

GLASS IN THE BOOK OF MORMON

by Mark F. Cheney

Upon opening the Book of Mormon to the Book of Ether we find the brother of Jared's discourse with the Lord regarding his need for light in the ships that he had built according to the Lord's instructions (Ether 2:19-25 & 3:1-6). This part of the story is thrilling because it precedes the brother of Jared's vision of the Savior's body as it would appear in the flesh, however, of particular interest at this time is the brother of Jared's quotation of the Lord in Chapter 2, verse 23, "...ye cannot have windows, for they will be dashed to pieces..." Some critics of the Book of Mormon's authenticity have stated that the mention of glass in the Book of Ether was anachronistic. This brief article addresses this criticism.

The question arises whether circa 2000 B.C. (give or take a century or so) these ancient people were familiar with windows at all. In Chapter 3, verse 1, in describing the "*sixteen small stones*" which were "*molten out of a rock*" by this faithful prophet, we read that "*...they were white and clear, even as transparent glass...*" Evidently the brother of Jared did have experience with clear glass and windows.

Directly related to the time of Babel and the Jaredite group was an anecdotal story told in the book "Glass" by William S. Ellis (p. 14, Avon, 1988): "I went one day to Babylon, *the* Babylon, where I stood on flat, brown ground amid some stones of ruins, and listened as an Iraqi ... told me, "*This is the place, right here, where the Gardens of Babylon were.*" I asked him if glass had been found during the excavations, and he said, "*Much glass. They have taken glass rods from this ground that were made **more than twenty-five hundred years before Christ**...*" (bold by this author).

In reviewing an old set of Encyclopedia Britannica (1959) which was readily at hand, relates the following history of early glass:

"Little is known of the earliest phases of glass-making. It is not even certain in which of the riverine civilizations of the ancient near east glass was first made. The earliest wholly glass objects (as opposed to objects of other materials covered with glaze) from Egypt are beads that date from some time after the 6th dynasty; that is, after about 2500 B.C. Possibly earlier than these is a green glass rod that may go back as early as 2600 B.C., found at Eshnunna in Babylonia, and a small piece of blue glass found at

Eridu, dating from before 2200 B.C." ("Glass", page 409) This closely correlates with the time of the Jaredites. Reading further is found the following statement:

"Glass is known to have been made on the palace site of Tel el Amarna, the residence of Ikhnaton (c. 1375-54 B.C.), and the number of fragments found in and near the palace of Amenhotep III (c. 1408-1375 B.C.) at Thebes suggests that it was made there also. This great period of activity seems to have died down after the 14th century B.C., and after the 21st dynasty (about 1000 B.C.) appears to have ceased altogether."
("Glass", page 409)

Continued reading explains that the excavation of Tel el Amarna was not done until around 1887 A.D., long after the time of Joseph Smith. In fact, this encyclopedia states that:

"There was no real excavation in Egypt, other than the opening of a tomb, till the 1850s and 1860s..." (see "EGYPT-ARCHAEOLOGY", page 35).

In fact, it is likely that few if anyone in 1820s America, including Joseph Smith, knew that the ancients had any knowledge of glass-making at all.

Further in the encyclopedia is found the following statement under the topic "window":

"In Roman Imperial times the glazed window first definitely appears, and fragments of glass in a bronze frame have been found in Pompeii, as well as many other fragments of glass in the remains of Roman villas in England." ("Windows", page 657)

The following excerpt is taken from <http://www.cmog.org/article/origins-glassmaking?id=5634> .

As early as 3,300 years ago, ritual instructions for glassmaking in Mesopotamia were written on clay tablets in a *cuneiform* script. These instructions were copied and recopied over the centuries. One group of clay tablets detailing glassmaking is from the library of King Assurbanipal (668-627 B.C.) and is currently housed in the British Museum. Part of the translation of the tablets (from Glass and Glassmaking in Ancient Mesopotamia by Leo Oppenheim) follows:

"When you set up the foundation of kiln to make glass, you first search in a favorable month for a propitious day, and only then you set up the foundation of the kiln. As soon as you have completely finished in the building of the kiln, and you go and place Kubu-images there, no outsider or stranger should enter the building thereafter; an unclean

person must not even pass in front of the images. You regularly perform libation offerings before the Kubu-images. On the day when you plan to place the glass in the kiln, you make a sheep sacrifice before the Kubu-images, you place juniper incense on the censer, you pour out a libation of honey and liquid butter, and then only, you make a fire in the hearth of the kiln and place the glass in the kiln...

If you want to produce zagindurû-colored [greenish type of lapis lazuli] glass, you finely grind, separately, ten minas [about one pound] of immanakku-stone [sand], fifteen minas of naga-plant ashes, and 1 2/3 minas of 'white plant.' You mix these together. You put them into a cold kiln which has four fire openings, and arrange the mixture between the four opening.... You keep a good and smokeless fire burning until the glass glows golden yellow. You pour it on a kiln-fired brick and this is called zukû-glass.

You place ten minas of "slow" copper-compound in a clean dabtu-pan. You put it into a hot chamber kiln... You crush and grind finely ten minas of zukû-glass. You open the door of the kiln and throw the ground glass upon the copper compound...When the glass assumes the color of ripe grapes, you keep it boiling for a time...After it has become yellow [hot], you observe some drops forming at the tip of the rake. If the glass is homogeneous, you pour it inside the kiln in a new dabtu-pan, and out of the cooled-off kiln emerges zagindurû-colored glass."

This ancient recipe describes much superstitious ritual, but it also includes the same basic ingredients that have been used in making glass for many centuries, if not millennia.

Hugh Nibley includes this commentary in his book Lehi in the Desert; The World of the Jaredites; There were Jaredites:

"This would make the invention of glass far older than anyone dreamed it was until the recent finding of such objects as Egyptian glass beads from "the end of the third millennium B.C."50 and "plaques of turquoise blue glass of excellent quality" in the possession of one of the very earliest queens of Egypt.51 "Very little . . . is known," writes Newberry, "about the early history of glass," though that history "can indeed be traced back to prehistoric times, for glass beads have been found in prehistoric graves."52 We need not be surprised if the occurrences of glass objects before the sixteenth century B.C. "are few and far between,"53 for glass rots, like wood, and it is a wonder that any of it at all survives from remote antiquity. There is all the difference in the world, moreover, between few glass objects and none at all. One clot of ruddy dirt is all we have to show that the Mesopotamians were using iron knives at the very beginning of the third millennium B.C.—but that is all we need. Likewise the earliest dated piece of

glass known comes from the time of Amenhotep I; yet under his immediate successors glass vases appear that indicate an advanced technique in glass working: "they reveal the art in a high state of proficiency; that must be the outcome of a long series of experiments," writes Newberry.⁵⁴

<http://lehislibrary.wordpress.com/2008/12/11/bulls-eye-glass-in-the-book-of-ether/>

It was refreshing to read in a news article about a recent scientific discovery, the statement of a prominent scientist, "The public has the misconception that science is about facts, but science is about mysteries." (Victor Baker, professor of planetary sciences, University of Arizona in the Arizona Republic). The Book of Mormon could help unveil some of those mysteries, but not merely by the scientific method. Some things come only by prayer and fasting.

Only because the Book of Mormon is a true account were these simple facts verifiable in the first resource checked. Of course, initial testimonies of the Book of Mormon should be obtained through Moroni's simple promise to ask of God (Moroni 10:4-6), but these things serve to strengthen our testimonies further after that confirming experience.