

BOOK OF MORMON COMPARISONS

Directions in Mesoamerica

"...the people...began to scatter abroad...on the north and on the south, on the east and on the west," (Mosiah 27:6)

Many experts and authors with varying experience and points of view have tackled the complex issue of Book of Mormon geography. While the scholarly consensus has settled on Mesoamerica as the best match (and we have to agree), they all differ in some respects as to the details. Every author has solid-sounding justification for his definitive location of the River Sidon, Zarahemla, or the Hill Cumorah. Since very educated people cannot yet agree on some of the finer points of Book of Mormon geography, it is a topic we tend to avoid. But there may be some room for a consensus that could someday lead to a greater understanding of this issue. The key could lie in the use of directions.

The standard cardinal directions and some variations of them are found throughout the Book of Mormon. Since the final book is the product of Nephite record keepers, if we could understand what these directions meant to the Nephites, that would be a major step toward figuring out the internal map of the Book of Mormon and relating it to real-world geography. Several LDS authors have taken different approaches to this question.

In our current era, there is no misunderstanding when it comes to directions; each cardinal direction occupies just one degree of the entire 360-degree compass rose. And there are other intermediate directions for situations where north, south, east, or west is not specific enough. Standard compasses use the earth's own magnetic field to calculate north, which becomes the basis for the rest of the compass. But how did ancient cultures determine directions? While we as yet have been unable to find any detailed information on how this was done, it seems obvious that observation of heavenly bodies was an integral part. What is interesting is that however directions were calculated, most ancient cultures, no matter how isolated from each other, came up with the idea of four cardinal directions, more or less corresponding with our modern views of north, south, east, and west. It is also worth noting that most assigned a color to each direction, although these colors are not consistent from culture to culture.¹ Supposing that most Book of Mormon events likely took place in the region now known as Mesoamerica, what is known about the origin and use of directions among indigenous people like the Maya? Is there any evidence that Book of Mormon groups adopted pre-existing local practices concerning directions? Were Book of Mormon directions any different from our modern definition?

LDS authors and scholars have answered these questions differently. John Sorenson suggests that the Nephites brought with them a Hebrew method of determining directions which was based on the location of the Mediterranean Sea as a constant. The end result is that directions in the New World would have been skewed because of the different orientation of the Pacific coastline.² This has led to the term 'Nephite north' as opposed to true north. Richard Hauck relates Book of Mormon directions to modern compass degrees, coming up with specific points for north, northward, east, eastward, and so on.³ Joseph and Blake Allen assert that Nephite directions adhere strictly to our modern cardinal directions and were not altered in any way.⁴ Jerry Ainsworth takes the ancient Maya method into account in order to decipher Book of Mormon directions.⁵

While we really do not know with certainty how the Nephites defined cardinal points, a closer examination of the concept of Maya directions may give us some insight. For the ancient Maya, their cardinal directions had everything to do with the movement of the sun. It is commonly known that the sun rises in the east and sets in the west, but there is more to it than that. The Maya viewed the earth as being a center point between the underworld of Xibalba below and the heavens of the gods and afterlife above. This center point was defined with a glyph that is now called a quincunx. It has a color, blue/green, and is thought of as being the place where the world tree that was created by the resurrection of the Maize God sprang from the ground at the beginning of creation and lifted the heavens up from the earth. This tree, the tree of life, links the underworld of death to the heavens. Its name, *yax che*, means 'first tree.' In Mayan, *yax* can mean 'first' or 'blue/green.' Each direction also had its own color. The direction in which the sun rose was red. The direction it set was black. Left of that was white, and the opposite direction was yellow. As we would interpret it then, east was red, west was black, north was white, and south was yellow. Red signified the heat and light of the sun and black is thought to refer to death or the sun's entrance into the underworld. The origins of white and yellow are unclear, but it is interesting that these four colors correspond to types of corn known and eaten in ancient America.

These glyphs and their colors are shown at the right. It may be tempting to relate them directly to modern compass directions, but that would not be quite accurate. The first notable difference is that the direction of the rising sun appears at the top, perhaps because of its importance. So, in an ancient Maya 'map,' east would be at the top and north would be at the left.

The other difference, and perhaps most significant for Book of Mormon studies, is that the glyphs do not represent



definite points, but rather a more generalized range of directions. This has to do with the fact that the rising and setting of the sun are not constant. Like many ancient peoples, the Maya were experts in observing and charting the movements of celestial bodies, and the sun was no exception. Viewed from a fixed center point, the position of the sun as it rises and sets changes over the course of a year. It reaches its most northerly point on the Summer Solstice when the day is longest and its most southerly point on the Winter Solstice when the night is longest. The sun only rises due east and sets due west on the Equinoxes. These four points of the sun's position defined the four 'quarters' of the Maya world. These points, along with the base center point, became the origin of the Mayan sign known as the quincunx. It is also the glyph *beh*, meaning 'road' or 'path,' perhaps originally defining the sun's path across the sky.

Unlike compass points, the Maya cardinal directions were not based on the positions of the rising and setting sun, but rather the spaces in between these four locations.⁶ The four quarters of the world were therefore not discreet points, but rather much wider, generalized directions. With this in mind, it can be

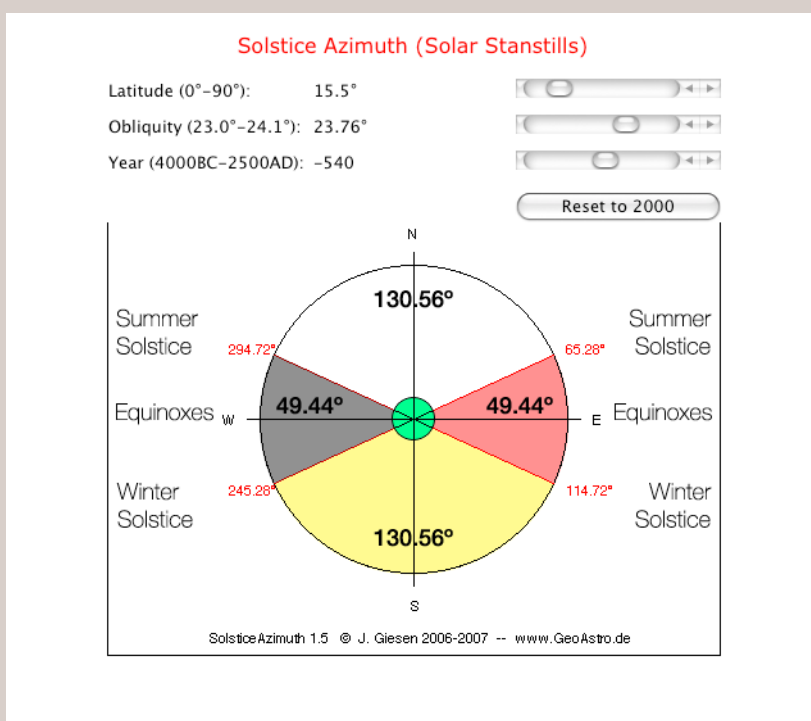
seen that the north and south quarters must be much larger than the east and west quarters. The chart at the right shows the sun's positions at the solstices as degrees on a compass, calculated for the Latitude of Guatemala in 540 BC. Of the 360 total degrees, north and south occupy 130.56° each, while east and west occupy only 49.44° each. The ancient Maya had just four directions, but their north and south included a much greater scope than the other two.

At this point, it would be useful to turn to the Book of Mormon

there. Before reaching the Promised Land, Lehi's group traveled great distances in the Middle East and directions were mentioned. Making their way in the Arabian wilderness and guided by the Liahona, Nephi tells us they headed in a south-southeast direction (1 Nephi 16:13). It is quite significant that this is the only mention of an intercardinal or compound direction. Once they had arrived in the Americas, neither this phrase nor anything like it is used; only the basic cardinal directions or some form of them are employed to describe every movement from one place to another or fixed positions. This simplification of directional terms may mean that Nephites and Lamanites adopted the indigenous method of determining directions once they reached the Americas.

With all this talk about compass points, some mention should be made of the Liahona. It is referred to as a compass six times, either by Nephi himself or by later Nephite writers. Alma 37:18 informs us that Lehi's family called it 'Liahona,' which means compass. Later Nephite writers also called it a ball or director. It is interesting that Joseph Smith chose the word 'compass' in his translation, since the Liahona was not really a compass, in that it did not point to magnetic north. It also appeared centuries before the commonly-accepted date of the invention of the compass. What exactly the Nephites meant by this or what word they originally used is unclear. Judging from its function, we might today say that it acted more like a modern GPS receiver. Its spindles pointed the way to go and it gave them messages from time to time, perhaps something like "Turn left at the next river of water." Its rotating spindles may have made Joseph Smith think of a contemporary compass, but Nephi would have had no such frame of reference. It is likely that the original word's etymology had something to do with making circles, as in to encompass or encircle.

In addition to referring to a magnetically-based direction finder, a compass can mean other implements as well. We should all remember compasses from school, those devices used to draw and measure circles and arcs. It can also refer to a scope, range, or boundary. In English, the word 'compass' is much older than

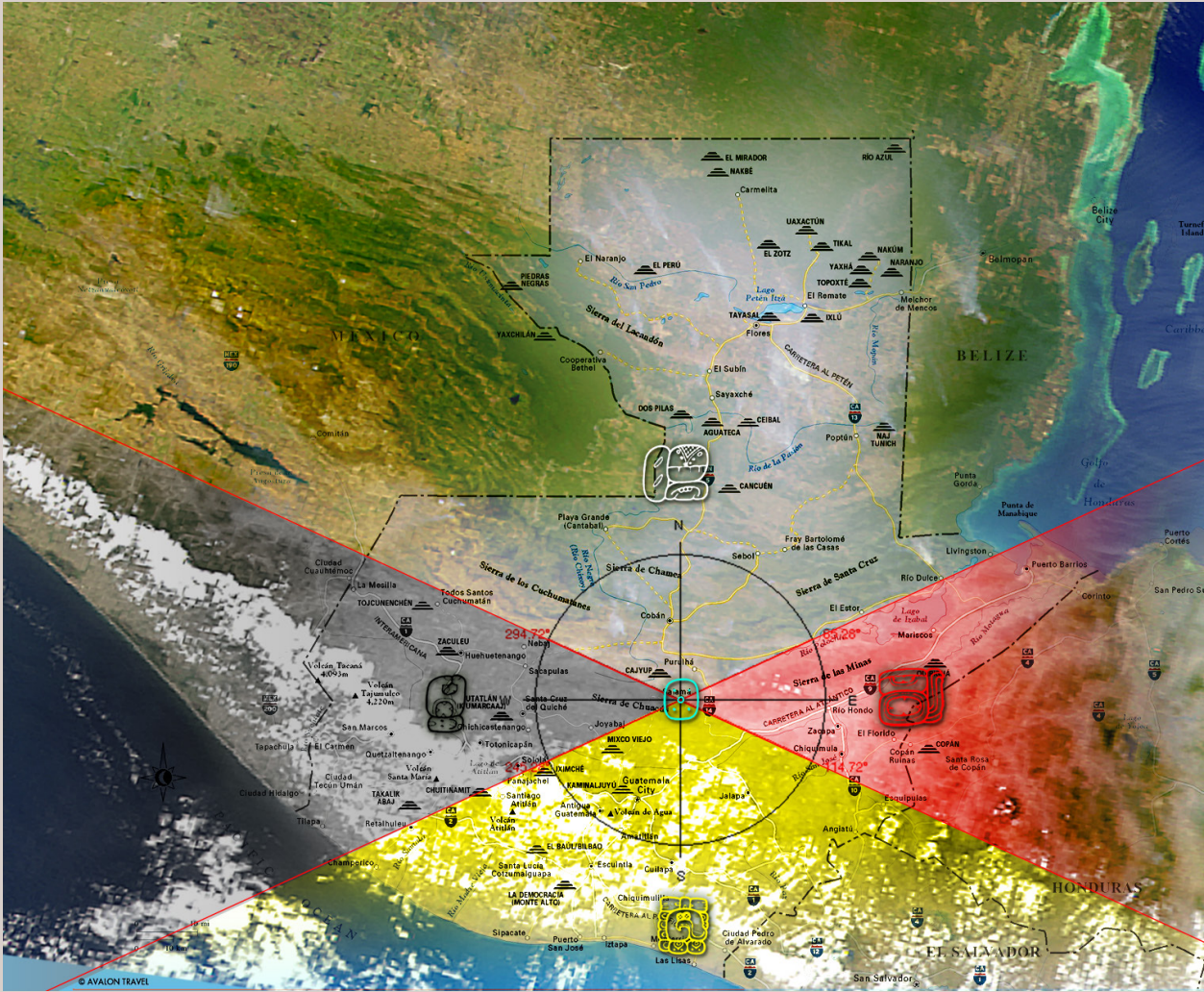


the navigational tool itself. Its original meaning was 'circle,' or 'to measure or pace off.' We find one other instance of this word in the Book of Mormon in 2 Nephi 7:11, copied from Isaiah on the brass plates: "Behold all ye that kindle fire, that compass yourselves about with sparks..." Here is a good example of this secondary definition. We must assume that Joseph Smith chose this word as the meaning of 'Liahona' because of his own understanding of the functionality of a contemporary compass, not because the Nephites had anything similar for comparison. Since Book of Mormon peoples did not have compasses as we would recognize them, their use of the cardinal directions most likely was different than ours. In addition, the Liahona apparently was not used in the Promised Land, its function being mainly to get Lehi's family there.

A closer examination of the Book of Mormon may reveal some clues as to how these directions were used. Counting how many times directional terms were described in the Promised Land (not the Middle East), and removing instances which were quoted from Old Testament scripture or are place names (such as the East Sea), we come up with the following numbers. North is used 23 times and northward is used 20 times, for a total of 43. South is used 21 times and southward is used 16 times, for a total of 37. West is used 13 times, but there is no use of the term 'westward.' East is used 19 times and eastward is used 2 times, for a total of 21. If we take these instances as accurately representing percentages of a whole, we can infer that people in Book of Mormon lands were traveling north and south far more frequently than they were traveling east and west. They also quite often traveled northward and southward, but hardly ever went eastward and never went westward. Nephite writers calculated directions as north or northward 38% of the time, as south or southward 33% of the time, as west 11% of the time, and as east or eastward 18% of the time.

Why would this be? The Maya method for determining directions based on the sun may provide the answer. As we have seen in this system, north and south occupy a greater scope (or compass) than east or west. From any given point, traveling north, south, east, or west was a general range, rather than toward a specific bearing. Without trying to decisively determine what the difference might be between 'north' and 'northward,' it can be seen that someone could travel practically the entire range between 67.5° east-northeast and 292.5° west-northwest according to our modern compass and still be traveling 'north' by Maya standards. The same in reverse could be said of traveling 'south.' The greater percentages of directions that are north and south in the Book of Mormon could be a result of Nephite use of the Maya directional system.

In the image on the following page, a diagram of the sun's position and Maya directions is seen overlaid on a satellite photo of a section of Mesoamerica. For ease of reference, Guatemala has been outlined and major archaeological sites are shown. The Maya directions have been rotated to align with the image and to comply with our view of north as up on a map. The Valley of Salamá has been chosen as the center point. There is a general consensus that the Guatemalan Highlands are a likely location for the land of Nephi. Some LDS authors have picked Kaminaljuyú in modern Guatemala City as a more precise location, but in recent years, archaeologist Richard Hauck has been excavating in the Salamá Valley, believing it to be a better choice in terms of its ancient history and surrounding topography. No matter the site, from this theoretical starting point, we can see the wide range of territory that lies to the north (*xaman*), as opposed to the west (*chik'inil*), according to a Maya way of thinking. From this location, Zarahemla (wherever it was) would definitely be down in terms of elevation, but also certainly to the north. Perhaps 'northward' and the 'north countries' take on a slightly different meaning when seen from this perspective.



Using this system, an entirely new perspective can be gained on where locations are, relative to each other. With only four local directions to choose from and the wide scope of north and south, Nephites may have coined their own terms, 'northward' and 'southward', in order to be a bit more specific in pinpointing locations. As can be seen in the image, implementation of the Maya directional system opens up a new world of possibilities. Perhaps the result is that no longer does geography need to be distorted in order to comfortably place Book of Mormon locations on a modern map

Notes

1. 02-12-2011. <http://www.absoluteastronomy.com/topics/Cardinal_direction>.
2. see John L. Sorenson, *An Ancient American Setting for the Book of Mormon* (Salt Lake City: Deseret Book, 1996), pp. 38-42, 248.
3. see F Richard Hauck, *Deciphering the Geography of the Book of Mormon* (Salt Lake City: Deseret Book, 1988), pp. 29-31.
4. Joseph L. Allen and Blake J. Allen, *Exploring the Lands of the Book of Mormon*, second edition (Orem: Book of Mormon Tours and Research Institute, LLC, 2008), pp. 360-361.
5. see Jerry L. Ainsworth, *The Lives and Travels of Mormon and Moroni* (PeaceMakers Publishing, 2000), pp. 257-260.
6. see David Stuart, *The Order of Days: The Maya World and the Truth About 2012* (Harmony Books, 2011), pp. 78-83.