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Part 8: "Towards the Promised Land"

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Abstract: Nephi's account does not reveal at what point Lehi and Sariah learned that their family would eventually embark on an ocean voyage. In the urgency to leave their homeland the family surely had little opportunity to ponder their ultimate destination. If they had, a natural assumption would have been that their removal from Jerusalem was to a nearby place within their own sphere, such as Egypt, and that perhaps their exile was only to be temporary. An ocean voyage may not have occurred to them until sometime after their arrival at Bountiful. Had the Lord's object been to simply remove them to the Americas, it would surely have been easier for them to depart from a Mediterranean seaport across the Atlantic, rather than undertake years of desert journeying across the Arabian peninsula, followed by a substantially longer ocean journey.

In our present text, the "land of promise" is first revealed to Nephi by the Lord while encamped in the Valley of Lemuel (2:19-20); we are left uncertain whether the prophet Lehi already knew. The two trips of Nephi and his brothers back to Jerusalem make it seem certain, however, that the full magnitude of the journey did not begin to unfold earlier than the Valley of Lemuel, when most of their desert crossing still lay ahead of them. At some point they also came to realize that their promised land lay across the seas; but even after they had set sail in Nephi's ship they likely had only a faint conception of the distances involved.

PART 8

“Towards the Promised Land”

“...after we had all gone down into the ship, and had taken with us our provisions and things which had been commanded us, we did put forth into the sea and were driven forth before the wind *towards the promised land.*”

(1 Nephi 18:8)



Sunrise captured at sea offshore of Khor Kharfot.

Introduction

Nephi’s account does not reveal at what point Lehi and Sariah learned that their family would eventually embark on an ocean voyage. In the urgency to leave their homeland the family surely had little opportunity to ponder their ultimate destination. If they had, a natural assumption would have been that their removal from Jerusalem was to a nearby place within their own sphere, such as Egypt, and that perhaps their exile was only to be temporary. An ocean voyage may not have occurred to them until sometime after their arrival at Bountiful. Had the Lord’s object been to simply remove them to the Americas, it would surely have been easier for them to depart from a Mediterranean seaport across the Atlantic, rather than undertake years of desert journeying across the Arabian peninsula, followed by a substantially longer ocean journey.

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Nephi’s Ship

Though they lived in the Judean hills both Nephi, his father and perhaps his siblings and the other men in the group were likely somewhat familiar with the ships of their day. In any event, the long trek from

Jerusalem to Nahom took them past a number of places where ships could readily be observed. The group’s extended stay at the Valley of Lemuel, for example, was only a few days’ travel beyond the major Red Sea port of Ezion-Geber, site of the modern twin ports of Aqaba and Eilat. Thus they had the opportunity to observe a variety of craft and enough awareness of them that Nephi could later comment on the uniqueness of his ship.

A vessel capable of carrying a sizeable group of people from Arabia to the Americas, however, clearly requires better design and workmanship than one making brief fishing forays or regional trading runs. Thus we find that the initial command of the Lord to Nephi concerning a ship indicates that Nephi would be shown how to construct it (17:8) and Nephi’s statement confirming that the Lord did “show me from time to time” (18:1) how to proceed. Too, more was involved in being divinely led than just the overall design of the vessel; Nephi also neither worked the timbers nor built his ship “after the manner of men” (18:1 2).¹ His choice of the phrase “curious workmanship” (18:1) also implies that something different from the ships of his day was being built. Nevertheless, some of the broad principles of shipbuilding and its history can yield insights into the task facing Nephi, his brothers and Zoram.

Nephi’s text offers only four other hints about the vessel that resulted. In several places, Nephi uses the phrase that upon departure the Lehite group went “down into” the ship (18:5-6 (twice), 8), which suggests a decked vessel. In any event, **decking** is virtually a certainty in order to carry the provisions mentioned (18:6, 8) and to allow the dancing recorded onboard at sea (18:9). It is clear that the ship did not merely drift with the prevailing ocean currents; it was purposefully “steered” with some type of **rudder** as, after binding him, Nephi’s angry brothers “knew not whither they should steer the ship” (18:13). At least **one mast and sail** was also involved; Nephi speaks of the ship being “driven forth before the wind” (18:8-9) and that the ship later “sailed

again” (18:22). Finally, it was **robust** enough to weather four days of severe storm, in addition to the long voyage that followed.

We can only speculate about other aspects, such as whether an anchor was carried, the accommodations provided and the size of the ship. One estimate is that a vessel on the order of 60 feet/18 meters in length is likely for housing a group of thirty or forty persons, assuming regular births took place during the eight years in the wilderness. At least half of the group would therefore have consisted of small children. In view of the limited manpower available to help in construction, a realistically sized and utilitarian vessel seems likely.² As we shall see, there are several reasons for questioning whether Nephi’s vessel was a traditional style hulled “ship” as most readers of his account have assumed.

The Resources Required

As noted in Part 5, ships are most easily constructed beside a **sheltered tidal inlet**. Both possible Bountiful sites, Khor Kharfot and Khor Rori, offer such conditions, varying only in their size and the resources available (Kharfot has naturally-growing timber and edible vegetation literally at the water’s edge, whereas Khor Rori has neither). Given the temperatures in the region, it seems certain that some type of simple **sun shelter** or “bowery” would have been built first to allow work to proceed during daytime. A simple slipway of greased logs, for example, would then allow the vessel to enter the water.

Nephi’s brief outline of the vessel construction focuses on the *timber* needed and on the supplies taken on board. The lack of any mention of the **sail and rigging** suggests that the material for them was already at hand and required little effort to utilize. Anthropologists know of at least 8 local species of palms and other plants used to make rope

in southern Oman anciently. Presumably, the Lehite group possessed significant quantities of roping in their tenting brought from Jerusalem that may have also been used at sea³

The whole matter of the **timber** that Nephi says he built the ship of is a non-issue when we examine what Khor Kharfot offers. Tamarind, acacia and sycamore fig wood in particular are species still found at Kharfot suitable for building a ship and are among several species still used today for ship construction in Oman and elsewhere. However, despite a recent claim that it was also available, cedar has never been found growing in southern Arabia.⁴ Ship timbers in the region have long been treated against marine organisms by applying a simple mixture of animal fat and lime, the latter usually obtained by burning shells.

Nephi records a period of gathering “much fruits and meat from the wilderness, and honey in abundance, and provisions” (18:6, 8). This included the seeds they had brought with them across the desert (18:24 tells us that *all* the seeds were planted upon arrival in the New World). Obviously, water, oil and wine supplies stored in skin bags or pottery containers would also have been necessary before leaving. Animals such as goats, together with fodder supplies, may have been taken onboard for milk and meat, and also to allow the offering of sacrifices during the voyage.

It is quite feasible to survive at sea for long periods with minimal supplies. As sailors on Heyerdahl’s “*Kon Tiki*” raft and many others have discovered, at sea fish are an abundant, easily caught food. Fish meat also provides a significant amount of the daily requirements for freshwater. Seawater can be used for washing, cleaning and cooking, while rainwater can be captured and stored for drinking. Dried or salted fish, meat, fruit, vegetables, grains and seeds occupy little room. There was no necessity for the Lehaites to store huge quantities of food supplies and fresh water.

Did Nephi Require any Outside Assistance?

Any attempt to place Nephi’s voyage in the real world must be careful not to ignore or undervalue the ability of the Lord to provide what was needed for the Lehites. Nephi’s Bountiful was far more than being merely a port at the beginning of the incense trade route, but was instead a place “prepared of the Lord” (17:5). Just as there was suitable timber found there, the text makes it evident that there were all of the *other* resources also needed to construct a ship. This becomes clear when we consider what Khor Kharfot would have offered the group:

- Ready access to fresh water and abundant food; thus allowing most of their time and energy to be devoted to shipbuilding
- A variety of timber types on hand
- Iron ore available in the immediate vicinity to make the tools required
- A variety of fibers from local flora from which rigging could be made
- A sheltered sea inlet to allow construction near the water’s edge
- Isolation from the distractions of a trading port and town
- No competition from other people for resources

Combined with the regular instructions from the Lord, such ideal circumstances would go far in compensating for the small labor pool available at the inlet and makes the ship construction quite feasible. Other clues come from the account of another seemingly impossible ship building effort. Ages earlier, God had instructed Noah how to build

a vessel for a critical, specific mission (Genesis 6:13-22), specifying not only the design but also its exact dimensions and the wood types to use. Noah’s earlier experience suggests what may lie behind Nephi’s plain statements that he was instructed of the Lord on the mount “from time to time,” (18:1, 3) in building his ship, rather than improvising from designs he had seen or consulting with an experienced local shipbuilder. Lehi had left his gold, silver and “precious things” back in Jerusalem (2:4) so he had nothing of great value to pay for the services of others.

Most importantly, in a single verse Nephi emphasizes three times that his ship was *not* built after “the manner of men” (18:2). These unequivocal statements surely make assistance in matters of design and workmanship from anyone outside the group, as some have speculated, very unlikely. As already noted, there is no evidence that there was a port in operation in southern Oman in Lehi’s day, and no evidence at all of large ships being built there at any period in the past.⁵ But, even had experienced shipbuilders been available to show him how to build his ship, they could still only have shared information about ships built after “the manner of men,” not the unique long-distance ocean-going vessel that Nephi required.

In a day when teenagers sail, unaided, non-stop around the world, the *sailing expertise* required for an ocean voyage has been exaggerated by some commentators. The basics of sailing are straightforward. To take the position that it was “simply impossible” for Nephi to proceed without training from experienced sailors is unsupported by logic or anything in Nephi’s account. To begin with, there is nothing to rule out Nephi, his father, his siblings or even the other men in the group already having gained some “maritime” experience before leaving Jerusalem. In view of Lehi’s evident trade contacts with Egypt it is quite likely that he at least had seen, and perhaps even sailed on, ships of the day during his career. Additionally, the entire group had passed the functioning Red Sea port of Ezion Geber on its way to the Valley of Lemuel. In

fact, the ability of Nephi's brothers to recognize the fine workmanship of his completed ship (18:4) may stem in part because they already had enough exposure to sea-going craft to appreciate what had been accomplished. The entire group, of course, had also been hardened by their long land journey.

And there are other reasons. The handling characteristics of a ship built to a divine design may well be very different to a conventional craft. Furthermore, they may not have made any stops en route to the Land of Promise and thus only needed to handle a single departure and arrival. The account of the ship's departure (18:6, 8) makes it evident that the ship and its undoubtedly simple sailing and navigation systems needed no trials before setting forth. It had not even entered the water up to that point.

While the Lord is obviously free to use any number of methods to achieve his purposes, the whole sense of Nephi's account is that in this instance *revelation* guided the ship-building and that the timber and other items needed for the project were *on hand*, just as they are today. Once at sea, navigation was taken care of as the Liahona continued to point the direction ahead, as evidenced in the story about Nephi being bound by his brothers (18:12-22). The Liahona may also have continued giving written instructions and directions as it had throughout the land journey. **Whether viewed through scriptural or historical eyes, there is simply no need to claim that the resources of Bountiful and the tutoring of the Lord were somehow not enough for Nephi to build his ship there and then sail it.**

The Construction Period

Given the resources available, and the need to also maintain their home at Bountiful, a likely minimum period required for construction

is at least a year; almost certainly it was longer. One hint is contained in 2 Nephi 1:4 which reports that Lehi, as promised earlier (17:14), saw in vision that Jerusalem had been destroyed. We cannot be sure how long after the destruction of Jerusalem the vision came to him or where he was at the time. However, Lehi had commenced prophesying in the "commencement of the first year of the reign of Zedekiah, king of Judah (1:4), which may have been 597 BC when Zedekiah was placed upon the Judean throne. The fall of Jerusalem took place about ten years into Zedekiah's reign (2 Kings 24:18 25:3).

In addition to their eight years "in the wilderness" (17:4), they had been in Bountiful "many days" (17:7) before Nephi commenced work on the ship. If they were at all in contact with local people, word of Jerusalem's fall could have reached them within a few months after the event, or roughly two years after their arrival at Bountiful. Presumably, their ship was still under construction at that point; if so, the fact that Lehi learned of this major news only through a *vision* further supports the idea that his group was alone and isolated from outsiders at Bountiful.

Historical Seafaring in Oman

Oceans functioned anciently much as they do today; rather than being barriers between lands, they *facilitated* contact, travel and transportation. In Oman, sea-going ships were being built in the north of the country many centuries before Lehi's day. In fact, ancient Oman, the land of "Magan," developed trade routes to the Gulf, to India, Malaysia, Africa and China very early on. Because the empty deserts to its west and south made it difficult to trade and to import the food needed for much of its population, Oman's isolation drove it to pursue sea links for trading from as early as 3000 BC. By the third century BC Oman's naval fleet was one of the largest in the world. This ensured

that it was at the forefront of Arab sea exploration and trade, an aspect of the Arab world at odds with the western stereotype of Arabs being a desert people. One archaeologist even describes Oman’s history as “most notably a record of Oman’s marriage with the sea.”⁶

The Arab “Dhow,” actually of Indian origin and usually built of Indian-sourced timber, has been the stereotypical ship associated with Arabia since being recorded by early Greek and Roman historians, but only recently have western historians come to recognize that Oman has been home to ancient shipbuilders and mariners for thousands of years, something that a person in 1830 could not have appreciated.⁷

The archaeological evidence to date suggests that the earliest sea vessels built in Oman, including Dhofar in the south, were simple shell-built dhows, dugouts with planks sewn or lashed to the sides to form the hull, or small rafts with inflated animal skins.⁸ Such boats had no decks and were suitable only for fishing or for carrying incense, down the coast to Qana for example. Simple sewn craft continue to be built and can still be seen in use today, often with outboard engines attached, in a handful of remote places on the Arabian coast. In time, larger craft were built in *northern* Oman using timber imported from India and perhaps Africa. Their greater carrying capacity expanded trade opportunities. Timber vessels also offered greater resilience in heavy seas and could be repaired at stops en route using local materials.

Assisted by innovations such as highly efficient triangular sails and simple star navigation techniques, Omani sailors developed regular sea trade with the African coast and India and, by the eighth century AD at least, journeyed at least as far as China using sewn ships. However, the historical evidence so far reveals that larger vessels seem never to have been built in *southern* Oman, despite native timber being available there. Nephi’s ship, with its singular mission taking it many times

further than local ships were required to go, seems likely to be literally the sole exception.

Ship Possibilities

Until the industrial revolution, hulled wooden sailing ships usually represented the most complex technology of the day. Construction techniques fall into three broad categories:

Mortise and Tenon - interlocking wood planks with sealing (of cotton fiber and beeswax for example) along the joints. A variation of this used bolts or clamps to further hold the timber together. The ancient Egyptians used this method, for example, in the Khufu vessel at Giza, which dates to about 2500 BC, but it was also in use in many other parts of the world. In China the technique may date as early as the Neolithic.

Lashed, sewn or stitched - The simple lashing together of shaped planks with rope, sometimes employing wooden pegs but always without any metal, was the primary method of ship construction used in much of the ancient world. It is known in Oman from at least 4,500 years ago, but may be a much older technique elsewhere.⁹ A later refinement (from about 2,000 years ago in Oman) was the more complex sewing or stitching of beams, a method that has survived down to the present. It was not unique to Arabian craft as some commentators have supposed; examples of ancient sewn ships have survived to the present from places as diverse as Egypt, France, Croatia and Finland. Sewn boats are still occasionally built today in isolated parts of Arabia, Sri Lanka, India and the Maldives.¹⁰

Nailed - apparently first developed in northern Europe and used to advantage by the Vikings, *Clinker* or *Lapstrake* ships used overlapping

planks fastened with wooden pegs or metal nails. Later variations included the *Shell-First* and *Frame-First* styles of construction. When Portuguese and other European ships moved into the region in the sixteenth century, nailed vessels, with their greater load-carrying capacity and durability, also began to be used in Arabia.



Sewn ships are rarely seen today. This example was on a remote beach in al-Mahra province, eastern Yemen in 1992. The close-up of the timber stitching is of an Omani ship.

A Ship not Built After “the manner of men” - a Raft?

Nephi’s clear statement that his ship differed in some significant way(s) from the usual style of his era raises the question of whether he had ever encountered an ocean-going vessel during his Jerusalem upbringing, or along the Red Sea early in the Lehite odyssey. It is also possible that if he had seen only small vessels used for fishing and coastal trading he may have felt that anything else justified writing that his ship was “not built after the manner of men,” (18:2).

Iron Age technology offers limited options for building an ocean-going craft; if it was a hulled vessel as popularly assumed then any of the three primary styles could have been used. Perhaps some unique aspect of its *design* might qualify it as differing from the ships of the day. That the workmanship of the timber ship was “exceedingly fine” (18:4) could, for example, refer to the precision required in sewing a ship together. We should be cautious, however, in how we view such a

subjective phrase. While we may assume that “exceedingly fine” refers to aesthetics, it may instead refer to the caliber of the ship’s rope work, its steering mechanism, or even to some aspect of its design, such as its provision of private quarters or the like.

The best known depiction of Nephi’s ship, Arnold Friberg’s painting of the Lehite group arriving in the New World, shows a substantial lashed vessel. Of course, Nephi had metal enough for tools and could presumably have also fashioned the thousands of nails needed if a nailed ship was built. Perhaps he was familiar all along with sewn ships and the innovation of his ship was that it used overlapping planks and nails. The text offers too little for us to be sure.

There is, however, a further ship design possibility that has received little attention to date: a *raft* of some sort. Raft technology was employed in many parts of the ancient world, including the Americas, where large seagoing rafts plied trade routes from Ecuador to Mexico and beyond.¹¹ Rafts, of course, are themselves built using one of the three construction techniques just discussed, or a combination of them. That is, their timbers were lashed, nailed or bolted, or perhaps used mortise and tenon joints. The raft concept did not develop in Arabia as it required much more timber than more traditional styles of ships. However, for anyone living at Kharfot and at Kharfot alone the availability of timber was not an issue and building a large timber raft was entirely possible.

A raft would have been a design that would be *totally* unfamiliar to anyone in the Lehite group; they would have seen nothing similar back in their Jerusalem days or on the long journey to Bountiful. More than any other possible design in that part of the world, some type of raft could be appropriately described as being “*not after the manner of men.*”

Building an ocean-going raft would still have been a significant project for such a small group, but one that **more closely matched to**

the material and labor resources at hand at Bountiful. A raft also offers a significant number of *additional* advantages for a long ocean voyage than the vessels that our Western-minds envisage when we encounter the word “ship.”

In the first place, it would have offered much **greater deck space for storage** as well as **opportunities for private quarters for each family**. The extra space also **could have even allowed small gardens** all important factors for a long duration voyage that were exploited by other cultures using rafts, notably in Polynesia. Secondly, rafts offer **improved stability and safety. With more forgiving handling characteristics, rafts can ride out storms and heavy seas better** than many narrow hulled styles. With a solid keel formed of perhaps several layers of logs secured by lashing or with large wood pegs or metal bolts, taking on water and sinking would never have been a concern and only an unusually severe storm could have presented any danger. Lashing, nails or bolts, or a combination of these fastening methods, would have allowed the timber to flex as it sailed while still maintaining its structural integrity. This may be a reason that Nephi makes no mention of any difficulties at sea after the storm sent by the Lord early in the voyage. The raft’s inherent stability could have been further enhanced by a pontoon attached to one or both sides, or even by using some sort of “catamaran” design with a central living area.

Finally, as the small *Kon Tiki* raft showed, contrary to popular opinion, a raft can be navigated and even tack against the wind by using its sails and moveable center-boards. Navigating the shallow draft of a raft onto a beach, or into an unknown harbor, **would more easily allow stops** and been less dangerous than maneuvering a hulled ship. It is important to remember, however, that rainwater collection and fishing may have made stops unnecessary or at least infrequent; seafarers in more recent times have recounted voyages lasting up to 14 months without stops.¹² Again, the experience of *Kon Tiki*’s long distance voyage

has been confirmed by modern sailors using other vessels; they fared well carrying only minimal supplies. Rafts also attract a variety of accompanying marine life and thus **fishing is substantially easier** than from higher, hulled vessels.¹³

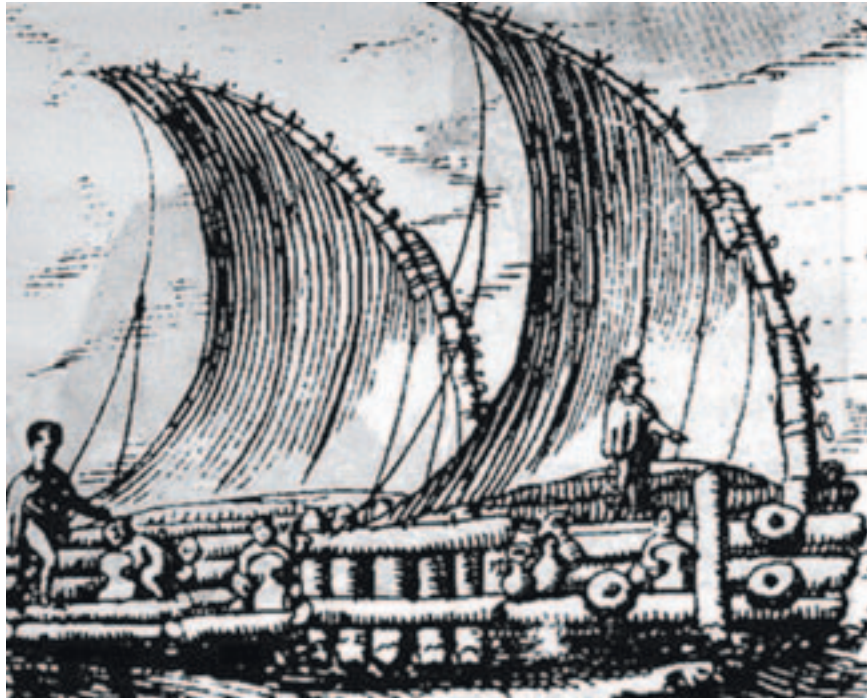
Finally, if Nephi’s ship was in fact some style of raft that might account for the fact that there was apparently no “shakedown” sailing in sheltered waters before the ship was launched into the Indian Ocean. The simplicity of the raft design would have made **pre-departure trial sailing much less of a requirement** than with any other style.



1. A design by Chad D. Aston for an ocean-going decked raft constructed of timber logs.
2. LDS artist Robert F. Fetterly’s painting *On the Fourth Day*, is likely the only published depiction of Nephi’s ship as a hybrid raft. It appeared in the January 1992 *ENSIGN* and the January 3, 2004 *Church News*: www.ldschurchnews.com/articles/print/44921/Book-of-Mormon-examples-Forgiving-others.html. Image used with permission of the Fetterly family.



Constructed of several layers of logs, Thor Heyerdahl’s *Kon Tiki* raft demonstrated in 1947 that rafts were a viable means of transportation over great distances using simple technology. Sailing image courtesy of Wikimedia Commons.



This 1619 sketch shows an ocean-going raft off the coast of Peru constructed with layers of balsa logs. It could be steered with great precision.

Archaeologist P. J. Capelotti, referring to the 4,300 mile/8,000 km “*Kon Tiki*” raft voyage across the same ocean that the Lehitites probably crossed, the Pacific, made a general point about the merits of rafts that will strike many Latter-day Saints as significant:

By its very structure, a raft is a floating warehouse. They were therefore the perfect vessel to carry the contents of a culture across an ocean. They are not fast, but they are virtually indestructible. If a conventional sailboat gets a small hole in its hull, it sinks. By contrast, a...raft can lose two thirds of its hull and still keep its crew and twenty tons of cargo afloat.¹⁴

It seems safe to conclude that a raft design not only meets all the scriptural requirements for Nephi’s “ship,” but it remains the minimal and most feasible structure that could be constructed under the circumstances. Indeed, it may have been the most durable, robust style that could be built for a journey of such an unprecedented distance. While it may require an adjustment to the cultural assumptions of most Latter-day Saints, we should therefore consider a raft of some kind as a strong candidate for the type of “ship” that carried the Lehitite group to the New World ca. 592 BC.

Modern Parallels to Lehi’s Voyage

Lehi’s story inspired DeVere Baker (1915-1990), an LDS bishop from Utah, to build a series of rafts with which he attempted to sail with a small crew from the California coast to Hawaii in the nineteen fifties. After a series of misadventures and costly rescues by the Coast Guard, in 1958 the final raft, the *Lehi IV*, eventually made the journey from California to Maui in 69 days, making his point that simple, un-powered craft could traverse great distances on the ocean. Despite the headline-grabbing embarrassments of his earlier attempts, Baker succeeded in focusing some attention on the origins of the Book of Mormon and introduced many to the practical realities of life on a long-distance sea voyage. His choice of vessel, raft, may also have been closer to the truth than even he realized. More ambitious sailing plans, to culminate in a re-creation of the Lehitite voyage from Oman to Central America did not eventuate.¹⁵

With greater resources but a related goal to demonstrate that sea-voyaging between the Americas, the Pacific islands and the Mediterranean was feasible without using modern materials - Thor Heyerdahl (1914-2002) and then others, often using rafts, defied the orthodox views of anthropology by demonstrating that the oceans were

highways *linking* different civilizations, rather than insurmountable barriers separating them. The raft that Heyerdahl is best remembered for, the *Kon Tiki*, sailed some 5,000 miles/8,000 km across the Pacific Ocean from Peru in 1947. His later drift voyages across the Atlantic and from Iraq to Djibouti in East Africa also proved to be seminal events in the development of practical archaeology and in breaking down the bounds imposed by conventional thinking.¹⁶



In 1958 LDS sailor De Vere Baker successfully voyaged from California to Hawaii to demonstrate that Lehi's sea journey was feasible using raft technology. Images courtesy of Baker family.

A modern parallel, in part, to the Lehite voyage was the 1980-81 voyage from Oman to China by Irish author, Tim Severin. Severin, who has made a career out of recreating ancient and legendary voyages, received Omani government sponsorship to construct a sailing ship using only traditional methods and materials. Construction at the old port of Sur in northern Oman by a team of thirty men took 165 days. The ship that resulted was an 80 foot/24 meter long vessel constructed to a traditional design without using a single nail the keel and the planks were sewn into place using coconut fiber rope kept moistened with vegetable oil. With several stops en route for provisioning and repairs, the *Sohar* survived the seven-month journey to Canton, China along the old maritime silk route in good shape and could have been sailed further. The elaborate methods employed to preserve the ship's timbers

from marine worms and to keep the interior ropes oiled may well have not been necessary for the one-time voyage of Nephi's ship.¹⁷



The sewn ship *Sohar* displayed near Muscat, Oman after its 1980-81 voyage from Oman to China.

While the voyage of the *Sohar* is a most interesting and instructive account, we should exercise caution before drawing too many conclusions from it as, lacking a place especially prepared for him by the Lord, Severin relied on timber imported some 1,300 miles/2,050 km from India for his vessel, the practice in northern Oman for as long as ships have been built there. There remains no justification for theorizing that Nephi, in southern Oman, would have needed to do the same - as noted earlier, even today the Qamar coast provides adequate large timber close to the ocean that is eminently suitable for ship building. Severin's ship also required a larger crew of trained sailors than Nephi likely had available to him at Kharfot.

Three recent ship projects also have potential in shedding additional light on the Lehite journey. Each of the three primary building

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techniques is represented: in August 2008, a 72 foot/21.5 meter ship, the *Phoenicia*, built of **nailed wood planks** (pine) in Syria to a 600 BC Phoenician design, was launched in a circumnavigation of the African continent. In August and September 2009, the author was part of the crew as the *Phoenicia* sailed east along the coast of Arabia to Salalah, Oman, traversing the same area Nephi's ship must have traversed. *Phoenicia* continued sailing around Africa and back to Syria via the Mediterranean, completing her historical feat in October 2010. Of note is that the total sailing distance, over 20,000 miles, thus exceeding the distance from Arabia to the Americas via the Indian and Pacific Oceans of about 17,000 miles or 27,000 km.

In December 2008, nautical archaeologist Cheryl Ward led a project in Egypt that built a 66 foot/20 meter **mortise (hole) and tenon (peg)** timber ship, *Min of the Desert*, recreating an ancient Egyptian design and successfully sailed it short distances on the Red Sea. The third project was the 2010 voyage of a wooden ship **sewn** with coconut

fiber and using woven flax sails, the *Jewel of Muscat*, in northern Oman to a traditional 9th century Arab design. With several stops en route, the 60 foot/18 meter ship sailed eastwards across the Indian Ocean from Oman to Singapore.¹⁸



In 2009 the author was part of the crew of the *Phoenicia*, a re-creation of a 600 BC Phoenician ship, as it sailed along the eastern coast of Yemen and Oman while circumnavigating the African continent. Such expeditions have enlarged our understanding of the Lehiite sea journey. Ship image courtesy of Leon Harmse, the *Phoenicia* Expedition.



Recent re-creations of traditional early wooden ships include the construction of the *Jewel of Muscat* which sailed from Oman east to Singapore in 2010. Ship image courtesy of Alessandro Ghidoni, the *Jewel of Muscat* Project.



The gritty realities of long voyages are suggested by the details in this image taken at sea on the *Phoenicia*: a harsh environment, repairs, empty horizons and hard work alternating with periods of inactivity.

Ancient Long-distance Ocean Voyaging

Anthropologist John Sorenson has pointed out that non-sailor commentators are prone to over-estimate the difficulties involved in long distant voyaging, an attitude that has prevented many otherwise open-minded scholars from accepting that Old World peoples arrived anciently in the Americas by sea. He wrote:

One scholar has referred to this attitude as “intellectual mal-de-mer when archaeologists look seaward.” Others have called this isolationist opinion “thalas-sophobia,” or fear of the sea. For instance, Hannes Lindemann, who made three solo voyages from West Africa to the West Indies, said that he and fellow sailors scoff at non-sailor’s views of the “dangers” at sea. He felt that it takes “a damn fool to sink a boat on the high seas.” Charles A. Borden recounts stories of all sorts of unlikely craft that have crossed the ocean. He concluded that “seaworthiness has little to do with size; little ships are often the safest.”

...many hundreds of persons have crossed the ocean in or on all sorts of craft – log rafts, rubber boats, replicas of Polynesian canoes, rowboats, and, more recently, personal water-craft and sailboards, not to mention numerous kinds of small boats...

...[there has been] recent recognition that ancient sailors ages ago were already making remarkable voyages. We now know that the first settlers of Australia crossed open sea from the north as early as 60,000 years ago...Nowadays it is acceptable for an established archaeologist like E. James Dixon to assume that navigators would have been able to come from Asia to America around the North Pacific by “perhaps 13,000 years ago.”¹⁹

Long ridiculed and ignored by establishment science, the “diffusionist” view captured so matter-of-factly in the Book of Mormon accounts of the Jaredite, Lehite and Mulekite voyages is now supported by an overwhelming body of evidence. A broad spectrum of cultural markers, ranging from ancient depictions of plants far from their native habitat (including maize in India in medieval times), the actual recovery of anomalous items (such as maize on the island of Timor dated to 2500 BC), the presence of disease organisms and fauna in both hemispheres and the preservation of specific names and terms for various plants (for example the mention of the sweet potato in early Chinese writings), the recording in art of various racial types (Chinese, African blacks and Semitic portraits from ancient Mesoamerica for example) and linguistic studies that show clear borrowings and adaptations between widely separated languages are but a few of the fields now well documented.

Only human voyaging gives us an acceptable explanation for all these traces of contact. There can be no question that extensive ocean voyaging has taken place globally for at least the past 8,000 years and likely much longer. Increasingly, non-LDS researchers are reaching the same conclusion.²⁰



Departing “every one according to his age”

Although the construction of their ship was under Nephi’s direction, the timing of the group’s departure was still dictated by revelation to his father, Lehi (18:5). Although they could not have fully grasped the distance they would need to sail, they knew at least that their departure marked the closing of one epoch and the beginning of another. With more than eight difficult years in the Arabian wilderness and at Bountiful behind them, we can expect that there was a sense of occasion as they finally boarded “on the morrow.” Some type of prayer and sacrificial thanksgiving offering was likely to have taken place before they embarked, boarding “every-one according to his age” (18:6). By specifying *who* boarded the ship (only family members are listed in verse 6), Nephi’s account makes it apparent that no outsiders joined the voyage. Rather, people who had spent so many years together in the desert constituted the entire complement of crew and passengers.

Recording the details of their boarding may have been more than merely painting a word-picture of a significant moment in their history on Nephi’s part; it may also have been his way of acknowledging with appreciation that the ship-building had come to proceed in harmony. His older brothers had not withheld their labor from him (17:49), but had been humbled to unite with him in the construction effort (18:1, 4).



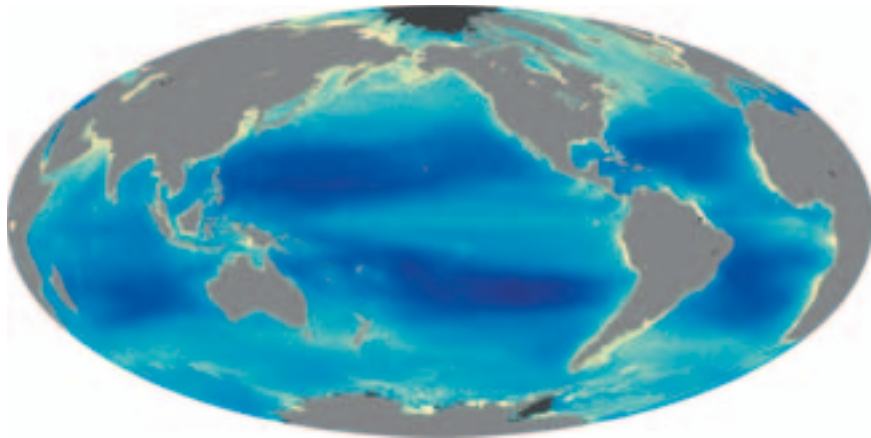
Thus it was that Nephi, the instigator and chief builder of the vessel, boarded without any prominence in the midst of his siblings. Showing respect for elders was deeply ingrained in their culture and, in that sense, the mention about boarding according to their age, rather than randomly, fits perfectly. It is likely that each adult male boarded “according to his age” accompanied by his spouse and their children.²¹

Nephi then matter-of-factly notes, “we did put forth into the sea and were driven forth before the wind towards the promised land.” (18:8) This verse makes it clear that the ship did not enter the sea until its departure. No trial or practice sailing was necessary. The text also reflects the reality that it was the *wind* determining the direction of sailing, rather than ocean currents. After sailing for the space of many days, the attempt by his older brethren to take control of the ship, and the terrible storm that raged for four days before they restored the captaincy to him in fear of their lives is related in harrowing detail (18:9-22). A life-threatening storm encountered centuries later by an Arab-crewed ship evoked similar terms:

*...the typhoon lasted three days and three nights, with the ship tossing up and down without anchor or sail, drifting we knew not whither. On the fourth day the wind began to abate; then it died down altogether and the sea was fair at the end of the day. From the morning of the fifth day the sea was good and the wind favorable; we erected a mast, hoisted the sails and went on our way, preserved by God.*²²

After the storm, Nephi’s silence about the following months of voyaging may well reflect the re-ordering of his priorities as the captain, husband, father and the dutiful son of aging parents. The arduous realities of life at sea likely left little time and energy for record-keeping.

The eight-plus year Lehite sojourn was surely intended, at least in part, by the Lord to develop group cohesion. It may also have been intended to allow their children time to mature sufficiently to contribute to the combined effort in simple ways. During the longest stage of that sojourn that followed the storm, the need to steer the ship, repair sails and rigging, and maintain water and food supplies, would require a consistent and well-organized cooperative effort. Furthermore, until the advent in modern times of solid fiberglass and metal hulls, all hulled ships took on water; if Nephi’s ship was hulled the arduous task of emptying the “bilges” would also be a time-consuming, unending task. Following the storm Nephi described, group cohesion - as a matter of survival if nothing more - seems to have reasserted itself for the duration of the voyage.



The oceans of the world. Courtesy of Earth Observatory, NASA.

There has been much discussion by LDS writers about the direction taken by Nephi’s ship to the Promised Land. The monsoon-dominated Indian Ocean differs from the Atlantic and Pacific Oceans in that its currents and winds change direction seasonally. In the summer months both currents and winds move *northwards*; but in the winter months *southwards*. This would allow travel from Arabia to the Americas in either direction. Alma 22:28, however, strongly suggests an initial

landing on the “west [i.e., Pacific coast] sea,” requiring an *easterly* crossing of the Indian and Pacific Oceans. Most scholars favor an arrival along the Pacific coast of southeastern Guatemala and western El Salvador, or about 15 degrees north latitude. Whether by coincidence or design, this is almost due east of Nahom. A journey eastward to the Americas would involve around 17,000 miles/27,000 km of ocean voyaging.²³ The ancient practice of hugging coastlines for easier re-supplying of provisions would dramatically increase this distance but, as noted earlier, is not at all necessary. Traveling in a *southwesterly* direction below the African continent and then west across the Atlantic is shorter, but the voyagers would be much more likely to encounter danger from difficult weather and stress on the ship.

In either scenario, however, the final stretch of ocean, whether the eastern Pacific or the Atlantic, is empty of islands for many hundreds of miles. The voyagers needed to cope with long stretches without making landfall. Such a journey likely occupied at least a year, perhaps longer. As John Sorenson notes, “...if the journey through Arabia consumed eight years, we need not suppose the Lord would hasten the party across the ocean, more than ten times as far, in hasty, uninterrupted fashion.”²⁴

El Niño and the Ocean Voyage to the New World

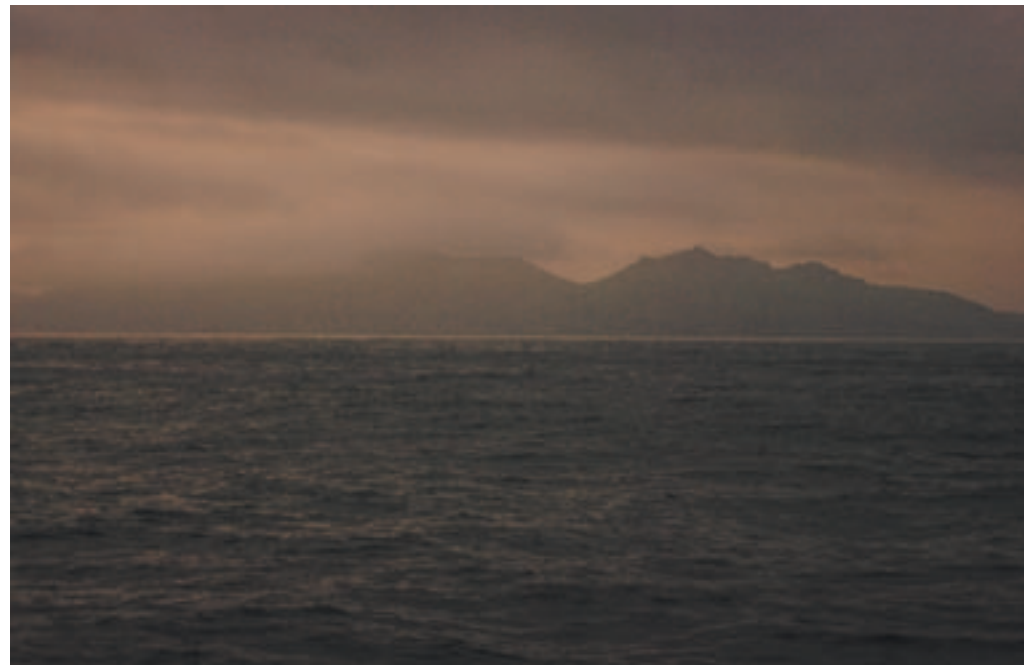
Normally, easterly travel across the Pacific Ocean is ruled out by the westerly movement of wind and currents exactly opposite to the conditions needed to reach the Americas after leaving the Indian Ocean. However, in recent decades science has begun to understand a weather phenomenon known as the ENSO effect. The acronym consists of *El Niño* (in Spanish: “the [Christ] Child,” as the weather patterns resulting from changes to ocean currents commonly reach the Americas about Christmas-time) and *Southern Oscillation*, which refers to the fact that these changes to wind and climate patterns commence in the great

expanses of the southern Pacific Ocean. The globe's major source of weather variation, its effects are felt worldwide.

One of these effects expands the normally narrow and unreliable equatorial counter-current (popularly known as the “doldrums”) for up to a year or more, allowing and even encouraging travel in an *easterly* direction across the Pacific. Data tells us that ENSO events occur at irregular intervals over recent centuries ranging from two to ten years, varying in their intensity and duration, with “major events” taking place every decade or two. Evidence from a variety of sources shows that, although less frequent long ago, El Niño Southern Oscillations have influenced weather in this way for many thousands of years; certainly well before Lehi's day. They may also have assisted the earlier Jaredite voyage to the Americas. Arguing that El Niño conditions permitted the voyages that settled the Pacific Island groups from 3600 to 1600 years ago, one anthropologist concluded:

At present there does not appear to be any reason to suppose that the wind circulation patterns of this migratory period were widely divergent from today's. It therefore seems likely that the voyagers of that expansionary era experienced spells of westerly wind broadly similar in frequency, duration, and extent to those today's sailors face.²⁵

The Lehite voyage to the Americas carried the religion of the future Redeemer to plant in their New World “land of promise.” Along with the Jaredite and Mulekite voyages, the Lehite account effectively linked both hemispheres, with its over-arching theme of the coming of the promised Messiah. From the perspective of believers, if El Niño was,



The Qamar mountains are visible in the distance in these views, taken looking inland while offshore of Kharfot.



The Pacific coast of southern Guatemala, with its extensive reed-lined lagoons, may be the place of arrival for Nephi’s ship, the Book of Mormon’s “land of first inheritance.” The Guatemalan highlands inland are visible in the final view.

in fact, the climatic agent making the Lehite ocean voyage possible, the fact it is named after the Son of God could be seen as very appropriate.

The record of the land and ocean odyssey linking Old and New Worlds reaffirms the universality of Christ’s atonement, accessible to all peoples no matter their location. In doing so, this New World account reinforces the essential accuracy of the Old World records, the Old and New Testaments, as no other book does or, indeed, could. Its focus on

clarifying the core doctrine of Christ’s Gospel and the ministry to his “other sheep” is fundamental to the Book of Mormon’s timeless and enduring spiritual value.²⁶

Towards a Conclusion

At a minimum, the converging evidences recounted in this book require the reader to take the Book of Mormon seriously as potentially

real history. The fact that so many specifics in First Nephi - most notably a sixth century BC “Nahom” with a uniquely fertile coast to its east - can be identified 180 years after publication argues strongly that Nephi’s account is based on a real-world journey. Establishing the plausibility of that journey has provided Mormon’s record the most credible of foundations, one that surely constitutes part of the “circumstantial evidence” that Joseph Smith predicted would validate his prophetic calling.²⁷

The story of Lehi, Sariah and their family is, moreover, the fulfillment of ancient predictions that truth would come forth in the last days from “out of the earth.” Of course, believers have long seen the story of the Book of Mormon metal plates being taken literally out of the earth as a fulfillment of those enigmatic statements. This book introduces a further dimension to that fulfillment by presenting *other* things that have come forth out of the earth: altars, inscriptions, tombs and geographical features, all lending support to the buried record. It confidently looks forward to more such evidences to similarly emerge in years to come.²⁸ This, in turn, augers well for the less-defined New World setting in which most of the Book of Mormon takes place.

The failure of “cultural” Mormonism (which inconsistently seeks to retain the “moral” teachings of the Book of Mormon while denying what the book says about its own origins) and of open critics of the book to otherwise account for the realities presented in this book, is telling. Those arguing that the Book of Mormon is somehow a nineteenth century product have yet to offer any meaningful alternative explanation for these Old World correlations.²⁹ The more astute and honest of those critics have begun to acknowledge the strength of these multiplying evidences in some ground-breaking concessions. Their courage renews hope that eventually the various divisions of Christianity will one day accept the new revelation of the risen Christ found within the Book of Mormon.³⁰ In divided Christendom, it is surely needed. What believers

in the book hope others will discover can be glimpsed in comments such as the following:

Students of the Christian scriptures in all faiths cry out to grasp the grand secrets of the Atonement, which can unlock the further mysteries of man’s nature and life’s purpose. If only they could know what truths lie buried before their eyes in the plain and precious language of the Book of Mormon. These truths are in some sense inaccessible to those whose tools of language and discourse are limited to the terms of art embodied in the academic and jargon-laden discipline of contemporary Christian theology.

Great revelations – literally – await those who will let the Book of Mormon speak for itself about its central message, Christ’s Atonement, ‘according to the plainness which is in the Lamb of God.’³¹

While The Church of Jesus Christ of Latter-day Saints is now the fourth-largest faith in the US, the majority of its over fifteen million members live in other countries. The distribution, as of April 2012, of over 150 million copies of its foundational text in more than a hundred languages, ensures that the academic study of Mormonism has also moved outside of North America as scholars increasingly recognize the Book of Mormon’s significance and impact.³²

Mormonism’s primary text is truly on the cusp of change, beginning to be treated in academic circles as a not-necessarily authentic, but legitimate “world-faith text.”³³ One indication of this came in 2004, when the first *non*-LDS version of the Book of Mormon was published, with approval from the LDS church, by a major commercial printing house. Despite official concerns expressed by the LDS church, “modern-day English” versions intended to expedite the Book of Mormon’s clarity and readability continue to be produced. Best known of these is

the 2005 “Reader’s Edition,” reformatting the original text. It has met favorable reviews.³⁴

From the perspective of the faithful, *The Book of Mormon: Another Testament of Jesus Christ* has roles beyond being the “keystone” scripture of the Restored Church and providing a spiritual foundation for the Latter-day work. Functioning as an additional witness of Jesus Christ’s mission, it is also uniquely fitted for the end of an age - something many would argue we are now witnessing. The recurring cycle of pride documented in Nephite and Lamanite history, together with the account of the Messiah’s visit to his “other sheep,” offer the sure antidote against the most pervasive belief systems of our day, materialism, and its destructive twin, ideological extremism.

As its doctrinal clarity becomes more integral to LDS understanding and culture, a process still underway, the Book of Mormon will surely be an instrument in preparing believers to more fully live its principles. At some point the recovery of the sealed portion of the metal plates from which the Book of Mormon sprang will then become a restoration of *additional* truths, many of them glimpsed only dimly at present. Perhaps Elder Neal A. Maxwell had these further truths in mind when he stated that the Book of Mormon’s greatest days still lie ahead.³⁵

As significant as the findings reported in this book are, therefore, they must not be permitted to detract from the *spiritual* message under-girding the Book of Mormon. After the Lehi saga ends, the account that follows resonates with the directness of record-keepers who witnessed the ghastly waves of genocide that followed rejection of the Messiah and his teachings. Readers more accustomed to diluted and fragmented truth may find such plainness unpalatable, but it allows the message to emerge powerfully. To all whose minds and hearts remain open the book’s central premise - that Deity can, and does, intervene in human history - emerges with unique clarity.

Lehi and Sariah’s descendants preserved a millennium of history documenting their moral decisions and, in confronting detail that remains entirely relevant in our day, the consequences of those choices. Each person’s encounter with the Book of Mormon offers those same ancient, but ever-new, alternatives between darkness and light.

END

NOTES

1. Old Testament scholar Margaret Barker notes parallels to Nephi's statements in other accounts of building feats guided by revelation, such as the Tabernacle built by Moses (Exodus 25) and the instructions revealed to King David (1 Chronicles 28:11-19). She also notes the apocryphal Enoch 89:1 where knowledge received from an archangel somehow transforms Noah's purely human status. This enables him to then build the ark, which can therefore perhaps, like Nephi's ship, be described as "not after the manner of men" (personal com. December 15, 2006).
2. See John L. Sorenson, "Transoceanic Crossings in the Book of Mormon" in Monte S. Nyman and Tate, eds, *First Nephi, the Doctrinal Foundation*, 251-270, and his "Winds and Currents: A Look at Nephi's Ocean Crossing" in John W. Welch, ed. *ReExploring the Book of Mormon*, 53-56. Also see John Tvedtnes, "My First-Born in the Wilderness" in *JBMS* 3/1 (1994), 207-209 proposing that Lehi may have seen his younger sons Jacob and Joseph in some sense as "replacements" for Laman and Lemuel respectively after their continual rebellion. Jacob went on to have custody of the plates after Nephi's death (see Jacob 1:1-4).
3. Data about ancient tents in Israel is found in Michael M. Homan, *To Your Tents, O Israel! The Terminology, Function, Form, and Symbolism of Tents in the Hebrew Bible and the Ancient Near East* (Boston: Brill, 2002). The Lehite tents brought from Jerusalem were apparently not entirely used for the ship as Nephi records that they "did pitch our tents" upon arrival in the Promised Land (18:23), the same wording used earlier to describe the arrival at the Old World Bountiful (17:6).
4. Several ancient wooden ships dating to Lehi's day or earlier are known. In the museum on the plateau near the Giza pyramids is housed, for example, the sewn cedar-wood Khufu ship dating to the 4th Dynasty, or about 2700 BC. The ship is about 143 feet/43 meters in length. In 2012 an even older vessel, a sewn acacia-wood ship about 40 feet/12 meters long was excavated at Abu Rawash near Giza. It dates to the reign of King Den, about 2950 BC. Over a millennium later, even larger vessels were apparently being built of sycamore fig-timber in Egypt; a relief in Queen Hatshepsut's funerary temple at Deir el Bahri directs that "all the sycamores in the land" be used to build the massive obelisk barges depicted. See also Cheryl Ward, *Sacred and Secular: ancient Egyptian ships and boats* (Boston: Archaeological Institute of America, 2000) and her "Boat-building and its social context in early Egypt: interpretations from the First Dynasty boat-grave cemetery at Abydos," *Antiquity* 80/307 (March 2006): 118-129, discussing the ancient sewn hulls found at Abydos.

The claim that "cedar" was one of the woods locally available to Nephi at Bountiful, made in *Journey of Faith*, 83, 86, 87 is without any basis. Cedar has never been attested in southern or eastern Arabia. See Part 5, Note 33 of this work for a listing of sources documenting the flora both past and present.

5. On the issue of shipbuilding at Khor Rori, see Part 5, Note 30.
6. A general overview of the beginnings of seafaring is provided in Andrzej Pydyn, *Argonauts of the Stone Age: Early maritime activity from the first migrations from Africa to the end of the Neolithic* (Oxford: Archaeopress, 2015). A more focused look is offered in Michael Rice, *The Archaeology of the Arabian Gulf, c. 5000-323 BC*, 248 and in Robert Carter, "The Neolithic origins of seafaring in the Arabian Gulf" in *Archaeology International* (London: UCL Institute of Archaeology, 2002), 44-47. Also see the summary in Noel B. Reynolds, "By Objective Measures: Old Wine into New Bottles" in *Echoes and Evidences of the Book of Mormon*, 128-129.
7. George F. Hourani, *Arab Seafaring* (Princeton: Princeton University Press, 1951) deals with what the Classical and Arab texts reveal of early trade routes, ship types and navigation methods. Concise and sometimes overly conservative (eg. the statement "Arabia does not and never did produce wood suitable for building strong seagoing ships" p. 5; and regarding the Phoenician circumnavigation of Africa ca. 600 BC reported by Herodotus as "legendary" p. 9) it remains a standard text in its field and has been released in an updated version, *Arab Seafaring: Expanded Edition* (Princeton: Princeton University Press, 1995).

A more detailed treatment is N. Boivin, R. Blench & D. Fuller, "Archaeological, linguistic and historical sources on ancient seafaring: A multidisciplinary approach to the study of early maritime contact and exchange in the Arabian Peninsula" in M. Petraglia & J. Rose, eds. *The Evolution of Human Populations in Arabia. Focusing on Arab ship types, navigation practices and sailing dates from Oman is the website <http://nabataea.net/sailing.html> and <http://nabataea.net/ships.html>.*

Also valuable is G. R Tibbetts, *Arab Navigation in the Indian Ocean Before the Coming of the Portuguese* vol. 42 (London: Royal Asiatic Society of Great Britain and Ireland, 1981), which discusses monsoon winds in the region and the discussion of literary sources dealing with Arab seafaring in S. Soucek, V. Christides, G. Tibbetts and G. Oman's entry, "Milaha: navigation, seamanship, seafaring" in the revised edition of the *Encyclopaedia of Islam* (1999). The most comprehensive discussion of navigation is currently William Facey, Anthony R. Constable, eds. *The Principles of Arab Navigation* (London: Arabian Publishing, 2013). This work includes the account of the 2010 Jewel of Muscat voyage from Oman and attempts to replicate early Arab navigation techniques.

Other sources such as Dionisius A. Agius, *Seafaring in the Arabian Gulf and Oman: People of the Dhow* (Oxon and New York City: Routledge, 2005) which focuses on seafaring in the last 150 years; Marie-Christine Graeve’s *The Ships of the Ancient Near East* (ca. 2000-500 BCE) (Louven: Dept. Orientalalistic, 1981); Paul Lunde’s “The Middle East and the Age of Discovery” in *Saudi Aramco World* 43:3 (May-June 1992) and “The Indian Ocean and Global Trade” in *Saudi Aramco World* 56:4 (July-August 2005) also provide valuable context and insight into aspects of early Arabian seafaring that illuminates Nephi’s account.

The work of eminent Jewish scholar Raphael Patai (d. 1996) deserves particular mention: *The Children of Noah: Jewish Seafaring in Ancient Times* (Princeton: Princeton University Press: 1998). Dr Patai referenced Book of Mormon claims and LDS beliefs in his writings, spoke several times at BYU Provo and was invited by LDS scholar John M. Lundquist, head of the Oriental Division of the New York Public Library, to contribute to the 1990 Festschrift honoring Hugh Nibley’s 80th birthday. Dr Patai credited this invitation with helping him complete his seafaring manuscript begun in 1935 and invited Lundquist to contribute an appendix to his book, appearing as “Biblical Seafaring and the Book of Mormon” 171-175. A review of the book (noting Lundquist’s acceptance of Kharfot as the probable Bountiful) mentions several items that may have been part of the Lehite ocean voyage, such as the Jewish requirement to carry soil so that blood spilt during animal sacrifices could be covered with earth (p. 67 in the book); see John Tvedtnes, “Jewish Seafaring and the Book of Mormon” *FARMS Review* 10/2 (1998), 147-155.

8. Email to the author from marine-archaeologist Tom Vosmer, Sep 11, 2003.
9. See Robert Gardiner & Arne E. Christensen, eds. *The Earliest Ships: The Evolution of Boats into Ships* (London: Conway Maritime Press, 2004) for in-depth essays on historical ships and Lionel Casson, *Ships and Seafaring in Ancient Times*, (London: British Museum Press, 1994) for a popular overview of ancient ships. Also valuable is Michael McCarthy, *Ships’ Fastenings: From Sewn Boat to Steamship* (College Station, TX: Texas A&M University Press, 2005) and J. Richard Steffy, “The development of ancient and medieval shipbuilding techniques” in Francisco Alves, ed. *Proceedings of the International Symposium on Archaeology of Medieval and Modern Ships of Iberian-Atlantic Tradition* (Lisbon: Instituto Portugues de Arqueologia, 2001), 49-61.

Ralph K. Pedersen’s, “Was Noah’s Ark a Sewn boat?” in *Biblical Archaeology Review* (May/June 2005) and his extended treatment “Traditional Arabian watercraft and the ark of the Gilgamesh epic: interpretations and realizations” in *PSAS* 34 (2004), 231-238, focuses on sewn vessels, proposing that sewn and lashed ships date to much earlier than previously recognized. Pederson suggested that the Biblical account of

Noah’s ark may suggest a lashed ship and finds strong parallels to the technique in the Gilgamesh account of the Flood, found in Ninevah in the 19th Century.

10. On the worldwide distribution of sewn ships, see A. H. J Prins, “A handbook of sewn boats” (Greenwich: Maritime Monographs and Reports, 1986), no. 59 and George F. Hourani, *Arab Seafaring: Expanded Edition*, 151. For illustrations of both lashed and sewn methods as used in Oman anciently, see *The Museum of the Frankincense Land: The Maritime Hall* (Muscat: Office of the Advisor to His Majesty the Sultan for Cultural Affairs, 2007), 62-65.
11. Robert C. West, “Aboriginal Sea Navigation between Middle and South America” in *American Anthropologist* 63 (1961), 133-135.
12. See Christopher Ralling, *Kon-Tiki Man: An Illustrated Biography of Thor Heyerdahl* (London: BBC Books, 1990), see 104, 142, 204 concerning steering, 112 for other perceived advantages of a raft and 120 concerning food and water. The 1832 experience of a stricken Japanese ship, the *Hojun Maru*, which drifted across the Pacific for 14 months, demonstrated that sailors can survive long periods on fish and rainwater. Historian Hubert Bancroft noted evidence for about a hundred accidental voyages from Japan to North American shores; see Hubert Howe Bancroft, *The Native Races of the Pacific States of North America*, vol. 5 (San Francisco: Bancroft & Co, 1883), 52.
- Latter-day Saints have had more reasons than most to be fascinated by Heyerdahl’s projects. An extended interview with Heyerdahl was published as “An interview with Famed Explorer Thor Heyerdahl” in the *New Era* of April, 1972 and can be accessed online. On April 29, 1989 the *Church News* carried a brief report of a discussion between Heyerdahl and Paul R. Cheesman of BYU as “Thor Heyerdahl’s voyages support Book of Mormon, he tells professor.”
13. See the comments by Tim Severin in *The China Voyage: A Pacific Quest by Bamboo Raft*, (London: Little, Brown & Co. 1996), 315-316.
14. P. J Capelotti, Senior Lecturer in Anthropology and American Studies at Penn. State University and author of *Sea Drift: Rafting Adventures in the Wake of Kon Tiki* (Piscataway, NJ: Rutgers University Press, 2001) made this general comment (emphasis added) in an interview accessed online July 1, 2007: http://rutgerspress.rutgers.edu/acatalog/Capelotti_interview.html.

See the review of nearly 40 modern raft voyages in P. J Capelotti, “The Theory of the Archaeological Raft: Motivation, Method, and Madness in Experimental Archaeology” the *Journal of Experimental Archaeology* (EXARC), issue 2012/1 at <http://journal.exarc.net/issue-2012-1/ea/theory-archaeological-raft-motivation-method-and-madness-experimental-archaeology>

Anthropologist Cheryl Ward, who led a project to build and sail an 1800 BC-design Egyptian ship in December 2008, suggested that a raft would most likely result under the parameters existing at Kharfot (email correspondence with the author March 14-15, 2009).

Grateful appreciation is extended to Stephen L. Carr, MD, of Salt Lake City for his pioneering efforts, following two visits to Oman with the author, to resolve practical aspects of how Nephi's ship may have been built and how it may have functioned on a daily basis for those on board; see his "Another Idea for Nephi's Ship" at www.bmaf.org/node/452. Two seasoned LDS seafarers, Robert Copeland of Washington state and Philip H. Harris of Texas have contributed comments to this section through their analysis of the issues involved; see Philip H. Harris, *The Voyage: A Sailor's Viewpoint* (Bloomington, IN: Xlibris, 2011).

15. Captain DeVere Baker, *The Raft Lehi IV: 69 days Adrift on the Pacific Ocean* (Long Beach, CA: Whitehorn Publishing, 1959). Baker was featured in the TV documentary series "Danger is My Business" in 1961, focusing on his fourth and ultimately successful sailing to Hawaii in July 1958. The segment "South Seas Raft Man" aired in the UK on the BBC in 1961. A fairly detailed overview of Baker's efforts is found in Samuel W. Taylor, "Twenty-Five Years on a Raft: the Odyssey of DeVere Baker" in *Sunstone* 21/3 (August 1998), 72-76.
Marking the 20th anniversary of Baker's death a feature by the author, "DeVere Baker and his ocean rafts" appeared January 31, 2011 in *Meridian Magazine*, at <http://ldsmag.com/article-1-7413/>
For another attempt to reprise a Book of Mormon voyage, that of the Jaredites, see: www.ldschurchnewsarchive.com/articles/print/39934/LDS-oarsman-completes-transatlantic-row.html.
16. Thor Heyerdahl, *Kon Tiki: Across the Pacific by Raft* (Chicago: Rand McNally, 1950) and his *Early Man and the Ocean: a Search for the Beginnings of Navigation and Seaborne Civilizations* (London: Allen and Unwin, 1978). From April to July 2006 Heyerdahl's grandson Olav re-created the original voyage in the raft "Tangaroa," sailing safely with his crew and with minimal damage to the raft, from Peru to Tahiti. Crew-leader Torgeir Higrav's account, *Tangaroa: Havets Hersker* (Oslo: Bazar Forlag, 2007), was published only in Norwegian.
17. Tim Severin, *The Sindbad Voyage* (London: Arrow Books, 1983).
18. In August and September, 2009 the author sailed as crew on the Aden to Salalah leg of the Phoenicia [nailed] ship's 2008-2010 circumnavigation of Africa, www.phoenicia.org.uk, a voyage totaling over 20,000 miles/32,000 km. This was reported in Warren P. Aston, "Sailing With Nephi" in *Meridian Magazine* on May 27,

2010. The official account of the project is Philip Beale & Sarah Taylor, *Sailing Close to the Wind: An epic voyage recreating the first circumnavigation of Africa by the Phoenicians in 600 BC.* (London: The Lulworth Press, 2012).

An Atlantic crossing is next planned for the Phoenicia, see "Phoenicians Before Columbus Expedition," see <http://pioneerexpeditions.com/phoenicians/>

The Min of the Desert [mortise and tenon] ship project in Egypt is discussed in Cheryl Ward and Chiara Zazzaro, "Evidence for Pharaonic Seagoing Ships at Mersa/Wadi Gawasis, Egypt" in *International Journal of Nautical Archaeology* 39/1 (Portsmouth, UK: Nautical Archaeology Society, March 2010), 27-43.

For the successful sailing in 2010 of the [sewn] Jewel of Muscat ship from Oman to Singapore via India, see the expedition website www.JewelofMuscatArchive.org. It followed an earlier effort by marine archaeologist Tom Vosmer to sail from Oman to Singapore using a vessel based on a four thousand year old design. The 40 foot/12 meter Magan 3 was constructed of bundles of reeds tied together with date-palm fiber ropes and sealed with bitumen. Woven woolen sails were used. See preliminary remarks in Tom Vosmer, "Model of a Third Millennium BC Reed Boat based on evidence from Ra's al-Jinz," *The Journal of Oman Studies* 11 (2000), 149-153. Unfortunately, in September 2005, the reed ship sank just before its maiden voyage.

19. John L. Sorenson, "Scientific Evidence for Pre-Columbian Transoceanic Voyages to and from the Americas," 3 parts at <http://maxwellinstitute.byu.edu/publications/transcripts/?id=154>.
20. Some non-LDS scholars are reaching similar conclusions. The recent publication by John A. Ruskamp of *Asiatic Echoes: The Identification of Chinese Pictograms in North American Rock Writing* (Amazon: CreateSpace, 2012), for example, illustrates the increased openness of mainstream scholars to a variety of cultural input from early voyages. As mainstream science accepts the overwhelming data confirming ancient long-distance sea voyaging we can expect further insights to emerge into the longest, yet least known, stage of the Lehite odyssey.
21. As in most cultures, respect for age in the family and in community life has always played an important role in Israelite society. Sometime age and gender considerations combine, as for example a Jewish male receiving circumcision and Bar Mitzva at specified ages. At death, the Kadish lamentation over the dead is customarily read by the first-born male over his father's grave. But, in other no less important settings, age alone may play a role. Each year, for example, at the Passover supper, it is the youngest child who asks the four traditional questions whose answers outline the reason for the feast. Even when only the husband or wife is present, the younger of the two asks the ritual questions. Although he was teaching his estranged brothers

- a powerful lesson, Joseph in Egypt had them sit at his table according to their age (Genesis 43:33), later opening their sacks of grain in the same order (Genesis 44:12). The only other boarding of a ship by a family group recorded in scripture, the account of Noah, does not clarify whether there was any priority in either boarding the ark (Genesis 7:7, 13) or in disembarking (Genesis 8:16, 18). It seems unlikely that a New York farm boy in 1830 would concoct these distinctions in protocol.
22. See the account recorded in George F. Hourani, *Arab Seafaring* (1995), 116.
 23. Lynn M Hilton, “Nephi’s “Eastward” Journey (1 Ne. 17:1)” in *AAF Newsletter* 62 (AAF #5 - SEHA News, April 1988), available at www.ancientamerica.org, argues in some detail that Nephi, writing years later, was recording the [eastward] direction of travel from Nahom not only to the Arabian Bountiful, but also across the ocean to the Americas.
 24. John L. Sorenson, “Transoceanic Crossings in the Book of Mormon,” 264. For a recent treatment of the Book of Mormon’s ocean voyages, see George Potter, Frank Linehan and Conrad Dickson, *Voyages of the Book of Mormon* (Springville, UT: CFI (Cedar Fort), 2011).
 25. John L. Sorenson drew the attention of LDS scholars to the potential of ENSO events to facilitate Lehi’s easterly travel across the Pacific in a *FARMS Update*, April 1986 and in his 1988 “Transoceanic Crossings,” 263-264. A fuller discussion was offered by David L. Clark, “Lehi and El Nino: A Method of Migration” in *BYU Studies* 30/3 (Summer 1990), 57-65. Its projected sailing date from Bountiful (in August, the midst of the monsoon storms) is not feasible however.
For concise updates on recent progress in dating past ENSO events and the implications, see Warren P. Aston, “El Nino and Lehi’s Voyage Re-Visited” *Insights* 27/6 (2007), 2-3 and “Is this the wind that blew Nephi to the Americas?” in *Meridian Magazine*, May 9 2011, available at www.ldsmag.com/component/zine/article/7969?ac=1
 26. See Clyde J. Williams, “Plain & Precious Truths Restored” *ENSIGN* (October 2006), 50-54 for an accessible outline for a general readership of the contributions the Book of Mormon has made in clarifying doctrine.
 27. *Times and Seasons* 3, (September 15, 1842), 921-922.
 28. That in the latter-days truth would be restored to the human family “out of the earth” has been a consistent theme of ancient prophets and seers. Enoch (Moses 7:62), Joseph in Egypt (2 Nephi 3:19-20), Isaiah (Isaiah 29:4) and the Psalmist (Psalms 85:11) all saw that in some way truth would come from “out of the ground,” predictions being fulfilled more literally than many may have supposed.
 29. In contrast to the perspectives by Terryl Givens concerning the significance of the Nahom altar finds (see Part 3, note 68), there has been mostly silence from cultural-Mormon and anti-Mormon critics and a refocusing by them on the less-developed New World setting of the Book of Mormon. See Kevin Christensen’s response to attempted naturalistic explanations of the Book of Mormon, “Determining What is “Real”” in *Sunstone* 139 (Nov 2005), 66-70, especially notes 20, 24; and commentary on apologetic LDS websites such as <http://mormanity.blogspot.com> under “Book of Mormon Evidences” and at www.fairlds.org.
 30. As noted in Part 3 (note 73) of this book, the most relevant response to the Old World research to date from non-LDS scholarship is found in Beckworth, Mosser and Owen’s *The New Mormon Challenge*, 498 written before the Nahom altar discoveries. Although convinced that the Book of Mormon has no divine origin, their appraisal is nonetheless refreshingly honest and balanced. More general recognition of the achievements of orthodox Book of Mormon scholarship was offered in the landmark paper “Mormon Scholarship, Apologetics, and Evangelical Neglect: Losing the Battle and Not Knowing It?” by Carl Mosser and Paul Owen, given in a 1997 Evangelical Theological Society conference (Far West Annual Meeting) and later published in *Trinity Journal* (Bannockburn, IL: Trinity Evangelical Divinity School, Fall 1998), 179-205. Some rapprochement between Latter-day Saints and Evangelicals in recent years has been evident with co-published books and papers attempting to find common doctrinal ground in the face of growing materialism and atheism worldwide.
 31. Bruce C. Hafen, *The Broken Heart: Applying the Atonement to Life’s Experiences* (Salt Lake City: Deseret Book, 1989), 26. Another primary text is Jeffrey R. Holland’s *Christ and the New Covenant: The Messianic Message of the Book of Mormon* (Salt Lake City: Deseret Book, 1997).
 32. In the academic world Mormon studies, inevitably dealing with the impact of the Book of Mormon, was pioneered by Douglas J. Davies of Durham University in England. Davies, a professor of divinity and an ordained Anglican priest, has authored such works as *An Introduction to Mormonism* (New York: Cambridge University Press, 2003) and *The Mormon Culture of Salvation* (Burlington, VT: Ashgate, 2000). The European Mormon Studies Association (EMSA) holds an annual conference in UK and European locations and publishes the *International Journal of Mormon Studies* (print and online). Other academic centers that focus on, or include, Mormonism are found in France, Italy, Belgium, France, Switzerland, Brazil and New Zealand.
Utah Valley University (formerly UVSC) in Orem has operated a Mormon Studies program since 1999 and Utah State University at Logan, Utah, Claremont

University in Southern California, the University of Wyoming and the University of Virginia on the US east coast are among those who have endowed chairs in Mormon studies.

Other non-LDS scholars and clergy with substantial academic pedigrees such as James H. Charlesworth of Princeton Theological Seminary, historian Jan Shipps of Indiana University, British theologian and Methodist minister Margaret Barker, Harold Bloom of Yale and the late Krister Stendahl, former dean of Harvard Divinity School and Emeritus Bishop of Stockholm have all had some involvement in “Mormon” studies. While maintaining their own denominational beliefs, they are in the vanguard of a rising appreciation for the book given to the world by Joseph Smith. For commentary on this subject, see M. Gerald Bradford, “The Study of Mormonism: A Growing Interest in Academia” FARMS Review 19/1 (2007), 119-174. For another perspective see John A. Tvedtnes, “Scholarship in Mormonism and Mormonism in Scholarship” at: www.fairlds.org/FAIR_Conferences/2001_Scholarship_in_Mormonism_and_Mormonism_in_Scholarship.html

33. *See Paul C. Gutjahr, The Book of Mormon: A Biography (Princeton, Princeton University Press, 2012) and the paper presented by religion scholar Ann Taves at the 2013 Mormon History Association meeting, titled “History and the Claims of Revelation: Joseph Smith and the Materialization of the Golden Plates,” available at www.religion.ucsb.edu/wp-content/uploads/B-6-Golden-Plates-Numen.pdf.*
34. *See Grant Hardy, ed. The Book of Mormon: A Reader’s Edition. An approved, non-LDS, commercial version of the Book of Mormon, with text identical to the 1981 LDS printing, was published in 2004 and 2006 by New York based Doubleday. In 2009 Yale University Press published the Book of Mormon incorporating textual corrections from Royal Skousen’s Critical Text Project. On unofficial contemporary versions, commentaries and abridgements of the Book of Mormon, see the First Presidency statement published in the ENSIGN magazine (April 1993), 74 and Shirley S. Ricks, “The Book of Mormon Abridged Anew” in FARMS Review 18/1 (2006), 21-33. For a generally positive review of a non-LDS Book of Mormon interpretation published in 1999 by the Zarahemla Research Foundation, see Brian M. Hauglid, “A New Approach to the Book of Mormon: the Restored Covenant Edition” in FARMS Review 12/2 (2000), 9-20.*
35. *Elder Neal A. Maxwell, unpublished address: “The Ends of the Earth Shall Inquire after Thy Name” delivered at the Missionary Training Center in Provo, Utah, on August 23, 1994.*