

SOLOMON'S TEMPLE AND SOLOMON'S MINES

I. The Seven Wonders of the World

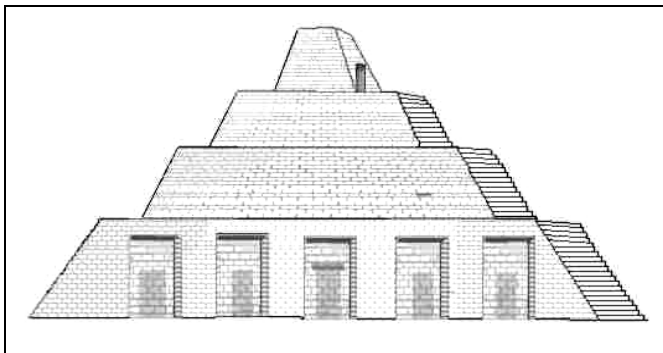
For several centuries after the death of Alexander the Great, Greek culture ruled the part of the world centered on the Mediterranean Sea. Historians call this culture the "Hellenistic world" after Hellas, the name the ancient Greeks used. The Hellenistic world endured for about 300 years until Rome rose to great power in the first century BC.

Hellenistic culture was one of the four great civilizations which the Holy Spirit predicted through the prophet Daniel (Daniel 2:39, 7:6, 8:21). It is not surprising, therefore, that this culture produced many technological wonders and became enamored with additional wonders that had preceded them. Eventually the idea grew of defining the greatest technological wonders of all time. Since about 250 BC that list has been known as the "Seven Wonders of the World" as listed below.¹

Seven Wonders of the Ancient World

Wonder	Date BC
1. Pyramids of Giza	c. 2000
2. Hanging gardens and walls of Babylon	c. 600
3. Pharos lighthouse at Alexandria	270
4. Statue of Zeus at Olympia	c. 450
5. Colossus of Rhodes	c. 270
6. Temple of Artemis (Diana) at Ephesus	550
7. Mausoleum at Halicarnassus	353

Only the Pharos lighthouse and the Colossus of Rhodes were built in Hellenistic times. However, all seven were located in or near the Hellenistic world, which due to Alexander's conquests included Egypt. Each of these wonders was remarkable. For example, the pyramids of Giza are the largest post-Flood stone structures and are the only one of the seven still standing. Until the Middle Ages when the



*The Hanging Gardens of Babylon May Have Been Cultivated
Atop the Tower of Babel,
Restored by Nebuchadnezzar c. 600 BC*

Muslims destroyed the Pharos lighthouse, it had stood for nearly 1500 years, far longer than any structure of our times is likely to last. Nevertheless, this list should really be called the Seven Wonders of the *Hellenistic* World, because other stupendous wonders have existed at other times and places. **One of these was the temple which King Solomon built in about 1000 BC.**

II. The Wealth of Israel Under Solomon

We often think of the biblical Israelites as a nomadic or pastoral people. For Israel under Solomon this stereotype is wrong. During Solomon's reign Israel was a great nation, and the capital city of Jerusalem was "the joy of the whole earth" (Psalm 48:2). Our stereotype of ancient nations is that they were relatively isolated and bartered only with near neighbors, but this is not the way the Bible describes Israel under Solomon.

"And all the earth sought to Solomon, to hear his wisdom," the Bible says (1 Kings 10:24, 2 Chronicles 9:23).² Israel was not an isolated nomadic nation. 1 Kings 10 describes the queen of Sheba's visit to Solomon;³ verse 10 says she gave Solomon 120 talents gold, plus other gifts. A talent was a unit of weight equal to 120 lb,⁴ so she gave Solomon 14,400 lb or more than seven tons of gold. So much for the idea that ancient people were always poverty-stricken traders! **At \$400 per ounce of gold, the queen of Sheba's gift was worth about \$100 million.**⁵

Solomon's personal income included 666 talents of gold annually from levy and tribute (1 Kings 10:14; 2 Chronicles 9:13), or some \$500 million per year in modern money. In addition, there was additional gold flowing into the country from the activities "of the merchantmen, and of the traffic of the spice merchants, and of all the kings of Arabia, and of the governors of the country" (1 Kings 10:15); Solomon's navy regularly brought gold and silver from Tarshish as well (1 Kings 10:22-23).⁶

Archeology has confirmed the wide reach of Israel's commercial voyages during Solomon's time. Solomon's "ships, made and manned by Phoenicians, used to sail from there to distant Ophir and back (1 Kings 9:26-28).⁷ Indeed, Solomon "exceeded all the kings of the earth for riches" (1 Kings 10:23, 2 Chronicles 9:22). His throne was so richly appointed with gold that "there was not the like made in any kingdom" (1 Kings 10:20, see picture on next page). **The country was awash in gold.**

Israel under Solomon had more gold pouring into it than even fabled colonial Spain of the 1500s when golden galleons delivered a continuous stream of wealth to Madrid. The result was that under Solomon silver, normally considered a precious metal, was considered worthless. As the Bible puts it, Solomon made "silver to be in Jerusalem as stones" (1 Kings 10:27, 2 Chronicles 9:23). All of Solomon's drinking vessels were gold; "none were of silver; it was nothing accounted of" (1 Kings 10:21, 2 Chronicles 9:20).



Solomon on His Throne (see previous page)

III. Solomon's Temple: Eighth Wonder of the World

1 Kings chapters 6-7 describe the building of Solomon's temple.⁸ **Its dimensions were ample but not exceedingly large.** The floor plan was 60 cubits by 20 cubits (2 Chronicles 3:3).⁹ The temple would have covered about two football fields. Among the Seven Wonders of the Ancient World, the Hanging Gardens of Babylon and the Temple of Artemis were comparable in size, and the pyramids of Giza were much larger. Many modern buildings have more floor space than Solomon's temple.

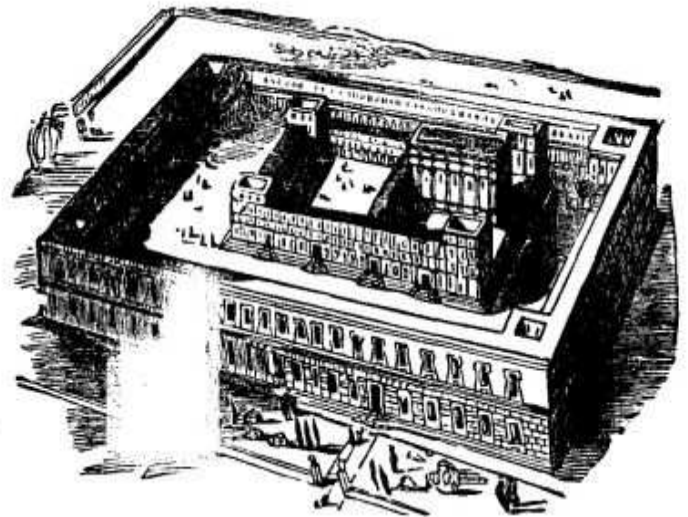
What set the temple of Solomon apart from other wonders was its incredible expense: "This temple was probably richer in its ornamentation and more costly than any [other ancient temples], because of the large amount of gold used in its construction."¹⁰ All the gold in Solomon's temple would make up a cube six meters on a side.¹¹ This is about one-thirtieth of all the gold ever mined up to the present. **In other words, only thirty buildings like Solomon's temple would contain all the gold in the world today.** In Solomon's time much less gold had been mined, and the temple contained a much larger fraction of the global store of gold then available.

Construction of the temple included 100,000 talents of gold and 1 million talents of silver, worth respectively \$77 billion and \$10 billion today.¹² **Including the cost of cedar wood and other construction materials, the wealth of Solomon's temple was about one hundred billion dollars.** There is no building in today's world of comparable value. But even this astronomical value may be grossly understated. In recent

decades, as the world's financial systems have moved increasingly toward exclusive use of paper as money rather than precious metals, the price of gold has been suppressed.¹³ Indeed, most of the world's "money" now consists of outstanding loans called "derivatives" made primarily among international banks and multinational corporations. The entire world gold supply is about one-half of one percent of global derivatives.¹⁴

Though it appears unlikely to happen, if the derivatives market crashed, the price of gold could explode to 200 times its current level. Then the wealth of Solomon's temple would be equivalent to 20 trillion dollars, or is several times the annual budget of the U.S. federal government.

No wonder that Nelson Glueck, one of the foremost archeologists of the mid-1900s, wrote, "Almost everything [Solomon] touched turned into the glittering gold of accomplishment."¹⁵ This assessment, of course, overlooks the fact that Solomon had God's blessing because of his humble plea for godly wisdom early in his reign (1 Kings 3:9, 12-13; 2 Chronicles 1:11-12). As Israel turned away from God, they were plundered again and again, culminating in the horror of Titus' conquest of Jerusalem in AD 70.



Solomon's Temple

IV. Solomon's Mines

Archeological discoveries in the early 1900s revealed that King Solomon's government supervised one of the largest copper mining operations in history.¹⁶ His Government also designed and managed the largest metal smelting operation known in antiquity. These discoveries moved archeologist Nelson Glueck to say:

"[I]t may be stated categorically that no archaeological discovery has ever controverted a Biblical reference. Scores of archaeological findings have been made which confirm ... statements in the Bible. And, by the same token, proper evaluation of Biblical descriptions has often led to amazing discoveries."¹⁷

Indeed, the accuracy of the biblical record, overlooked by others, made Glueck's discoveries possible. In Glueck's own words,

"The whereabouts of Solomon's long-lost port city of Ezion-geber was for centuries an unfathomable mystery, because no one paid attention to the Biblical statement that it was located 'beside Eloth, on the shore of the Red Sea, in the land of Edom' (I Kings 9:26; 10:22). And that is exactly where we found it, in the form of the small, sanded-over mound of Tell el-Kheleifeh on the north shore of the Gulf of Aqabah, which is the eastern arm of the Red Sea. Memory of its location had been snuffed out like the flame of a gutted candle. Assuming, however, as we did, that the Biblical statement was literally correct, it was not too difficult to rediscover it."¹⁸ This discovery "verified completely the sometimes questioned description of the Promised Land as being in part a land 'where stones are iron and out of whose hills you can dig copper' (Deuteronomy 8:9)."¹⁹

The smelting operations at Ezion-geber were sophisticated, using the "Bessemer process," a technique re-discovered in the 1800s for refining large amounts of metal. Glueck elaborated at length on this process: "What puzzled us greatly when we first commenced operations at Tell el-Kheleifeh was what seemed to us to be the particularly unfortunate location of the site. Situated in the center of the Arabah rift, which is banked on either side by high hills leading, respectively, into Arabia and Sinai, it is open to the full fury of the almost constant winds that blow fiercely down the Wadi Arabah, as if forced through a wind tunnel. ... The architects of Ezion-geber could not possibly have chosen a more inclement site along the entire shoreline. ... Their seeming madness, however, was soon explained.

"The very first building brought to light at the northwest corner of the mound turned out to be the largest and most elaborate smelter ever discovered in antiquity. Each of the walls of its rooms was pierced by two rows of carefully constructed apertures, which could only be flues. The upper rows opened into a system of transverse air-channels, utilizing the winds blowing almost constantly from the north and north west to fan the flames in the furnace rooms. The lower rows were intended to permit the gases formed in one chamber to penetrate into the second and so on and preheat its contents. ... The ores were given a preliminary 'roasting' at the individual mining sites in the Wadi Arabah, and then brought for further smelting and refining to Ezion-geber. Layers of ore were placed between layers of lime in large, thick-walled, pottery crucibles.

"Piles of charcoal from the wooded hills of Edom were packed all around them in the open furnace rooms of the smelter, with the fires being ignited in successive order at proper intervals of time. No hand-bellows system was necessary, because with brilliant calculation, Solomon's engineers had harnessed the winds to furnish a natural draft. The Bessemer principle, discovered less than a century ago, was, in essence, already familiar some three millennia back. So well had the smelter been constructed, that when it had been completely exposed, we could place our hands on the flue holes in the wall at the south end of the structure and feel the

air emerging, which had entered through the flue holes on the north side, a number of rooms away."²⁰

Aside from the technological need for wind currents to power the Bessemer process, **the geographical location of Ezion-geber was critical to Solomon's plans for global trade:**

"It was first under Solomon's reign that the Negev [southern Israel] assumed its proper place in the make-up of the burgeoning state. David's victories had made this possible. It had become evident that the kingdom of Israel could not long endure, let alone thrive, without the Negev. It was the key to Egypt and Arabia. It barred or opened the way to India and Africa. ... It was inevitable that Solomon should have built the famous seaport and great copper smelter and industrial center at Ezion-geber on the north shore of the eastern arm of the Red Sea. It was natural that his ships should have carried its finished products to distant Ophir and brought back in exchange the frankincense and spices and gold and other precious goods of Arabia and India and Africa."²¹

V. Conclusions

Solomon's Israel was not the stereotypical poor nation of Bible times. There was fabulous wealth, together with the global commercial and technological activity necessary to procure and maintain that wealth.

Notes

1 Clayton, P.A., and M.J. Price, *Seven Wonders of the Ancient World*, Barnes and Noble, 1993. For information on the Tower of Babel and the Hanging Gardens of Babylon, see J. Henry, "Do Ruins of the Tower of Babel Exist?," 2000, <creationconcepts.org>.

2 There is evidence of world wide navigation, trade, and commerce in ancient times. **The dispersion from Babel guarantees that there was at least a period of global travel.** Diverse artifacts indicate that global travel persisted throughout antiquity. For example, the Newark Holy Stones, ancient tablets inscribed with the Decalogue, were unearthed from Indian mounds in Ohio from 1860-1867 and appear to be genuine (Alrutz, R.W., *The Newark Holy Stones: The History of An Archaeological Tragedy*," *Journal of the Scientific Laboratories, Denison University*, Vol. 57, 1980, pp. 1-57 and 58-72). The implication is that global navigation occurred and included Hebrews many centuries before Columbus ever sailed.

3 Who was the queen of Sheba? Sheba was a great grandson of Ham (Gen. 10:7). He was presumably prominent in his day, which may account for the fact that later, one of Abraham's grandsons through Keturah was apparently named after him (Gen. 25:3). Sheba's descendants settled in Arabia and also possibly migrated into Africa across the Red Sea. Ps. 72:10 associates the queen of Sheba's kingdom in Africa with the Sheba of Gen. 10:7.

Another Sheba in Gen. 10 (verse 28) was descended from Shem through Joktan. This Sheba may have given rise to the Sabaeans in Arabia, though it is perhaps more likely that Ham's great grandson Sheba (Gen. 10:7) was actually the precursor of the Sabaeans for two

reasons: (1) Many of the early Hamites were also in Arabia, and Job 1:15 recounts the Sabean attack on Job's asses and oxen. Job himself may have been of Semitic descent. Other factors being equal, an attack of Hamitic Sabeans on the Semite Job seems more probable than Semitic Sabeans attacking their own distant relative. (2) Most of Joktan's descendants left no traceable mark on history, but many of Ham's descendants did. Following the same pattern, it seems more likely that it was the Hamite Sheba's line that was preserved as the Sabeans. Thus distant kinspeople of the queen of Sheba may have lived in Arabia near Israel.

4 Strong, J., *The Tabernacle of Israel*, Kregel, 1987, reprint of 1888 edition, p. 34. Other estimates put the talent at 75 lb (Dolphin, L., "The Treasures of the House of the Lord," 1992, <[www .templemount .org/TMTRS.html](http://www.templemount.org/TMTRS.html)>).

5 The price of gold fluctuates; from 1971 to 1996 the low was about \$250 an ounce and the high was about \$800 an ounce.

6 Where was Tarshish? A man named Tarshish is in the Table of Nations (Gen. 10:4). Tarshish as a place has been identified with Tartessos in Spain and with Carthage in north Africa. However, both of these were Phoenician cities and the Phoenicians were Canaanites. Possibly the descendants of Tarshish were the original settlers of Spain and north Africa but the Phoenicians were later more prominent in these regions.

Tarshish appears numerous times in the Old Testament and is almost always related to a land that was "afar off" (e.g., Isa. 66:19; Ps. 72:10). The Phoenicians imported silver, iron, tin, and lead from Tarshish (Ezek. 27:12). Solomon had a "fleet of Tarshish" (1 Ki. 10:22). Jonah tried to flee from God by taking a ship to Tarshish (Jonah 1:3).

The navy of Solomon included a smeltery or refinery fleet which brought smelted metal home from the colonial mines. Much of this trade was with the Phoenicians, and some of it was in joint venture with them. In fact, the name "Tarshish" means "smeltery," and the ancient Phoenicians, the first great mariners, founded iron smelteries, mines, and settlements in many lands, including at least Spain and England, and quite possibly even America. Other descendants of the man Tarshish may in fact have been preserved as the "Neanderthal Man" or "Cro-Magnon Man" in Spain and France.

Thus the Biblical name Tarshish probably refers to more than one place, though sites proposed for Tarshish the city have ranged from the island of Rhodes to western Anatolia, Sardinia, and Carthage (as mentioned above). Apparently Tarshish the man gave his name to a city which, under the Phoenicians, was famous for smelting, "Tarshish" becoming a generic term for "smeltery."

Ezekiel 38:13, describing the Tribulation attack on Israel by Gentile nations, mentions "the merchants of Tarshish." Based on the generic meaning of Tarshish in Ezekiel's time, this reference is probably to the western nations in general.

7 Glueck, N., *Rivers in the Desert: A History of the Negev*, Jewish Publication Society of America, 1959, p. 32. Where was Ophir? Ophir is listed in the Table of Nations (Gen. 10:29). Ophir in later Biblical times was a region famous for its gold (1 Ki. 10:11; Job 22:24, 28:16; Ps. 45:9; Isa. 13:12). Apparently located in Arabia, it may have been where the descendants of Ophir settled. There is a slight possibility that Ophir (which can also be spelled "Aphir") may have given his name to Africa ("Aphir-ca").

8 1 Chron. 28:1-19 and 2 Chron. 2-4 also give construction details.

9 One cubit = 1.719 ft, or about 1.5 ft (Strong, op. cit., p. 16).

10 AGS Consulting, "The Temple Which Solomon Built," October 14, 2004. <www.agsconsulting.com/htdbv5/r2054.htm>

11 Dolphin, op. cit.

12 *ibid.* Dollar equivalents assume 120 lb/talent, and gold at \$400 per ounce and silver at \$5 per ounce.

13 Murphy, B., *Gold Derivative Banking Crisis*, Gold Anti-Trust Committee, 2000, p. 117. <www.gata.org/test.html>

14 "Commodity Numbers FAQs," October 14, 2004. <www.galmarley.com/FAQs_pages/commodity_essentials_faqs.htm>

15 Glueck, op. cit., p. 150.

16 The largest known ancient mining operation of all was the removal of up to 50 million pounds of copper (25,000 tons; cp. 6000 tons of gold used in Solomon's temple) from shafts near the coast of Lake Superior. These were the mines of Kitchi-Gummi which were worked for about 1200 years beginning around 2500 BC. Most of this copper apparently disappeared from the New World, implying that merchant vessels from the Old World shipped it to Europe, Asia, and Africa (Jewell, R., *Ancient Mines of Kitchi-Gummi*, Jewell Histories, 2000, pp. 1, 19, 121). Solomon's merchant marine may have been involved. By comparison, the Old World was relatively poor in copper except for sites such as Solomon's mines.

17 *ibid.*, p. 31.

18 *ibid.*, pp. 31-32.

19 *ibid.*, p. 32. *King Solomon's Mines* (1885) by British novelist H. Rider Haggard placed Solomon's copper mines in Africa, the location assumed before Glueck's discoveries.

20 *ibid.*, pp. 163-165. Israel remains a rich source of metal and minerals today. Indeed, "The mining operations extensively carried on in former times at Timnah [in the Arabah rift] by Solomon's men are being repeated on a much larger scale today. A modern smelter has been erected there to process the ore. We had found its equivalent in Ezion-geber, where Solomon's engineers had, about 3000 years ago, erected an elaborate smelter. It utilized the principle of the Bessemer blast furnace process. Flues were provided in its walls through which the strong and constant winds from the north were admitted to furnish the draft necessary for the charcoal-fueled flames in the furnace rooms (*ibid.* p. 36).

In the late 1900s, the Bessemer process was replaced by even more efficient methods of metal refining, but for more than a century it was the mainstay of the metal refining industry.

21 *ibid.*, pp. 149-150.