exceedingly expert in the working of cement,” and thus built “houses of cement,” and even built “many cities, both of wood and of cement” (vv. 7, 9, 11).

Ancient American cement was made using limestone, and has, thus far, only been found in Mesoamerica. While some people were aware of pre-Columbian American cement in the early 19th century, its origins, history, and development remained obscure well into the 20th century.

In 1970, David S. Hyman was “not able to uncover clues relative to the origins of American cement manufacturing.” The earliest samples he had found dated to the first century AD but were so “technically well advanced” that Hyman was convinced there must have been earlier, less developed forms.

Since that time, earlier precedents have indeed been found. In a 1991 report, Matthew G. Wells documented that a “limey whitewash,” which was “not structural” but “is believed to be a precursor to later structural developments,” was in use as early as the ninth century BC. During the Middle Preclassic period (ca. 800–300 BC), “the Maya of the lowlands had discovered … that if limestone fragments were burnt, and the resulting powder mixed with water, a white plaster of great durability was created.”

According to Mayan experts Michael D. Coe and Stephen Houston, it was not until the Late Preclassic period (300 BC–AD 250) that the Maya “quickly realized the structural value of a concrete-like fill made from limestone rubble” and lime-rich mud. This led to “an explosion of activity around 100 BC.” One area where cement was used extensively was the city of Teotihuacán in central Mexico, which some Book of Mormon scholars consider to be in the land northward.

These discoveries place the development and expansion of lime cement in Mesoamerica for structural building construction very close to the same period that the...
cement mentioned in the Book of Mormon becomes widespread in the northern lands.

**The Why**

Despite the fact that pre-Columbian cement had been known to some in the early 19th century, the Book of Mormon was criticized for this point as recently as the early 20th century. In 1929, Heber J. Grant related a story from his youth where a fellow with a doctorate “ridiculed [him] for believing in the Book of Mormon.” This was because it mentioned that “people had built their homes out of cement and that they were very skillful in the use of cement.”

John L. Sorenson observed, “The first-century-BC appearance of cement in the Book of Mormon agrees strikingly with the archaeology of central Mexico.” Both Sorenson and John W. Welch remarked, “No one in the nineteenth century could have known that cement, in fact, was extensively used in Mesoamerica beginning at about this time, the middle of the first century BC.” And it is more than the mere mention of cement. As Welch put it, “The dating by archaeologists of this technological advance to the precise time mentioned in the book of Helaman seems far from knowable to anyone in the world in 1829.”

While other examples of alleged anachronisms have revealed the value in being patient and waiting for new light from archaeology, this example teaches another kind of lesson: sometimes, even well-educated and well-intended people can be wrong (cf. 2 Nephi 9:28–29).

Rather than panicking at overconfident dismissals or jumping to presupposed outcomes, it is always wiser to continue to investigate the facts to the best of one’s ability. In some cases, further time and patience may be necessary to bring additional clarity and understanding, but in other cases—as with cement—the concrete evidence that people can confidently build upon is gratefully already available.

**Further Reading**

Matthew Roper, “Exceedingly Expert in the Working of Cement (Howlers #9),” Ether’s Cave: A Place for Book of Mormon Research, July 1, 2013, online at etherscave.blogspot.com.


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Notes


2. In a letter written to President Heber J. Grant, dated March 1, 1932, B. H. Roberts shared some sources from the late 18th and early 19th century which mentioned the use of cement in the construction of buildings by pre-Columbian Native Americans. A copy of this letter is in Book of Mormon Central’s possession.


4. Hyman, Precolumbian Cements, ii; sec. 6, p. 15.


7. Coe and Houston, The Maya, 81. The full quote mentions “rubble and marl,” which is a “lime-rich mud or mudstone which contains variable amounts of clays and silt.” See Wikipedia, s.v. “Marl,” online at wikipedia.org.


crete structures which was radiocarbon dated to ca. 50 BC– AD 110, although both dated the use of concrete at their respective sites to later phases of development. For Latter-day Saint discussion connecting Teotihuacán to the land northward, see John L. Sorenson, An Ancient American Setting for the Book of Mormon (Salt Lake City and Provo, UT: Deseret Book and FARMS, 1985), 266–267; Joseph L. Allen and Blake J. Allen, Exploring the Lands of the Book of Mormon, revised edition (American Fork, UT: Covenant Communications, 2011), 193–213; Brant A. Gardner, Traditions of the Fathers (Salt Lake City, UT: Greg Kofford Books, 2015), 327–337.

10. This story is related in Heber J. Grant, Conference Report, April 1929, p. 129; cited in Matthew Roper, “Exceedingly Expert in the Working of Cement (Howlers #9),” Ether’s Cave: A Place for Book of Mormon Research, July 1, 2013, online at etherscave.blogspot.com (accessed August 8, 2016). Roberts to Grant, March 1, 1932, identified the antagonist as a Mr. Morgan, brother of John Morgan.


12. Sorenson, “How Could Joseph Smith Write So Accurately,” 287. Welch, “A Steady Stream,” 372–373, differs only slightly in wording: “No one in the nineteenth century could have known that cement, in fact, was extensively used in Mesoamerica beginning largely at this time, the middle of the first century BC.”


15. H. Curtis Wright, Introduction, in John A. Tvedtnes, The Book of Mormon and Other Hidden Books: “Out of Darkness and Unto Light” (Provo, UT: FARMS, 2000), ix–xii, similarly tells the story of a family in the Midwest which was bombarded with critical material dismissing the ancient practice of writing on metal plates, a practice which was already well-attested at the time of the criticism.