Journal of Book of Mormon Studies Volume 9 Issue 2

Neal A. Maxwell Institute for Religious Scholarship

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The Middle East Context of Nephi's Metallurgy

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On the cover: Egyptian metal founders smelting ore over an open fire. Painting in the tomb of Rekhmire, Sheikh Abd el-Qurna, West Thebes, 18th dynasty. Courtesy Kodansha Ltd.

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THE EDITOR'S NOTEBOOK

For three years we have been emphasizing that the *Journal of Book of Mormon Studies* is pitched to the level of the general intelligent reader, not the specialist. Despite a few possible lapses in meeting our own standard, we feel that our aim has been a wise one. Judging by feedback we have received from readers at both levels, general public and specialists, we believe we have more or less succeeded.

We continue to feel strongly that it is possible and highly desirable for informed researchers and writers to communicate with readers in the simplest, most straightforward language possible. We recently found a professor who feels as we do and phrases the need better than we might.

Gerard J. DeGroot, an American and chair of the Department of Modern History at the University of St. Andrews in Scotland, had this to say in an opinion piece in the *Christian Science Monitor* (1 May 2000, p. 11):

"In 1998, the British Golden Bull award for academic pomposity was awarded to a Birmingham University professor for research entitled: 'The Measurement of Consumer Criteria for Manufacture Parameter Values in Biscuit Texture.' In other words, the good professor was trying to discover why people prefer crunchy cookies to 'squidgy' ones.

"Unlike previous recipients of the award, the professor took the accolade badly, accusing the Plain English Campaign (sponsors of the award) of crude populism.

"Academics everywhere—be they from the arts or sciences—produce pure research studied mainly by other academics. They apparently need jargon to define membership in their exclusive circle. Those who understand belong; those confused do not. . . .

"In order to give legitimacy to their work, academics mystify it, creating myriad magic circles to which only those who speak the secret language are admitted. Many of them have lost the ability to communicate, except in the sense of communicating with each other. . . .

"I have [a] . . . book on sexuality and social relations, a fascinating topic which deserves attention. Unfortunately, I've never been able to get beyond the first few sentences: 'When we turn our attention to theoretical discourses, our gaze falls on what the discourse itself sees, its visible. What is visible is the relation between objects and concepts that the discourse proposes. This is the theoretical problematic of a given theoretical discipline.'

"I'm proud to admit that I haven't a clue what that's about.

"But what really scares me is that an innocent student might actually think it's intelligent simply because it's incomprehensible. I don't understand why communication is such a problem for academics.

"Isn't teaching supposed to be about conveying knowledge? Perhaps academics feel that sophistication requires complexity, that simple expressions can't convey complicated ideas. But it's more than that. There seems to be a deep contempt for the public and a concomitant belief that any research that is understandable to the lay person is inferior—too populist.

"I recall meeting a colleague some years ago who proudly boasted that his latest book sold only 257 copies. He slept soundly knowing that only specialist libraries had bought it. Ordinary people hadn't managed to get their grubby fingers on it.

"It is a basic truth in education that people learn best that which they enjoy.

"Yet, within the ivory tower, there exists a strange prejudice against academic writing which is interesting or, heaven forbid, entertaining.

". . . The world is confusing enough without academics bringing darkness to every corner of light."

We continue to invite Latter-day Saint researchers who wish to communicate their studies of the Book of Mormon and related topics through the *Journal* to strive to meet Nephi's standard: "plainness unto my people" (2 Nephi 25:4).

Submitting Articles to the *Journal of Book of Mormon Studies*

Guidelines for preparing and submitting articles for publication in the *Journal* are available on the FARMS Web site (farms.byu.edu), by e-mail request to jbms@byu.edu, or by mail from FARMS. In general, authors should submit a detailed outline or abstract to the editors for approval before submitting a completed manuscript.

DESERT EPIPHANY:

Sariah

& THE WOMEN IN 1 NEPHI

CAMILLE FRONK

Perhaps one of the greatest deterrents to effective scripture study is the pattern of reading verses in the same order, focusing on the same insights, and asking the same questions. When I have considered a different perspective in scripture study, I have nearly always discovered new insights, almost as though supplemental verses had been added since my last reading. I found myself asking questions I had not considered and seeing connections I had not recognized.

When reading 1 Nephi, one might profitably consider the eight-year wilderness experience through the eyes of the women in Lehi's company. Because 1 Nephi was recorded by two men (Lehi and Nephi), we naturally encounter their faith and sacrifice on every page. The women, however, are not nearly as visible as the men, and their voices may initially appear muted or feeble.

During ancient Israel's history, the prevalent culture and interpretation of law showed little sensitivity toward women. For example, Israelite law viewed women as an extension of their fathers or husbands. Since at marriage daughters became members of another man's family, men perceived women as "aliens or transients within their family of residence."[1] Additionally, divorce laws differentiated men from women: Only men were given directives pertaining to divorce, implying that women could not initiate a divorce (see Deuteronomy 24:1–4). A man could legally sell his daughter into marriage to settle a debt (see Exodus 21:7–9), but no mention is made of sons being sold. A male Hebrew servant was automatically freed after seven years of servitude, but a female servant was freed only if her basic needs were not being met (see Exodus 21:2–4, 10–11). Moreover, lineage assignment and transmission of land inheritance were traced through men (see Numbers 27:8; 36:6–8), and Israelite society considered women to be unclean twice as long after bearing a daughter as after giving birth to a son (see Leviticus 12:2–5).

Portions of Nephi's writings reflect that Lehi and his family were products of this Israelite culture. For example, Nephi reported that Lehi "left *his* house, and the land of *his* inheritance, and *his* gold, and *his* silver, and *his* precious things" (1 Nephi 2:4) and that he and his brothers secured the brass plates containing "the genealogy of my *father*" (1 Nephi 3:12). He summarized his writings as "the things of my *father,* and also of my *brethren*" (1 Nephi 10:1). We can be sure that Nephi's mother, wife, sisters-in-law, mother-in-law, sisters, and daughters in fact also figured prominently in the soul-stretching events of establishing a homeland in the New World. Yet, although Nephi recorded the names of his father and brothers, the only woman's name to appear in his record is his mother's, Sariah.

On the other hand, we stand in awe at the divine wisdom that permeates Nephi's writings and supersedes his national culture. First, we hear God's voice through doctrine taught by prophets who themselves may not have completely recognized the depth contained in their pronouncements. These inspired sermons contain no hint of inequality between men and women and seem to contradict the predominant culture of the time. Nephi boldly declared that God "denieth none that come unto him, black and white, bond and free, *male and female;* and he remembereth the heathen; and *all are alike unto God,* both Jew and Gentile" (2 Nephi 26:33). Likewise, Nephi's younger brother taught that "the one being is as precious in [God's] sight as the other" (Jacob 2:21). Despite a cultural tendency to blur the importance of any segment of the population, God's doctrine and promises speak to all his children and transcend every mortal culture.[2]

Second, Nephi's writings actually *do* include multiple references to women. "The wonder is not that there is so little about women in the Book of Mormon but that there is so much, given the times and traditions."[3] Seen in this light, instances in which women are included in Nephi's narrative should be regarded not as inconsequential but as worthy of serious consideration.

Who Were the Women in 1 Nephi?

Nephi specifically mentions nine women: Sariah, Ishmael's wife, Ishmael's five daughters (four of whom became wives to Lehi's four oldest sons, and one who married Laban's servant, Zoram; see 1 Nephi 16:7), and the two women who married into Ishmael's family before their departure from
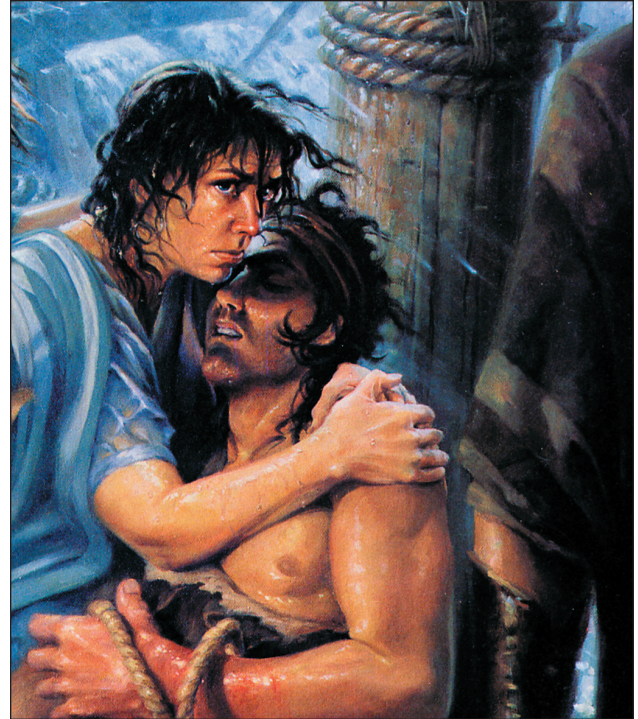
Nephi's wife showed support and commitment (see 1 Nephi 18:15, 19) that she must have gained in part from her mother-in-law, Sariah.

Jerusalem (see 1 Nephi 7:6). Nephi referenced his "sisters" in 2 Nephi 5:6, but no supporting information is supplied in the text concerning the number of sisters or their birth order in the family. John L. Sorenson argues that these girls were born in Jerusalem, before the family departed, and would have been younger than Nephi; "otherwise there would be no way to place them in Sariah's birth history."[4] Let it suffice that at least nine urban women were thrust into an eight-year desert existence. Not only did these nine survive, but the experience changed their lives forever. Considering the wilderness experience through their eyes affords insights that otherwise would elude us.

Sariah

Sariah was the first and only woman that Nephi identified by name in his record. In almost reverential tones, he acknowledges her in the opening line ("I, Nephi, having been born of goodly parents . . .") and specifically names her when identifying his family members (see 1 Nephi 2:5). The name Sariah apparently comes from the Hebrew name שריה (śryh). Book of Mormon critics have argued that while śryh is detectable 19 times in the Bible as a male name, there is no evidence that the name was applied to a woman. In response, Jeffrey R. Chadwick discovered a reference to a woman from Elephantine named "śryh, daughter of Hosea,"[5] in a fifth-century-B.C. Aramaic papyrus. In the feminine usage, the name probably means "princess of Jehovah," derived from the Hebrew root for sar(ah), meaning "prince" or "princess," and jah, a derivative of Jehovah.[6]

Furthermore, in his record Nephi provided more descriptive coverage of his mother than of any other woman. In chapter 5 of 1 Nephi, 10 consecutive verses give attention to Sariah (see 1 Nephi 5:1–10). This account relates Sariah's fearful reaction when her sons had not returned from securing the brass plates from Laban. A hasty and narrow review of these verses could lead a casual reader to conclude that Sariah was a "murmurer." But that approach ignores how women were generally viewed in that culture.

We consider the following questions: What was required of Sariah to leave her accustomed lifestyle in Jerusalem? What indications of Sariah's faith emerge when the family departed? Why would Nephi choose to record this incident to focus our attention on his mother—an incident that clearly manifests her murmuring against Lehi? Why not choose an experience that more obviously showed her spiritual strength? What implications did Sariah's attitude have on the other women who eventually joined Lehi's company? These are some of the questions I would like to explore in this study.

Departure from Jerusalem

To appreciate the sacrifice involved in the company's departure from Jerusalem, we tease out of the record a few hints about the home Lehi and Sariah left behind. Nephi frequently commented that his father was a wealthy man. He referred to the family's "gold and silver, and all manner of riches" (1 Nephi 3:16), their "precious things" (1 Nephi 2:4; 3:22), and Laban's lustful response to the abundance of Lehi's family property (see 1 Nephi 3:25). So we may assume that the family inhabited one of the better houses in or near the city and enjoyed unusually favorable health and dietary conditions.[7] Archaeologists have uncovered well-built homes inside walled Jerusalem, in a section of the city called the City of David. These homes date to the seventh century B.C. and show signs of being destroyed by fire at the time of the Babylonian invasion in 586 B.C.[8] Although Lehi and Sariah most likely lived in another sector of the city, these contemporary homes give us an idea of the comparative luxury their family would have known.

One of those uncovered houses was a four-room, two-story building with substantial pillars supporting the roof and dressed limestone blocks framing the doorways. The house measured 24 by 36 feet. A "service wing," made up of three tiny rooms behind the home, contained an indoor toilet and quarters for servants.[9] Remains of other "better" homes in Jerusalem indicate that residents owned-

Women's ancient treasures like this mirror must have been hard for Sariah to leave behind.
© Yigael Yadin

chairs, tables, beds, numerous clay oil lamps, an oven, stone structures for storing grain, and clay vessels for storing liquids. Decoration in the form of pictorial art, faience vases, glass beads, carved ivory plaques, decorated pottery, and metal art products adorned nicer homes.[10]

Although leaving home was a sacrifice for Lehi, it was arguably a greater test of faith for Sariah. Four reasons support this suggestion. First, Sariah undoubtedly spent more time at home and had more domestic responsibilities than did Lehi, so leaving home would have tremendous significance for her. According to Israelite tradition, the female head of the household supervised all other women in the home, including unmarried daughters, daughters-in-law, and servants.[11] Sariah's world revolved around her home, whereas both commercial and religious duties would have frequently taken Lehi outside the home.

Furthermore, they left their "precious things" behind to take only "family, and provisions, and tents" (1 Nephi 2:4). Having visited Bedouin camps along a possible route followed by Lehi's family, some LDS researchers suggest "provisions" included "wheat, flour, barley, dried sour milk, olive or sesame oil, olives, dates, a few cooking utensils, bedding, and weapons such as bows, arrows, and knives" but would not have included eating utensils.[12] It is unlikely that Sariah took beautiful trinkets or home decorations to soften the harsh reality of tent living. In recent centuries nomadic women, such as Bedouin women, possessed one simple locked box to hold their valuables. Each woman wore the key on her headscarf.[13] Even wives of the very wealthy had only one box, albeit a very lavish box. Bedouin women also wore their valuables, in the form of coins and jewelry, around

This shell was used as a cosmetic palette. The rings, above, were found at Masada.
© Yigael Yadin

their necks and wrists. One wonders whether Sariah did the same. The wealth around her neck or niceties in her box may have gradually disappeared as necessity to survive in the desert required trading or selling them. After all, Nephi said that his father left his possessions behind (see 1 Nephi 2:4); he made no such claim for his mother's wearable wealth. Whether from the beginning of their journey or later as the family sailed to a new land, the implication is that Sariah was devoid of any tangible reminder of a privileged life known in Jerusalem.

A second reason suggesting departure was more difficult for Sariah was that Lehi would have adjusted more easily to full-time tent living than Sariah could have. Hugh Nibley described Lehi as "an expert on caravan travel."[14] Family members complained about Lehi's visions but never about his lack of skill in leading and preserving his family in the wilderness. Likewise, his sons appear to have had previous wilderness hunting experience, particularly Nephi, who owned a steel bow (see 1 Nephi 16:14–18). Nephi's brothers mocked his proposal to build a ship but never his ability to hunt in the wilderness.[15] In contrast, tradition suggests that women remained at home during caravan runs. One wonders whether Sariah had ever spent time in a tent. Granted, Lehi would have owned a fine tent with accommodations to increase comfort and protection, but even the most luxurious tent would have been a poor substitute for Sariah's Jerusalem home.

Third, perhaps more difficult than leaving her house's comforts and luxuries, Sariah had to leave kinfolk and associations with other women.[16] As the family embarked on its journey, Nephi named Sariah as the sole woman in a cast of "large in stature" men. The implication is that Sariah initially lacked female companionship during a demanding adjustment period. Having another woman to commiserate with and share the burden of increasing demands surely would have bolstered Sariah's courage and made the going easier.

Fourth, Nephi gives no indication that his mother received her own personal witness from the
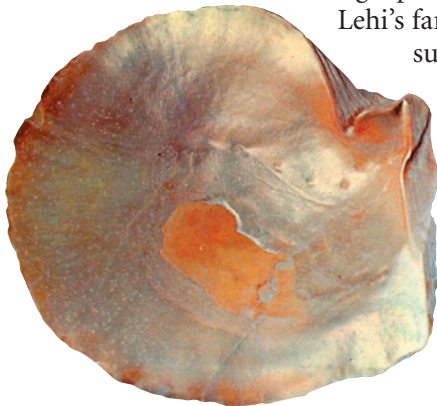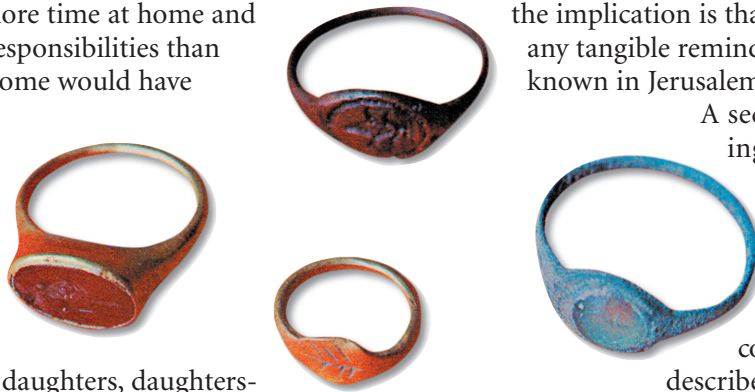
Bedouin tents. The party's collection of tents could not begin to replace a comfortable urban house.

strong faith and resolve to follow the Lord's will, respect for her husband, and honor to her marriage covenant. Yes, Sariah obeyed, as did her prophet-husband, leaving behind a beautiful, servant-supported home surrounded by kinfolk and friends to live in a world to which she was unaccustomed. There is no indication that Sariah murmured as she left Jerusalem. She apparently undertook the wilderness trek because a prophet had borne witness that such was the will of God and she trusted that his witness was true.

Lord of the necessity of fleeing Jerusalem. Lehi, on the other hand, received many visions and dreams (see 1 Nephi 1:16) that allowed him to see, hear, and read in order to know God and his will. In response to his prayer, Lehi "saw and heard much" that caused him to "quake and tremble exceedingly" (1 Nephi 1:6). He saw "God sitting upon his throne," and "One descending out of the midst of heaven" whose "luster was above that of the sun at noon-day" and "twelve others following him, [whose] brightness did exceed that of the stars in the firmament" (1 Nephi 1:8–10). These glorious personages gave Lehi a book from which he read about Jerusalem's imminent destruction (see 1 Nephi 1:13–14). Finally, the Lord commanded Lehi "in a dream, that he should take his family and depart into the wilderness" (1 Nephi 2:2).

All of these revelations underscore the Lord's obvious love and trust for his prophet, Lehi, as well as Lehi's commendable faith and obedience, even when his life was threatened by angry Jerusalemites. In an understatement, Nephi simply observes, "And it came to pass that [Lehi] was obedient unto the word of the Lord. . . . And it came to pass that he departed into the wilderness" (1 Nephi 2:3, 4).

These dreams and visions, however, tell us little about Sariah. She also was obedient to the word of the Lord and departed into the wilderness. Why did she leave? The record is silent. If his mother did receive a spiritual manifestation confirming that of her husband, Nephi did not record it—nor would we expect him to, given his culture. Was Sariah illiterate, as was typical for women of that day, and therefore limited in her access to scripture? Surely her ready obedience to the Lord's command through Lehi that the family leave Jerusalem is indicative of a

Sariah's Crisis

As if the Lord were stretching her to the brink of her faith, Sariah soon encountered another test far more demanding than abandoning her home and kinfolk. Facing the potential loss of all four of her sons, she "murmured" (see 1 Nephi 5:1–3). It was one thing to leave a comfortable lifestyle, but quite another to have her most precious blessing torn from her. Children were the focus of life for women in ancient Israel (see Psalms 127:3; 128:3). Only in their roles as mothers did Israelite women receive honor and authority. "The [Israelite] woman's primary and essential role within the family . . . accounts for her highest personal and social reward."[17] More specifically, being a mother of sons created a woman's greatest source of joy and comfort. Sons were seen as a particular blessing not only because they could defend the family in the face of opposition, but because they promised a continuation of the family name.[18] A reciprocal love was typical among the sons of these mothers. Charles A. Doughty, a 19th-century British explorer who made the *hajj* (Islamic pilgrimage to Mecca) by traveling by camel through some of the same deserts that Lehi's family traveled, observed that among Bedouin women "the grown son has a tender regard toward his mother, . . . before the teeming love even of his fresh young wife" and could be depended on to welcome his mother as matron in his tent should something happen to her husband.[19] This relationship may partially explain why Nephi spoke more of his mother than of his wife.

Such strong family ties made the tragedy of losing a son especially traumatic—almost insurmountably devastating if a mother like Sariah were to lose all of her sons at one time. Centuries after Sariah's time, but within a similar desert cultural tradition, Doughty encountered a woman who attempted to offer him an armful of fresh produce while pleading,

> I have lost my children, one after [the] other, four sons, and for the last I besought my Lord that He would leave me this child, but he died also . . . and he was come almost to manly age. And there are times when this sorrow so taketh me, that I fare like a madwoman; but tell me, O stranger, hast thou no counsel in this case? and as for me I do that which thou seest,—ministering to the wants of others—in hope that my Lord, at the last, will have mercy upon me.[20]

Coupled with this profound motherly love was Sariah's knowledge of specific dangers awaiting her sons in Jerusalem. Many Jerusalem men holding positions of power had a vendetta against "the prophets" who vehemently warned against resistance to the Babylonians (see 1 Nephi 7:14–15).[21] We can therefore understand some of Sariah's fears when her sons did not return from Jerusalem in the time frame she anticipated. So again we ask, why did the Lord inspire Nephi to include this incident in his narrative? Obviously, Nephi's intent was not to demean his mother, nor to lead readers to write her off as a faithless murmurer.

I suggest a different explanation. To establish Lehi and his family in a new land where they would inspire and instruct later generations to come unto Christ, God needed more than a father and a son (as successor) to possess a testimony tried in the fire of affliction. God also needed a matriarch, weathered by her own trials of faith and armed with her own unwavering witness, to stand steadfast with her prophet-husband.

When her sons failed to return, Sariah feared, giving evidence that her present faith, though admirably strong, was not yet strong enough to continue the difficult journey, let alone to establish a God-fearing family in a new land. The content of 1 Nephi 5 is therefore especially significant because it shows how crucial a mother's preparation is to the Lord. God desired not only that the family possess the brass plates for the journey, but also that both

the mother and the father have unshakable faith before they continued.

In her fear, Sariah "complained against" her husband, calling him a "visionary man" and blaming him for leading their family to "perish in the wilderness" (1 Nephi 5:2). Lehi did not argue Sariah's accusation but validated the force that propelled him to act in total faith. Lehi responded to his wife: "I know that I am a visionary man; for if I had not seen the things of God in a vision I should not have known the goodness of God, but had tarried at Jerusalem, and had perished with my brethren" (1 Nephi 5:4; 19:20). He continued his witness, "I know that the Lord will deliver my sons out of the hands of Laban, and bring them down again unto us in the wilderness" (1 Nephi 5:5). Nephi relates that "after this manner of language did my father, Lehi, comfort my mother, Sariah," suggesting that this type of interchange occurred a number of times during the sons' absence. But the fact that Sariah desired repeated reassurance indicates that Lehi's powerful testimony, though comforting, was not enough to deal with the threat of the potential loss of her sons (see 1 Nephi 5:1, 3, 6).

Sariah must have begun to pray more fervently than ever before during her sons' absence—not only for their safety but also for a confirmation that their journey was of great importance to the Lord. One can imagine Sariah gazing longingly toward the horizon several times a day, hoping for some sign of her sons' return, all the while pleading with God.

Nephi gives us a glimpse of the emotional reunion with his parents when he and his brothers returned from Jerusalem. "And it came to pass that after we had come down into the wilderness unto our father, behold, he was filled with joy, and also *my mother, Sariah, was exceedingly glad,* for she truly had mourned because of us" (1 Nephi 5:1). Doughty described a similar return of a son to his mother:

> A poor old Beduin wife, when she heard that her son was come again, had followed him over the hot sand hither; now she stood to await him, faintly leaning upon a stake of the beyt. . . . [After giving his report to the men in the camp], he stepped abroad to greet his mother, who ran, and cast her weak arms about his manly neck, trembling for age and tenderness, to see him alive again and sound; and kissing him she could not speak, but uttered little cries. Some of the

[men] laughed roughly, and mocked her driveling, but [one man] said, 'Wherefore laugh? is not this the love of a mother?'[22]

Sariah's reunion with her sons was additionally charged with the spiritual witness and stronger faith she received as a result of her trial. At that moment Sariah gained a deeper testimony than she had previously known. Notice the power and assurance in

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Sariah as she bore witness to her reunited family: "*Now I know of a surety* that the Lord hath commanded my husband to flee into the wilderness; yea, and *I also know of a surety* that the Lord hath protected my sons, and delivered them out of the hands of Laban, and given them power whereby they could accomplish the thing which the Lord hath commanded them" (1 Nephi 5:8). Sariah's expressions of faith continued, for Nephi added, "And after this manner of language did she speak" (1 Nephi 5:8). Sometime, either then or later, she or Lehi must have given an account of her crisis, including her fears while the sons were gone and how she com-

plained to their father. Nephi was not personally present to witness Sariah's fears, but he recorded her experience as among those "things which are pleasing unto God" (1 Nephi 6:5). Obviously Sariah's witness communicated a vital truth to Nephi, one that carried a message for generations to follow. Furthermore, Sariah's now firm personal testimony would bless Lehi. When periodic moments of discouragement pulled at his faith, Sariah could reaffirm God's promises to him as Lehi had done for her during her crisis.

Appreciating Sariah's epiphany also gives greater meaning to her subsequent act of sacrifice. "And it came to pass that *they* did rejoice exceedingly, and did offer sacrifice and burnt offerings unto the Lord; and *they* gave thanks unto the God of Israel" (1 Nephi 5:9). Notice that Nephi reported that "they" offered the sacrifice. Since Nephi was writing in first person, he tells us that he was not included as a primary participant in the ordinance. The context suggests that Lehi and Sariah together performed this sacred act of worship. One can feel the renewed personal commitment that Sariah reverently placed on the altar alongside the animal sacrifice. And—most important—there is no indication that Sariah ever murmured again.

The Arrival of Ishmael's Family

God's confirming witness came to Sariah before her sons returned to Jerusalem for Ishmael's family. Sariah's conversion would influence the other women who joined their camp. Clearly, many in the family had experienced a dramatic increase in faith as a result of fulfilling God's command to obtain the brass plates. On the second return trip, the sons did not encounter opposition in the land of Jerusalem, nor did Sariah express fear over their absence.

The text is silent as to why Ishmael's daughters were selected to be wives for Lehi and Sariah's sons. Tradition among desert peoples was for a woman to marry her paternal uncle's son.[23] Consequently, there may have been some familial connection between Ishmael (or his wife) and either Lehi or Sariah. Elder Erastus Snow purported learning from Joseph Smith that Lehi's daughters had married into Ishmael's family already, connecting the two families before they ever left Jerusalem.[24] Furthermore, the fortuitous fact that a precise number of eligible men were available to marry Ishmael's five single daughters may have figured prominently in Ishmael's decision

to join Lehi's family in the wilderness.[25] Finally, Nephi tells us that the Lord softened Ishmael's heart and also the hearts of those in his "household" to assist them in their decision to depart (see 1 Nephi 7:5).

While again we marvel at the confidence with which a family left its comfortable city lifestyle to dwell in the desert in search of a new homeland, we note that not all members of Ishmael's family were spiritually prepared for the mission God had called them to serve. During the journey back, a serious conflict erupted. Two opposing groups emerged, with women on both sides. Four women (two unmarried daughters of Ishmael and his two daughters-in-law) sided with Laman and Lemuel and Ishmael's two married sons. The other four women in Ishmael's family (his wife and three remaining unmarried daughters) sided with Nephi, Sam, and Ishmael (see 1 Nephi 7:6).

When their anger reached its climax, Laman and Lemuel bound Nephi and threatened his life. Nephi's physical strength and fervent prayers loosened his bands but could not calm his brothers' wrath. Rather, women in the company succeeded in softening the contentious brothers. Nephi reported that first a daughter of Ishmael, next Ishmael's wife, and then one of Ishmael's sons assuaged Laman and Lemuel's anger. The order of those listed implies that the two women were the more effective in reestablishing peace and harmony (see 1 Nephi 7:19).

One scholar proposed that women succeeded in this incident because Semitic culture allowed men to save face when yielding to a woman's pleas.[26] While this may be the case, it underestimates the strength of a woman's influence. Perhaps the success in calming Laman and Lemuel has more to do with women's ability to replace contention and disunity with respect and tranquility among feuding men. Furthermore, we note that Ishmael's daughter and wife had a voice in the affairs of the traveling company, and that voice carried weight. This is an important observation because it contradicts most reports of traditional women's roles in related cultures. For example, Doughty found women were most often silent in desert family clans. He observed, "The women . . . live in the jealous tyranny of the hus-

bands. . . . Timid they are of speech, for dread of men's quick reprehending."[27]

Since both families came from the same Israelite culture, one assumes that Sariah was regarded as the female "head of household," supervising her new daughters-in-law and exerting significant influence for the women as a whole. That influence is particularly important when we remember Sariah's newly strengthened faith. Her witness would be heard along with Lehi's and Nephi's and would bolster conviction and divine purpose (in both the men and the women) in the journey. Such an important voice would not be silenced in the camp, although Sariah is not cited again in the text.

Life in the Wilderness

The presence of converted, God-fearing family leaders did not erase the physical hardships of the company's life in general and wilderness challenges in particular. "Sufferings" and "afflictions" are mentioned often in Nephi's narrative. Bouts with severe hunger and thirst were paramount in their struggle to survive (see 1 Nephi 16:19, 21, 35). Doughty observed that "the Arabians inhabit a land of dearth and hunger" and that "many times between their waterings, there is not a pint of water left in the greatest sheykhs' tents." He also noted that when scant water was available, it was often unwholesome "lukewarm ground-water" or else infected with camel urine.[28]

A staple in the desert traveler's diet was the date, described as "too much of cloying sweet, not ministering enough of brawn and bone."[29] The menu had little if any variety and depended on goat milk,

Life in the Arabian desert took endurance and ingenuity in ancient times and continues the same today.

desert mammals, and locusts toasted on hot coals and eaten with the heads removed.[30] Doughty noticed starvation conditions particularly prevalent among women: "From spring months to spring months, nine months in the year, . . . most nomad women are languishing with hunger."[31]

While "wild beasts" threatened the safety of Lehi's party (see 1 Nephi 7:16), they also provided a substantial source of food (see 1 Nephi 16:31). Described as a blessing from the Lord, wilderness meat was eaten raw because the Lord made it taste sweet to them (see 1 Nephi 17:2, 12). Citing a 19th-century explorer in Arabia, Nibley suggested the reason for eating uncooked meat was to reduce the need to build fires that would attract "roving marauders" to the rising smoke.[32] The Lord explained that the reduced need for fires was also to teach Lehi's party that he would be their "light in the wilderness" (1 Nephi 17:13). However, when considering the saga through women's eyes, another rationale for calling raw meat a blessing becomes apparent. Without the necessity of cooking, women would have an obvious reduction in their workload. If for no other reason, being able to eat raw meat shows the Lord's compassion for these women, whose heavy duties were eased by the elimination of cooking.

The family's rate and mode of transportation also shed light on women's life in the desert. Presumably, Lehi's company used camels to carry their cumbersome gear and essential possessions as well as themselves. Traveling 20 to 25 miles a day, the capacity pace for laden camels, Lehi could have covered the distance between Jerusalem and suggested locations for Bountiful in weeks rather than eight years.[33] The company would have camped for lengthy periods or was otherwise detained during the journey. To account for some of the added years of "sojourning," S. Kent Brown has conjectured that Lehi's family experienced periods of servitude or bondage among larger desert clans and that the family may have traded food and water for their freedom.[34] Alma accounted for Lehi's lost time in travel to "slothfulness" on the part of some in the party who "forgot to exercise their faith and diligence" (Alma 37:41–42).

Perhaps longer periods of camping and resting occurred during the women's advanced stages of pregnancy and subsequent childbirth. Nephi recorded that the women, including Sariah, gave birth to one or more children during their eight years in the wilderness (see 1 Nephi 17:1; 18:7).[35] Doughty described the desert birthing bed as "a mantle or tent-cloth spread upon the earth." Older women among the clan typically assisted the mother by taking her away from the camp, "apart in the wilderness," to be delivered.[36]

In addition to their duty to carry, deliver, and nourish children, desert women assumed a daunting list of other responsibilities. They collected water, gathered firewood, churned butter, guarded flocks,
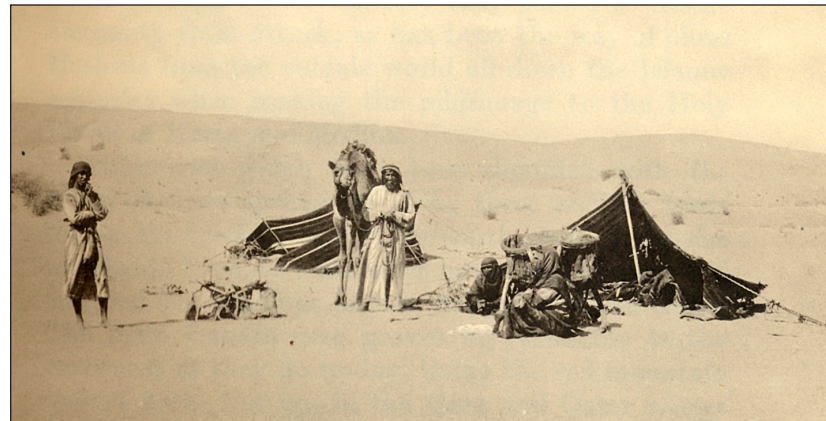
The smaller the nomad camp, the more vulnerable and more fearful they would be (compare 1 Nephi 17:13).

prepared meals, spun yarn from which mantles were woven to keep the family warm, braided palm matting that covered tent floors, and wove and repaired cords used to secure the tents.[37] Most remarkable, it was considered women's work to take tents down, load tents and supplies on camels, ensure the security of the children and supplies during transport, and set up tents again when a new campsite was reached.[38] Most tents were made of black goatskins, making them significantly heavy.[39] Doughty described the scene as a Bedouin clan set up a new camp:

> The housewives spread the tent-cloths, taking out the corner and side-cords; and finding some wild stone for a hammer, they beat down their tent pegs into the ground, and under-setting the tent-stakes or "pillars"(*am'dàn*) they heave and stretch the tent-cloth: and now their booths are standing. The wife enters, and when she has bestowed her stuff [unloading all the supplies], she brings forth the man's breakfast. . . . After that she sits

within, rocking upon her knees the *semîla* or sour milk-skin, to make this day's butter.[40]

No wonder George Reynolds and Janne Sjodahl observed in their commentary on Lehi's sojourn in the wilderness that "the wives were not an encumbrance on the road, but [the group's] greatest help."[41]

The more one considers the rigors of desert living, the more one understands why there was murmuring and even open complaining in Lehi's company. They were, after all, mostly urban in their tastes. Nephi reported that most of the men "murmured exceedingly" because of their afflictions, namely Laman and Lemuel and the two sons of Ishmael; "and also my father began to murmur against the Lord his God" (1 Nephi 16:20). The daughters of Ishmael also joined in murmuring after their father died in the wilderness: "Our father is dead; yea, and we have wandered much in the wilderness, and we have suffered much affliction, hunger, thirst, and fatigue" (1 Nephi 16:35). Conspicuously absent in this list of

afflictions but for the trials the women suffered: "Our women have toiled, being big with child; and they have borne children in the wilderness and suffered all things, save it were death; and it would have been better that they had died before they came out of Jerusalem than to have suffered these afflictions" (1 Nephi 17:20). This statement implies that the women suffered greater hardships than the men did, but whined less after the strengthening of their faith.

Furthermore, Nephi allowed the men's complaints in behalf of the women to stand. The message inferred is that if these women, who had been wrenched from a relatively comfortable urban life, could become strong through their extreme afflictions, then so can you and I. Paul taught the same correlation between hardships and developing faith: "God having provided some better things for them through their sufferings, for without sufferings they could not be made perfect" (Hebrews 11:40 JST). And Nephi echoes: "And thus we see . . . if it so be that the children of men keep the commandments

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MORE FIRM THAN THE VALLEY OF LEMUEL OR THE PEGS THAT SUPPORTED DESERT TENTS, SARIAH'S FAITH WAS A SIGNIFICANT ANCHOR.

"murmurers" is Sariah. More firm than the valley of Lemuel or the pegs that supported desert tents, Sariah's faith was a significant anchor.

Perhaps it was Sariah's unwavering testimony coupled with Nephi's teachings that led each of these women, like Nephi, to be "desirous also that I might see, and hear, and know of these things, by the power of the Holy Ghost, which is the gift of God unto all those who diligently seek him" (1 Nephi 10:17). For after the trial of their faith, Nephi gave these women the sublime compliment from a male perspective: "our women . . . were strong, yea, even like unto the men; and they began to bear their journeyings without murmurings" (1 Nephi 17:2). Thereafter, when complaints were voiced, they were from Nephi's brothers, and then, not for their own

of God he doth nourish them, and strengthen them, and provide means whereby they can accomplish the thing which he has commanded them" (1 Nephi 17:3). Nephi used the women's faithful example to teach us that lesson.

Conclusion

Nephi's record of the women in 1 Nephi communicates much about the need to seek and receive one's own witness of truth. Furthermore, the Lehite women's experiences evidence the role of adversity in achieving such a testimony. In many ways, women in Lehi's company form a parallel to heroic and faithful pioneer women who left comfortable homes in both Nauvoo and faraway lands to "gather to Zion." During the 19th century, scores of these women

trekked across a harsh and dangerous wasteland, intent on establishing a home where a people would commit to follow God at all hazards. Once they arrived in the Salt Lake valley, they continued to take an active role in both private and public spheres. Their voices, combined with those of their brothers, forged a society that increasingly influenced those who desire to know God.

Bryant S. Hinckley, father of President Gordon B. Hinckley, recognized the essential influence of women in every aspect of society. Although he referred directly to pioneer women, the same could be said of the women in 1 Nephi :

> Our pioneer mothers carried with them into the remotest corner of this commonwealth the spirit of the home and the culture of the race. There is no role of life where women do not take their place and play their part with heroism and courage. There is no place where man goes, no matter how hard or far, that she does not follow, and that to bless and cheer his abode. . . . In counsels and in assemblies she is there to consider and promote the well-being of mankind with instinct and inspiration superior to the reason of man. But there is no other place where she fits more perfectly and contributes more completely than in that haven we call home.[42]

Equality of the sexes, without duplicating each other's responsibilities, is further acknowledged in the wilderness saga of 1 Nephi. Women were neither superior nor inferior to men, but contributed female strengths that complemented men's talents, making everyone stronger. In context, we see that the women's God-given capacity, both physical and spiritual, enabled them to accomplish whatever the Lord required. Nephi issues the same assurance to anyone who desires similar strength: "For he that diligently seeketh [the Lord] shall find; and the mysteries of God shall be unfolded unto them, by the power of the Holy Ghost, as well in these times as in times of old, and as well in times of old as in times to come" (1 Nephi 10:19; see also Alma 32:23). While cultural lenses may cloud the clarity and hide the deeper meaning of truth, to those willing to listen, God speaks through prophets who boldly proclaim that "he denieth none that come unto him, black and white, bond and free, male and female; . . . and all are alike unto God" (2 Nephi 26:33).

NEPHI & HIS ASHERAH

Daniel C. Peterson

Nephi's vision of the tree of life, among the best-known passages in the Book of Mormon, expands upon the vision received earlier by his father, Lehi.

> And it came to pass that the Spirit said unto me: Look! And I looked and beheld a tree; and it was like unto the tree which my father had seen; and the beauty thereof was far beyond, yea, exceeding of all beauty; and the whiteness thereof did exceed the whiteness of the driven snow.
>
> And it came to pass after I had seen the tree, I said unto the Spirit: I behold thou hast shown unto me the tree which is precious above all.
>
> And he said unto me: What desirest thou?
>
> And I said unto him: To know the interpretation thereof. . . . (1 Nephi 11:8–11)

Since Nephi wanted to know the meaning of the tree that his father had seen and that he himself now saw, we would expect "the Spirit" to answer Nephi's question. But the response to Nephi's question is surprising:

> And it came to pass that he said unto me: Look! And I looked as if to look upon him, and I saw him not; for he had gone from before my presence.
>
> And it came to pass that I looked and beheld the great city of Jerusalem, and also other cities. And I beheld the city of Nazareth; and in the city of Nazareth I beheld a virgin, and she was exceedingly fair and white.
>
> And it came to pass that I saw the heavens open; and an angel came down and stood before

me; and he said unto me: Nephi, what beholdest thou?

And I said unto him: A virgin, most beautiful and fair above all other virgins.

And he said unto me: Knowest thou the condescension of God?

And I said unto him: I know that he loveth his children; nevertheless, I do not know the meaning of all things.

And he said unto me: Behold, the virgin whom thou seest is the mother of the Son of God, after the manner of the flesh.

And it came to pass that I beheld that she was carried away in the Spirit; and after she had been carried away in the Spirit for the space of a time the angel spake unto me, saying: Look!

And I looked and beheld the virgin again, bearing a child in her arms.

And the angel said unto me: Behold the Lamb of God, yea, even the Son of the Eternal Father! (1 Nephi 11:12–21)

Then "the Spirit" asks Nephi the question that Nephi himself had posed only a few verses before:

Knowest thou the meaning of the tree which thy father saw? (1 Nephi 11:21)

Strikingly, though the vision of Mary seems irrelevant to Nephi's original question about the significance of the tree—for the tree is nowhere mentioned in the angelic guide's response—Nephi himself now replies that, yes, he knows the answer to his question.

Assyrians represented the sacred tree of divine fertility in several iconic forms.

And I answered him, saying: Yea, it is the love of God, which sheddeth itself abroad in the hearts of the children of men; wherefore it is the most desirable above all things.

And he spake unto me, saying: Yea, and the most joyous to the soul. (1 Nephi 11:22–23)

How has Nephi come to this understanding? Clearly, the answer to his question about the meaning of the tree lies in the virgin mother with her child. It seems, in fact, that the virgin *is* the tree in some sense. Even the language used to describe her echoes that used for the tree. Just as she was "exceedingly fair and white," "most beautiful and fair above all other virgins," so was the tree's beauty "far beyond, yea, exceeding of all beauty; and the whiteness thereof did exceed the whiteness of the driven snow." Significantly, though, it was only when she appeared with a baby and was identified as "the mother of the Son of God" that Nephi grasped the tree's meaning.

Why would Nephi see a connection between a tree and the virginal mother of a divine child? I believe that Nephi's vision reflects a meaning of the "sacred tree" that is unique to the ancient Near East, and that, indeed, can only be fully appreciated when the ancient Canaanite and Israelite associations of that tree are borne in mind.

Asherah, Consort of El

The cultural and religious distance between Canaanites and Israelites was considerably smaller than Bible scholars once thought. (Michael D. Coogan says it clearly: "Israelite religion [was] a subset of Canaanite religion.")[1] In their attempts to better understand the beliefs of the ancient Israelites, modern scholars have been greatly helped by extrabiblical documents and artifacts that have been recovered from the soil of the Near East. For many years, there had been little beyond the Bible itself for them to study. The situation changed dramatically beginning in 1929 with the discovery of the Ugaritic texts at Ras Shamra, in Syria. They revolutionized our understanding of Canaanite religion in general, and of early Hebrew religion in particular.

The god El was the patriarch of the Canaanite pantheon. One of his titles was ʾēl ʿōlām. Frank Moore Cross Jr. noted: "We must understand it . . . as meaning originally 'ʾEl, lord of Eternity,' or perhaps more properly, 'ʾEl, the Ancient One.' The myths recorded on the tablets at Ugarit portray ʾEl as a greybeard, father of the gods and father of man."[2] However, observed Professor Cross, "no later than the fourteenth century B.C. in north Syria, the cult of ʾEl was declining, making room for the virile young god Baʿl-Haddu,"[3] the Baal of the Old Testament. El was probably also the original god of Israel.

In the earliest Israelite conception, father El had a divine son named Jehovah or Yahweh.[4] Gradually, however, the Israelite conception of Yahweh absorbed the functions of El and, by the 10th century B.C., King Solomon's day, had come to be identified with him.[5]

Asherah was the chief goddess of the Canaanites.[6] She was El's wife and the mother and wet nurse of the other gods. Thus, the gods of Ugarit could be called "the family of [or 'the sons of'] El," or the "sons of Asherah."[7] Moreover, Asherah was connected with the birth of Canaanite rulers and could be metaphorically considered to be their mother as well.[8]

She was strongly linked with the Canaanite coastal city of Sidon, at least in the period following Lehi and Nephi's departure from the Old World, and probably before.[9] This is interesting because Lehi, whose family origins appear to lie in the north of Palestine and who may have had a trading background, "seems to have had particularly close ties with Sidon (for the name appears repeatedly in the Book of Mormon, both in its Hebrew and Egyptian forms), which at that time was one of the two harbors through which the Israelites carried on an extremely active trade with Egypt and the West."[10]

Moreover, Asherah seems to have been known and venerated among the Hebrews as well. At least some Israelites worshipped her over a period extending from the conquest of Canaan in the second millennium before Christ to the fall of Jerusalem in 586 B.C.—the time of Lehi's departure with his family from the Old World.[11] Ancient Israelite women, for instance, were sometimes buried in "Asherah wigs," and she may also be reflected in Israelite temple architecture. Additionally, thousands of mass-produced goddess figurines have been found at Israelite sites. Summarizing the evidence, William Dever writes of the figurines that "most show the female form nude, with exaggerated breasts; occasionally she is depicted pregnant or nursing a child." But there is one significant difference between the figurines from Israelite sites and those recovered from pagan Canaanite locations: The lower body of the Israelite figurines lacks the explicit detail characteristic of the Canaanite objects; indeed, the area below the waist of the Israelite figurines is typically a simple plain column. Whereas the pagan Canaanite objects depict a highly sexualized goddess of both childbearing and erotic love, in the Israelite figurines

the aspect of the *dea nutrix,* the nourishing or nurturing goddess, comes to the fore. As Professor Dever writes, "The more blatantly sexual motifs give way to the nursing mother."[12]

Asherah seems to have been popular among all segments of Israelite society over many years.[13] She was worshipped in Israel in the time of the Judges.[14] She was especially venerated in the countryside,[15] but she was important in later Hebrew cities as well.[16] Although 1 Kings 3:3 says that he "loved the Lord," King Solomon brought Asherah into Jerusalem sometime after 1000 B.C. And a large-scale center of Asherah worship may have functioned at Taʿanach, under at least the indirect patronage of the court of Solomon.[17]

After the separation of the states of Israel and Judah, King Ahab and his Phoenician-born queen, Jezebel, daughter of "Ethbaal, king of the Sidonians," installed Asherah in Samaria, where "around 800 B.C.E. the official cult of Yahweh included the worship of his consort Asherah."[18] She seems to have been worshipped there until the fall of Israel to the Assyrians in 721 B.C.

But the veneration of Asherah was hardly restricted to the often-denigrated northern kingdom.[19] In the south, in Judah, Solomon's son, Rehoboam, introduced her into the temple at Jerusalem—meaning, presumably, that he erected some sort of sacred symbol (sometimes referred to in the lowercase as "an *asherah*" or "the *asherah*") that represented her. Kings Asa and Jehoshaphat removed Asherah from the temple, but Joash restored her. The great reforming king Hezekiah removed her again, along with the so-called Nehushtan, which 2 Kings 18:4 describes as "the brasen serpent that Moses had made." Subsequently, although he failed to restore the Nehushtan, King Manasseh reinstalled Asherah in the Jerusalem temple, where she remained until the reforms of King Josiah, who reigned from roughly 639 to 609 B.C. So visible was Asherah still in this period just prior to the Babylonian captivity that Lehi's contemporary, the prophet Jeremiah, felt obliged to denounce her worship.[20] In other words, an image or symbol of Asherah stood in Solomon's temple at Jerusalem for nearly two-thirds of its existence, certainly extending into the lifetime of Lehi and perhaps even into the lifetime of his son Nephi.[21] Her title *Elat* ("goddess") persists to this day in the name of a major Israeli coastal resort and in the

Israeli name for the Gulf of Aqaba. Lehi and his party very likely passed through or by Elat on their journey southward from Jerusalem.

By the time of Israel's Babylonian exile and subsequent restoration under Ezra, however, opposition to Asherah was universal in Judaism. Indeed, the developing Israelite conception of Yahweh seems, to a certain extent, to have absorbed her functions and epithets much as it had earlier absorbed those of Yahweh's father, El.[22] Thus, Asherah was basically eliminated from the history of Israel and subsequent Judaism. In the text of the Bible as we now read it, filtered and reshaped as it appears to have been by the reforming Deuteronomist priests around 600 B.C., hints of the goddess remain, but little survives that gives us a detailed understanding of her character or nature.[23]

So what are we to make of Asherah? Does the opposition to her veneration expressed and enforced by the Deuteronomists and the reforming Israelite kings indicate that she was a foreign pollution of legitimate Hebrew religion coming from abroad? It does not look that way. Recall that Hezekiah removed both the *asherah* and the Nehushtan from the temple at Jerusalem. The Nehushtan was not a pagan intrusion, but was "the brasen serpent that Moses had made," which had been carefully preserved by the Israelites for nearly a millennium until Hezekiah, offended by the idolatrous worship of "the children of Israel [who] did burn incense to it" (2 Kings 18:4), removed it and destroyed it. In other words, the Nehushtan had an illustrious pedigree entirely within the religious world of Israel, and there is no reason to believe that the *asherah* was any different in this respect.

What is striking in the long story of Israel's Asherah is the identity of those who did not oppose her. No prophet appears to have denounced Asherah before the eighth century B.C. The great Yahwist prophets Amos and Hosea, vociferous in their denunciations of Baal, seem not to have denounced Asherah. The Elijah-Elisha school of Yahwist reformers do not appear to have opposed her. Although 400 prophets of Asherah ate with Jezebel along with the 450 prophets of Baal, Elijah's famous contest with the priests of Baal, while dramatically fatal to them, left the votaries of Asherah unmentioned and, evidently, untouched. "What happened to Asherah and her prophets?" asks David Noel Freedman. "Nothing."[24] In subsequent years the ruthless campaign against

Baal inspired by Elijah and Elisha and led by Israel's Jehu left the *asherah* of Samaria standing. Baal was wholly eliminated, while the veneration of the goddess actually outlived the northern kingdom.[25]

Belief in Asherah seems, in fact, to have been a conservative position in ancient Israel; criticism of it was innovative. Saul Olyan, noting that "before the reforming kings in Judah, the asherah seems to have been entirely legitimate,"[26] argues that ancient Hebrew opposition to Asherah emanated entirely from the so-called Deuteronomistic reform party, or from those heavily influenced by them. Other factions in earliest Israel, Olyan says, probably thought that worshipping her was not wrong and may well have worshipped her themselves.[27] (The book of Deuteronomy is considered by most scholars to have been associated with the reforms of the Judahite king Josiah in the seventh century B.C., and a number of students of the history of Judah believe that it was actually written during that period.) Writing about the common goddess figurines to which we have already referred, Professor Dever remarks, "As for the notion that these figurines, whatever they signified, were uncommon in orthodox circles, the late Dame Kathleen Kenyon found a seventh-century-B.C. 'cult-cache' with more than three hundred fifty of them in a cave in Jerusalem, not a hundred yards from the Temple Mount."[28] (It should be kept in mind that this date for these figurines makes them at least near contemporaries of Lehi.)

What was Asherah's role in early Israelite religious belief? Given what we have already said about the history of Canaanite and Israelite religion, "Asherah may have been the consort of El, but not [of] Yahweh, at some early point in Israelite religion."[29] Over the generations, however, the Israelites' concept of Yahweh absorbed the attributes of Yahweh's father, El, and the people's imagination seems also to have granted to Yahweh the wife and consort of his father. "It is well-known," remarks André Lemaire,

> that in Israelite religion Yahweh replaced the great god El as Israel's God. If Yahweh replaced El, it would seem logical to suppose that under Canaanite influence asherah [i.e., material tokens representing the goddess] replaced Athirat [the goddess Asherah], and that, at least in the popular religion of ancient Israel if not in the purer form of that religion reflected in the Bible, asherah functioned as the consort or wife of Yahweh.[30]

The view that Asherah was considered the divine wife of Yahweh seems to be gaining ground among students of ancient Israelite religion.[31] "That some in Judah saw his consort as Asherah is hardly any longer debatable," declares Thomas Thompson.[32] "Asherah was a goddess paired with El, and this pairing was bequeathed to Israelite religion by virtue of the Yahweh-El identification,"[33] according to Smith, while Olyan says that Asherah seems to have been regarded as Yahweh's consort in both state and public religion, in both the northern kingdom of Israel and the southern kingdom of Judah.[34]

Important support for this contention has come from two recent and very controversial archaeological finds in Palestine. The first is Khirbet al-Qom, a site about eight miles west of Hebron and six and a half miles east-southeast of Lachish in the territory of ancient Judah. The palaeo-Hebrew inscriptions at Khirbet al-Qom can be dated to between 700 and 800 B.C.[35] Scholars agree that they show us at least a portion of the popular religion of their time.[36] The second is Kuntillet ʿAjrūd, perhaps the southernmost outpost of the kingdom of Judah. This place served as either a fortress or a stopover point for caravans (or both). It is situated on the border between the southern Negev and the Sinai peninsula, not far from the road that linked Gaza and Elat. The archaeological ruins at this location reflect influences from the northern kingdom of Israel and date to the late ninth or early eighth century B.C., which would place them in the reign of Jehoahaz, king of Israel, the son and successor to the militant anti-Baalist Jehu.[37]

An inscription discovered at Kuntillet ʿAjrūd was written in red ink on the shoulder of a large clay vessel. It seems to refer to "Yahweh of Samaria and his Asherah." On the other side of the vessel is a drawing of a tree of life.[38] The tomb inscription at Khirbet al-Qom also appears to mention "Yahweh and his *asherah*" (where some sort of cultic object is intended) or, less likely, "Yahweh and his Asherah" (where the reference may be directly to a goddess-consort). With these finds explicitly in mind, archae-

ologist William Dever has contended that "recent archeological discoveries provide both texts and pictorial representations that for the first time clearly identify 'Asherah' as the consort of Yahweh, at least in some circles in ancient Israel."[39] Raphael Patai declares that they indicate that "the worship of Asherah as the consort of Yahweh ('his Asherah'!) was an integral element of religious life in ancient Israel prior to the reforms introduced by King Joshiah [Josiah] in 621 B.C.E."[40] David Noel Freedman concurs, saying, "Our investigation suggests that the worship of a goddess, consort of Yahweh, was deeply rooted in both Israel and Judah in preexilic times."[41]

As among the Canaanites, furthermore, Asherah was also associated with earthly human fertility and human childbirth.[42] A Hebrew incantation text found in Arslan Tash in upper Syria, dating from the seventh century B.C. (i.e., to the period just prior to Nephi's vision), appears to invoke the help of the goddess Asherah for a woman in delivery.[43]

Let us now focus more precisely on the nature of the veneration that was paid to the divine consort among the Israelites. What was the "*asherah*" that stood in the temple at Jerusalem and in Samaria? Asherah was associated with trees.[44] A 10th-century cultic stand from Taʿanach, near Megiddo, features two representations of Asherah, first in human form and then as a sacred tree. She *is* the tree.[45] Perhaps we should think again, here, of the Israelite goddess figurines: It will be recalled that their upper bodies are unmistakably anthropomorphic and female, but their lower bodies, in contrast to those of their pagan Canaanite counterparts, are simple columns. William Dever suggests that these columnar lower bodies represent tree trunks.[46] And why not? Asherah "is a tree goddess, and as such is associated with the oak, the tamarisk, the date palm, the sycamore, and many other species. This association led to her identification with sacred trees or the tree of life."[47] The rabbinic authors of the Jewish Mishna (second–third century A.D.) explain the *asherah* as a tree that was worshipped.[48]

> Asherah "is a tree goddess, and as such is associated with the oak, the tamarisk, the date palm, the sycamore, and many other species. This association led to her identification with sacred trees or the tree of life."

The lowercase "*asherah*" was most commonly a carved wooden image, perhaps some kind of pole. Unfortunately, since it was wooden, direct archaeological evidence for it has not survived.[49] But we know from the biblical evidence that the object could be planted (Deuteronomy 16:21) so that it stood up (2 Kings 13:6), but that it could also be pulled down (Micah 5:13), cut (Exodus 34:13), and burned (Deuteronomy 12:3). Very probably it was of wood and symbolized a tree. It may itself have been a stylized tree.[50] It was not uncommon in the ancient Near East for a god or goddess to be essentially equated with his or her symbol, and Asherah seems to have been no exception: Asherah was both goddess *and* cult symbol. She *was* the "tree."[51]

The menorah, the seven-branched candelabrum that stood for centuries in the temple of Jerusalem, supplies an interesting parallel to all of this: Leon Yarden maintains that the menorah represents a stylized almond tree. He points to the notably radiant whiteness of the almond tree at certain points in its life cycle. Yarden also argues that the archaic Greek name of the almond (*amygdale,* reflected in its contemporary botanical designation as *Amygdalis communis*), almost certainly not a native Greek word, is most likely derived from the Hebrew *em gedolah,* meaning "Great Mother."[52]

"The Late Bronze Age iconography of the asherah would suggest," writes Mark Smith, "that it represented maternal and nurturing dimensions of the deity."[53] Raphael Patai has called attention to the parallels between Jewish devotion to various female deities and quasi-deities over the centuries, commencing with Asherah, and popular Catholic veneration of Mary, the mother of Jesus.[54] Interestingly, it appears that Asherah, "the mother goddess par excellence," may also, paradoxically, have been considered a virgin.[55] The Punic western goddess Tannit, whom Saul Olyan has identified with Israelite-Canaanite Asherah, the con-

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From Assyria, the ninth century B.C.

sort of El, the mother and wet nurse to the gods, was depicted as a virgin and symbolized by a tree.[56]

It should be apparent by now why Nephi, an Israelite living at the end of the seventh century and during the early sixth century before Christ, would have recognized an answer to his question about a marvelous tree in the otherwise unexplained image of a virginal mother and her divine child. Not that what he saw and how he interpreted those things were perfectly obvious. What he "read" from the symbolic vision was culturally colored. The Coptic version of the record called the *Apocalypse of Paul* shows how cultural interpretation shapes meaning. This document, which probably originated in Egypt in the mid-third century of the Christian era, relates a vision of the great apostle that, in this detail at least, strikingly resembles the vision of Nephi: "And he [the angel] showed me the Tree of Life," Paul is reported to have said, "and by it was a revolving red-hot sword. And a Virgin appeared by the tree, and three angels who hymned her, and the angel told me that she was Mary, the Mother of Christ."[57] But Nephi's vision goes even further, *identifying* Mary with the tree. This additional element seems to derive from precisely the preexilic Palestinian culture into which, the Book of Mormon tells us, Nephi had been born.

Of course, Mary, the virgin girl of Nazareth seen by Nephi, was not literally Asherah. She was, as Nephi's guide carefully stressed, simply "the mother of the Son of God, *after the manner of the flesh.*"[58] But she was the perfect mortal typification of the mother of the Son of God.

Asherah and the Biblical Wisdom Writings

Asherah is connected with the Bible in an entirely different manner as well. We will examine a Bible passage that seems to deal with her while also yielding several interesting parallels to the visions of Lehi and Nephi.

Biblical scholars recognize a genre of writing, found both in the standard, canonical scriptures (e.g., Job, Proverbs, Ecclesiastes, the Song of Solomon) and outside the canon, that they term "wisdom literature." Among the characteristics of this type of writing, not surprisingly, is frequent use of the term *wisdom*. But also common to such literature, and very striking in texts from a Hebrew cultural background, is the absence of typical Israelite or Jewish themes. We read nothing there about the promises to the patriarchs, the story of Moses and the Exodus, the covenant at Sinai, or the divine promise of kingship to David. There is, instead, a strong emphasis on the teachings of parents, and especially on instruction by fathers.[59] Careful readers will note that all of these characteristics are present in the accounts of the visions of Lehi and Nephi as they are treated in the Book of Mormon.

The Bible identifies two chief earthly sources of wisdom. It is said to come from "the East," which is almost certainly to be understood as the Syro-Arabian desert, and from Egypt.[60] (The book of Job, for example, is set in "the East" and lacks much if any trace of peculiarly Israelite or Hebrew lore.)[61] This is reminiscent of the twin extra-Israelite influences—Egypt and the desert—that the Book of Mormon and Latter-day Saint scholarship have identified for the family of Lehi and Nephi.[62] It may be significant that a section of the book of Proverbs (31:1–9) claims to represent "the words of Lemuel"—using a name that not only occurs among the sons of Lehi but also is at home in the Arabian desert.

Certain other motifs common to wisdom literature are also typical of the Book of Mormon as a whole. For example, both the canonical and extra-canonical wisdom books are much concerned with the proper or improper use of speech.[63] The book of Proverbs warns against the dangerous enticements of "the strange woman, even . . . the stranger which flattereth with her words," and advises us to "meddle not with him that flattereth with his lips."[64] "Flattering" and "cunning words," generally used for evil purposes and with an implication of deceit, are also

A plaque from Sumer of the third millenium B.C.

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a recurring concern of the Nephite record.[65] Another consistent theme in both the Book of Mormon and Near Eastern wisdom litereature is the notion that wisdom or justice or righteousness brings prosperity, while folly or wickedness leads to suffering and destruction.[66] The vocabulary of Proverbs 1–6, which stresses learning, understanding, righteousness, discernment, and knowledge, is obviously related to important messages of the Book of Mormon in general, and of the visions of Lehi and Nephi in particular. Similarly, Proverbs 3:1–12 focuses on our need to "hear" inspired wisdom, as well as on the promise of "life" and our duty to trust in the Lord rather than being wise in our own eyes.[67] Each of these admonitions can also be documented abundantly throughout the text of the Book of Mormon— notably Nephi's repeated invitation to us to put our trust in the Lord rather than in "the arm of flesh."[68] In Nephi's vision of the tree of life, the "great and spacious building" symbolizes the wisdom and pride of the world, which shall fall.[69]

But among the interesting correspondences between ancient Near Eastern wisdom literature and the Book of Mormon, one is of special interest for the present article. Wisdom itself is represented in Proverbs 1–9 as a female person.[70] Indeed, here and elsewhere in ancient Hebrew and Jewish literature, Wisdom appears as the wife of God, which can hardly fail to remind us of ancient Asherah.[71] She may even have played a role in the creation: "The Lord by wisdom hath founded the earth," says Proverbs 3:19. "Like the symbol of the asherah, Wisdom is a female figure, providing life and nurturing."[72] In fact, as Steve A. Wiggins observes of Asherah herself, "She is Wisdom, the first creature of God."[73] The classical text on this subject is found in Proverbs 8:22–34.

The Lord possessed me in the beginning of his way, before his works of old.

I was set up from everlasting, from the beginning, or ever the earth was.

When there were no depths, I was brought forth; when there were no fountains abounding with water.

Before the mountains were settled, before the hills was I brought forth:

While as yet he had not made the earth, nor the fields, nor the highest part of the dust of the world.

When he prepared the heavens, I was there: when he set a compass upon the face of the depth:

When he established the clouds above: when he strengthened the fountains of the deep:

When he gave to the sea his decree, that the waters should not pass his commandment: when he appointed the foundations of the earth:

Then I was by him, as one brought up with him: and I was daily his delight, rejoicing always before him;

Rejoicing in the habitable part of his earth; and my delights were with the sons of men.

Now therefore hearken unto me, O ye children: for blessed *[ashre]* are they that keep my ways.

Hear instruction, and be wise, and refuse it not.

Blessed *[ashre]* is the man that heareth me.

The use of the Hebrew word *ashre* in this connection—from the same root *(ʾshr)* that underlies the word *asherah*—is probably significant.[74] "Happy *[ashre]* is the man that findeth wisdom" (Proverbs 3:13). (A similar wordplay may be going on behind the word *happy* in 1 Nephi 8:10, 12, and perhaps even behind *joy* and *joyous* in 1 Nephi 8:12 and 11:23.)[75] Another noteworthy fact is that "the 'tree of life,' which recalls the asherah, appears in Israelite tradition as a metaphorical expression for wisdom." Indeed, Mark Smith sees Proverbs 3:13–18 as "a conspicuous chiasm" in which the essentially equivalent "inside terms" are *ḥokmāh* (wisdom) and *ʿeṣ-hayim* (a tree of life).[76] The apocryphal book of Ecclesiasticus, which is also known as Wisdom of Ben Sira, uses various trees to symbolize Wisdom (24:12–19). "Wisdom is rooted in the fear of the Lord," says Ecclesiasticus 1:20 (New English Bible), "and long life grows on her branches." "She is a tree of life to them that lay hold upon her: and happy *[meʾushshar]*[77] is every one that retaineth her" (Proverbs 3:18).

Several parallels between the language of Proverbs 1–9 and the language of the visions in 1 Nephi will be apparent to careful readers. Note, for exam-

ple, in Proverbs 3:18, quoted above, the image of "taking hold," which recalls the iron rod of Lehi and Nephi's visions.[78] The New English Bible translation of Proverbs 3:18 speaks of "grasp[ing] her" and "hold[ing] her fast"—in very much the same way that Lehi and Nephi's visions speak of "catching hold of" and "holding fast to" the rod of iron. Proverbs 4:13 advises us to "take fast hold of instruction; let her not go: keep her; for she is thy life." Apocryphal Baruch 4:1 declares that "all who hold fast to [Wisdom] shall live, but those who forsake her shall die." Both the advice of Proverbs and the images of Lehi's dream, furthermore, are expressly directed to youths, to sons specifically or to children.[79] ("O, remember, my son," says Alma 37:35, echoing this theme, "and learn wisdom in thy youth; yea, learn in thy youth to keep the commandments of God.") Both Proverbs and 1 Nephi constantly use the imagery of "ways," "paths," and "walking" and warn against "going astray," "wandering off," and "wandering in strange roads."[80] Proverbs 3:17 declares that "her [Wisdom's] ways are ways of pleasantness, and all her paths are peace." In subsequent Nephite tradition, King Benjamin speaks of "the Spirit of the Lord" that "guide[s] . . . in wisdom's paths" (Mosiah 2:36), and Mormon laments "how slow" people are "to walk in wisdom's paths" (Helaman 12:5).

Proverbs represents Wisdom's words as "plain," an attribute that is lauded repeatedly throughout 1 Nephi, notably in the narrative of Nephi's vision, and throughout 2 Nephi.[81] The phrase *plain and precious*, recurrent in Nephi's account of his experience with the angelic guide,[82] could serve as an excellent description of biblical "Wisdom." Even more apt is the phrase *plain and pure, and most precious* in 1 Nephi 14:23. In Proverbs 8:19 Wisdom declares, "My fruit is better than gold, yea, than fine gold."[83] "She is more precious than rubies," says Proverbs 3:15, "and all the things thou canst desire are not to be compared unto her." "Wisdom," declares Ecclesiasticus 4:11, "raises her sons to greatness." Similarly, Lehi and Nephi's tree was "precious above all" (1 Nephi 11:9)—"a tree, whose fruit was desirable to make one happy" (1 Nephi 8:10), "desirable above all other fruit" (1 Nephi 8:12, 15; compare 11:22). Accordingly, no price is too high to pay, if it will bring us to attain wisdom. "I say unto you," Alma the Younger remarked to the poor among the Zoramites in the context of a discussion centering on a seed

and on the tree of life that could be nourished out of it, "it is well that ye are cast out of your synagogues, that ye may be humble, and that ye may learn wisdom" (Alma 32:12). Confident in the quality of what she has to offer, Wisdom, according to Proverbs, invites others to partake:

> Wisdom crieth without; she uttereth her voice in the streets:
> She crieth in the chief place of concourse, in the opening of the gates: in the city she uttereth her words.[84]
> Doth not wisdom cry? and understanding put forth her voice?
> She standeth in the top of high places, by the way in the places of the paths.
> She crieth at the gates, at the entry of the city, at the coming in at the doors.[85]
> She hath sent forth her maidens: she crieth upon the highest places of the city.[86]

Yet, for all her exalted status, Wisdom must face "scorners," which must surely remind the reader of 1 Nephi of those in "the large and spacious building" who point the finger of scorn at the saints coming forward to partake of the tree of life.[87] This building seems to represent a human alternative to the true wisdom, the divine wisdom of God: Nephi records that it symbolizes "the world and the wisdom thereof" (1 Nephi 11:35).

Wisdom represents life, while the lack of wisdom leads to death.[88] (Perhaps the juxtaposition of a living and nourishing tree in 1 Nephi with the inanimate structure from which the worldly lean out to express their disdain is intended to make this point.) "For the upright shall dwell in the land, and the perfect shall remain in it. But the wicked shall be cut off from the earth, and the transgressors shall be rooted out of it."[89] "For whoso findeth me findeth life," Wisdom says in Proverbs 8:35–36, "and shall obtain favor of the Lord. But he that sinneth against me wrongeth his own soul: all they that hate me love death." The sinner, in fact, falls into the clutches of the "whorish woman," the rival to Lady Wisdom: "For her house inclineth unto death, and her paths unto the dead. None that go unto her return again, neither take they hold of the paths of life."[90] Ammon in the Book of Mormon closely echoes the warning of Proverbs: "O how marvelous are the works of the Lord, and how long doth he suffer with his people;

yea, and how blind and impenetrable are the understandings of the children of men; for they will not seek wisdom, neither do they desire that she should rule over them!" (Mosiah 8:20). Ecclesiasticus 4:19 says of Wisdom and of the individual who "strays from her" that "she will desert him and abandon him to his fate." In Lehi's vision, those who rejected the fruit of the tree "fell away into forbidden paths and were lost" (1 Nephi 8:28) or "were drowned in the depths of the fountain" (1 Nephi 8:32). "Many were lost from his view, wandering in strange roads" (1 Nephi 8:32). It was for fear of this possible outcome that, after partaking of the fruit of the tree, Lehi was "desirous that [his] family should partake of it also" (1 Nephi 8:12). In a parallel vein, Ecclesiasticus 4:15–16 tells us that Wisdom's "dutiful servant . . . will possess her and bequeath her to his descendants."

In 1 Nephi 8:13–14, Lehi's tree is associated with a river and spring of water. "The symbols of fountain and tree of life are frequent" in wisdom literature too.[91] Nephi himself, in 1 Nephi 11:25, actually equates the "tree of life" with "the fountain of living waters," "which waters," he relates, "are a representation of the love of God." "And I also beheld," he continues, "that the tree of life was a representation of the love of God."

The inclusion in 1 Nephi of two authentically preexilic religious symbols (Asherah and Wisdom) that could scarcely have been derived by the New York farmboy Joseph Smith from the Bible strongly suggests that the Book of Mormon is, indeed, an ancient historical record in the Semitic tradition.

LEHI PREACHING IN JERUSALEM, BY DEL PARSON

LEHI AS MOSES

MOSES PARTING THE RED SEA, BY ROBERT T. BARRETT

O ur understanding of Lehi's leadership comes through the writings of his son Nephi. While it has been previously noted that Nephi chose to tell the story of his "reign and ministry" (1 Nephi 10:1) in such a way that his readers would see Nephi himself as a second Moses, it has not been much observed that it may have been his father, Lehi, who first employed this device to persuade his descendants of his own divine calling.[1]

In this paper I will show that Lehi had used this device in an attempt to persuade his descendants to accept his difficult instructions and that in portraying himself as a second Moses, Nephi was following a model established at least two decades earlier by his own father (Nephi's small plates were probably written 20 to 30 years after Lehi's final teachings were given to his family; see 2 Nephi 5:28, 34).[2] While we do not have Lehi's account of the events reported in the small plates, we know that the leadership was very much a shared thing, with Lehi's role preeminent in the beginning and Nephi's responsibility surfacing quickly in the brass plates episode and repeatedly thereafter at crucial junctures. But it could just as easily be said of Lehi that he was a Moses figure,[3] for he led his people out of a wicked land because of commands received in visions from God, through the wilderness, across the sea, and to a promised land. And then he died, leaving it to others to establish the covenant people in the promised land.

Our direct evidence that it may have been Lehi who first compared himself to Moses as a rhetorical device to help his children see the divine direction behind his actions comes from Lehi's final speeches to his people, as reported in 2 Nephi 1. Lehi needed to bolster his case, for as his rebellious older sons clearly saw, he had led them out of Jerusalem, not Egypt. It was hard for them to believe that the kingdom of Judah was the wicked and soon-to-be-destroyed place their father described from his visions. The analogy between a thriving and prosperous Jerusalem and an oppressive Egypt of old was not easy for them to assimilate (see 1 Nephi 17:21–22). So in his final words to them, Lehi invokes the very phrases and concepts used by Moses in his farewell address to the Israelites, as recorded in Deuteronomy. In so doing, Lehi casts himself in a role similar to that of Moses, the great prophet revered by all Israel, in an eloquent attempt to bring his murmuring sons to accept and obey the successor leader the Lord had chosen. It was a noble but vain attempt, and its inevitable failure almost seems implicit in the awkward logic of the blessings Lehi gave to his sons.[4] Even so, recorded and perpetuated forever in the family records, Lehi's words would stand for all time—like Deuteronomy for the Israelites—as a witness to his descendants of what the Lord expected them to do.[5]

Comparing Deuteronomy and 2 Nephi 1

There is good reason to believe that Lehi would have been especially familiar with Deuteronomy.[6]

Two decades before Lehi received the visions and revelations that sent him and his family into the wilderness, a manuscript now generally believed to have included all or part of the book of Deuteronomy was discovered in the temple at Jerusalem. This occurred during the 18th year of the reign of the righteous king Josiah (approximately 621 B.C.). After the discovery, Josiah went up to the temple with "all the people from the least to the greatest" and read the book to them, renewing the covenant contained therein in the presence of the Lord, "and all the people pledged themselves to the covenant" (see 2 Kings 22–23, especially 23:1–3; see 2 Chronicles 34–35). The book and this event then provided the basis for Josiah's reforms by which he overthrew idol worship and centralized worship of Jehovah at the Jerusalem temple. Some of Lehi's own understanding of the covenant with Israel might have derived from that memorable event. The discovery

NOEL B. REYNOLDS

of that version of Deuteronomy was without doubt the manuscript find of the century. It occurred while Lehi, an exceptionally literate and learned man in the prime of his life, lived in or near Jerusalem. While I do not want to develop an account of the origin of the brass plates in this paper, I would note that it is even possible that the late-seventh-century discovery of this new text provided someone with the motivation to create the brass plates as an enlarged and corrected version of the Josephite scriptural record.[7]

Deuteronomy is a powerful book, containing the final three addresses of Moses given to the people of Israel before they crossed the Jordan into their promised land, leaving him behind. Given the enormous importance of Moses' words, it is most reasonable to assume that they were written out in the first instance and then circulated to ensure that the correct version was made available to all. While scholars generally believe Deuteronomy was given final form during Josiah's reign, some version of the text was definitely included in the brass plates and was believed by Lehi and his people to have been written by Moses (see 1 Nephi 5:11). Certainly, the text presents itself consistently as a first-person account from Moses, with only minimal editorializing to provide context and transitions. I will argue below that Lehi's own final address reflects an intimate knowledge of the text of Deuteronomy, such that Lehi could allude to it at every turn of his own discourse without letting the references distort or detract in any way from his own message. He thus made Deuteronomy a powerful, though unmentioned, foundation for his own message for any Israelites who knew the Torah.

It may be difficult for modern readers to understand why a prophet like Lehi would choose to compare himself to Israel's great deliverer prophet. But because Lehi and his people understood their own times in terms of types and shadows from the past, he really had no choice but to use historical images.

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If human history is, as Lehi and Nephi understood it to be, and as their own visions reemphasized, a repetitive revelation of the covenant with Israel, then God's leading the family out of Jerusalem and reinstituting his covenant with Lehi in a new promised land can be understood only by comparison with the Exodus and the roles of Lehi and Nephi in terms of Moses.[8]

In this article I identify 14 Mosaic themes and circumstances that Lehi invoked in his sermon recorded in 2 Nephi 1. Illustrations of close parallels in Deuteronomy, particularly chapter 4, will be noted.

Lehi evidently saw himself in the same awkward position as Moses. We read that after years of leading his family through the arduous wilderness journey beset with almost impossible obstacles, which they overcame only through divine intervention, Lehi's two oldest sons are still murmuring and rebelling. Lehi knows that they are not going to have a basic change of heart and that they will soon abandon the ways and covenants he has taught them. But the father's time is over. Like Moses, he knows he is near death. All he can do now is leave a blessing and teachings for future generations who may be more receptive.

I emphasize that Lehi sees the contents of Deuteronomy only as a parallel to, not as a source for, his message to the future. Lehi has experienced great visions and other revelations like those Moses received. God himself has shown Lehi the mixed future of his descendants. Lehi has seen in a vision the salvation of all mankind. He has beheld the birth and ministry of the Messiah, the Son of God. He has seen the triumph of God and his people in the last days. And he has beheld God himself on his throne. Lehi does not need nor want simply to repeat Moses' messages. Lehi's visions have made him an independent witness. However, some of his people have consistently failed to recognize the Spirit that bears witness of his revelations. He desires to reach their resistant hearts and minds. Evidently he feels he

might touch some by making a rhetorical appeal to Moses as a second witness to Lehi's own prophetic viewpoint. He especially knows that his rebellious older sons, who specifically rejected his visions, calling him "a visionary man" (1 Nephi 2:11), will not respond to his teaching alone. And so he phrases his message in terms that repeatedly remind his hearers of Moses' similar message delivered on a similar occasion.[9]

Rehearsal of Blessings

Nephi does not include the full record of Lehi's teaching in 2 Nephi 1. Instead, he summarizes extensively, reporting that Lehi "spake many things unto them" and "rehearsed unto them, how great things the Lord had done for them in bringing them out of the land of Jerusalem," including the divine warning to flee from Jerusalem before it was destroyed (see 2 Nephi 1:1, 3). In the quoted sections we learn what that list of "great things" might have included. Lehi's people had received "a knowledge of the creation of the earth, and all men, knowing the great and marvelous works of the Lord from the creation of the world." The Lord had bestowed power on them to do all things by faith. They possessed all the commandments from the beginning. And the Lord had guided them into "this precious land of promise" (2 Nephi 1:10).

Likewise, Moses rehearsed the blessings that the Israelites had received. Why? "Lest thou forget the things which thine eyes have seen, and lest they depart from thy heart all the days of thy life" (Deuteronomy 4:9). Like Lehi, he reminded his people particularly of their direct experience with God. Moses' people had met him at Horeb, where they saw the fire and the smoke and heard the voice of the Lord declaring his covenant unto them—"even the ten commandments" (Deuteronomy 4:10–13). As a starting point, Moses referred to the day God created man and asked if there had since been such great things done elsewhere as God had done for Israel. Not only had God let them hear his voice, but he had freed them from the Egyptians, leading them out "by signs and by wonders" and "by a mighty hand," including the parting of the Red Sea and the driving out of nations to make a "land for an inheritance" for Israel (Deuteronomy 4:32–38).

Appointment of a Successor

It is in the speeches in Deuteronomy that Moses declares Joshua as his successor (see Deuteronomy 1:38; 3:28; 31:3, 7, 14, 23). "And Joshua the son of Nun was full of the spirit of wisdom; for Moses had laid his hands upon him: and the children of Israel hearkened unto him, and did as the Lord commanded Moses" (Deuteronomy 34:9). Lehi similarly seizes on the occasion of his pending demise to appoint Nephi as his successor, though in a somewhat indirect way.[10] Recognizing the unlikelihood that Nephi will enjoy the same support that the early Israelites gave Joshua, Lehi promises and warns his sons that "if ye will hearken unto the voice of Nephi ye shall not perish" (2 Nephi 1:28).

A Prophet's Last Words

Lehi's perception that his life is near an end drives the timing of his remarks. He describes himself as "a trembling parent, whose limbs ye must soon lay down in the cold and silent grave." He speaks to his children of those things that are of the deepest importance, for in "a few more days" he will "go the way of all the earth" (2 Nephi 1:14). For Lehi, his own pending demise provides additional rhetorical leverage in his effort to coax his oldest sons to repentance. Death holds no terror for Lehi because "the Lord hath redeemed my soul from hell; I have beheld his glory, and I am encircled about eternally in the arms of his love" (2 Nephi 1:15). But like Laman and Lemuel who are in a deep spiritual sleep, "even . . . the sleep of hell," those who do not repent and "shake off the awful chains by which [they] are bound" will be "carried away captive down to the eternal gulf of misery and woe" (2 Nephi 1:13).

Lehi does not need nor want simply to repeat Moses' messages. Lehi's visions have made him an independent witness. However, some of his people have consistently failed to recognize the Spirit that bears witness of his revelations.

Even though Lehi invokes his imminent death for a different rhetorical purpose, it is hard to miss the similarity of his situation to that of Moses in his final address to Israel. Moses regrets that the Lord was angry with him and will not allow him to join his people in crossing the Jordan and entering "that good land," which the Lord gave them for an inheritance (Deuteronomy 4:21). Thus Moses "must die in this land" and will warn his people one last time of what they will suffer if they fail to keep God's commandments (Deuteronomy 4:22).

Apostates Will Be Cursed, Scattered, and Smitten

The fundamental symmetry in these messages of Lehi and Moses provides the reason for all the other similarities that Lehi incorporates into his prophetic discourse. For, like Moses at a founding moment for the nation of Israel, Lehi most urgently wants to warn his people to avoid sin and to obey the Lord. Both couch their messages in terms of prophetic warnings about future destructions and scatterings of their people among the nations of the earth. Lehi warns that, should the time ever come that a people so blessed "reject the Holy One of Israel, the true Messiah, their Redeemer and their God, behold, the judgments of him that is just shall rest upon them" (2 Nephi 1:10). The Lord will transfer their land to others as a possession and "will cause them to be scattered and smitten" (2 Nephi 1:11). Lehi recognizes that although many of his apostate descendants may be "cut off and destroyed forever," as a people they will minimally suffer a cursing that will come upon them "for the space of many generations," be visited by the sword and by famine, and be hated and "led according to the will and captivity of the devil" (2 Nephi 1:17–18). So it is that, as Lehi draws his discourse to a close, he focuses tightly on the choice between receiving a blessing or a "sore cursing":

> And now that my soul might have joy in you, and that my heart might leave this world with gladness because of you, that I might not be brought down with grief and sorrow to the grave, arise from the dust, my sons, and be men, and be determined in one mind and in one heart, united in all things, that ye may not come down into captivity;
>
> That ye may not be cursed with a sore cursing; and also, that ye may not incur the displeasure of a just God upon you, unto the destruc-

> *Like Moses at a founding moment for the nation of Israel, Lehi most urgently wants to warn his people to avoid sin and to obey the Lord. Both couch their messages in terms of prophetic warnings about future destructions and scatterings of their people among the nations of the earth.*

tion, yea, the eternal destruction of both soul and body. (2 Nephi 1:21–22)

But, he assures his descendants in warm tones, if they will "hearken unto the voice of Nephi," they will not perish. And Lehi will leave them his blessing—"even my first blessing" (2 Nephi 1:28–29).

Moses foresaw that idol worship would be the downfall of Israel. A central theme of the close of his first discourse (Deuteronomy 4) is that Israel knows God only as a voice that spoke to them "out of the midst of the fire." Because they "saw no similitude," they cannot make idols in the likeness of God, neither male nor female, neither beast nor fish nor fowl (see Deuteronomy 4:12, 15–18). He goes on to warn sternly that if they or their descendants "shall corrupt [themselves], and make a graven image," they will "utterly perish from off the land" and "utterly be destroyed." The Lord will "scatter you among the nations, and ye shall be left few in number among the heathen, whither the Lord shall lead you" (Deuteronomy 4:25–27). Moses returns repeatedly to this theme in his closing sermons, warning Israelites that they have been given a choice between a blessing and a cursing (see Deuteronomy 11:26–28); for if they forget the Lord, they will surely perish (see Deuteronomy 8:19–20; 7:4; 30:18). If they choose to serve other gods and fail to hearken to the commandments and statutes, they will be cursed and perish (see Deuteronomy 11:16–17). The following warnings of Moses are mirrored in those of Lehi:

But it shall come to pass, if thou wilt not hearken unto the voice of the Lord thy God, to observe to do all his commandments and his statutes which I command thee this day; that all these curses shall come upon thee, and overtake thee:

Cursed shalt thou be in the city, and cursed shalt thou be in the field.

Cursed shall be thy basket and thy store.

Cursed shall be the fruit of thy body, and the fruit of thy land, the increase of thy kine, and the flocks of thy sheep.

Cursed shalt thou be when thou comest in, and cursed shalt thou be when thou goest out.

The Lord shall send upon thee cursing, vexation, and rebuke, in all that thou settest thine hand unto for to do, until thou be destroyed, and until thou perish quickly; because of the wickedness of thy doings, whereby thou hast forsaken me. (Deuteronomy 28:15–20)

Remember the Statutes and Judgments

For both Lehi and Moses, the way to avoid these frightening consequences is to "remember to observe the statutes and the judgments of the Lord" (2 Nephi 1:16). This message forms Lehi's most direct and obvious invocation of a dominant theme of Deuteronomy.

Moses frames his classic address in Deuteronomy 4 with references to the statutes and judgments of God and refers to them three more times in the exact same wording (see Deuteronomy 4:1, 5, 8, 14, and 40). The editor of Moses' speeches, recognizing their the-

matic role, uses the same phrasing in his summary and transition to the next discourse of Moses: "These are the testimonies, and the statutes, and the judgments, which Moses spake unto the children of Israel, after they came forth out of Egypt" (Deuteronomy 4:45). Moses begins his second discourse by invoking the same theme: "And Moses called all Israel, and said unto them, Hear, O Israel, the statutes and judgments which I speak in your ears this day, that ye may learn them, and keep, and do them"(Deuteronomy 5:1). The phrase is frequently expanded to include the commandments of God and appears over 20 times in Deuteronomy alone.[11]

Keep the Commandments and Prosper in the Land

Closely connected to the Mosaic formula enjoining Israel to keep the statutes and judgments is the warning and promise that this obedience is a precondition to the blessings of the covenant and, specifically, prospering. Moses warns that if Israel will "not hearken" and "observe to do all [the] commandments and . . . statutes[,] . . . thou shalt not prosper in thy ways" (Deuteronomy 28:15, 29). Only a few verses later he repeats that warning in the form of a promise: "Keep . . . the words of this covenant, . . . that ye may prosper in all that ye do" (Deuteronomy 29:9).

Lehi does not simply leave that promise in the Mosaic formula. Rather, he reports his own version, as he received it from the Lord, which becomes the formula used by Nephite prophets over the next millennium and repeated (almost 20 times) throughout the Book of Mormon. For the Lord had said, apparently to Lehi directly, "Inasmuch as ye shall keep my commandments ye shall prosper in the land; but inasmuch as ye will not keep my commandments ye shall be cut off from my presence" (2 Nephi 1:20; 4:4). Earlier, in his first book, Nephi reports having received the same promise (see 1 Nephi 2:20–21; 4:14). This has become such a classic formulation in Nephite tradition five centuries later that Alma invokes it as a frame for the formal account of his own conversion (see Alma 36:1, 30).

Finally, Moses expresses a differently worded version of Lehi's mirroring connection between keeping the commandments and prospering in the land:

Thou shalt therefore keep the commandments, and the statutes, and the judgments, which I command thee this day, to do them.

> *Lehi's version of the promise in Deuteronomy 29:9 becomes the formula used by Nephite prophets over the next millennium and repeated (almost 20 times) throughout the Book of Mormon.*

Wherefore it shall come to pass, if ye hearken to these judgments, and keep, and do them, that the Lord thy God shall keep unto thee the covenant and the mercy which he sware unto thy fathers:

And he will love thee, and bless thee, and multiply thee: he will also bless the fruit of thy womb, and the fruit of thy land, thy corn, and thy wine, and thine oil, the increase of thy kine, and the flocks of thy sheep, in the land which he sware unto thy fathers to give thee.

Thou shalt be blessed above all people: there shall not be male or female barren among you, or among your cattle.

And the Lord will take away from thee all

Remember, and forget not, how thou provokedst the Lord thy God to wrath in the wilderness: from the day that thou didst depart out of the land of Egypt, until ye came unto this place, ye have been rebellious against the Lord.

Also in Horeb ye provoked the Lord to wrath, so that the Lord was angry with you to have destroyed you. (Deuteronomy 9:7–8)

A Choice Land

Moses clearly declares that it was the Lord who gave the Israelites their new land (see Deuteronomy 5:16; compare 27:2). Moreover, their continued possession of the land was contingent on their keeping the commandments (see Deuteronomy 8:1). Moses

Lehi echoes, but also goes beyond, Deuteronomy in proclaiming the virtues of his land of promise. It is to be a land of liberty and a land protected from all save those whom the Lord should bring into it.

sickness, and will put none of the evil diseases of Egypt, which thou knowest, upon thee; but will lay them upon all them that hate thee. (Deuteronomy 7:11–15)

A Rebellious People

Lehi opens his final discourse by rehearsing the blessings that his people have received and then creates a rhetorical tension by also rehearsing their rebellions and murmurings, particularly against both him and Nephi during their ocean crossing (see 2 Nephi 1:2). In the part of Lehi's address that Nephi quotes, Lehi even more specifically cites the tendency of Laman and Lemuel to resist Nephi, whom the Lord has chosen as his mouthpiece to them. He pleads with them to "rebel no more against your brother, whose views have been glorious," and portrays the object of their murmuring as Nephi's plainness in "manifesting boldly concerning [their] iniquities" (2 Nephi 1:24–26).

Moses uses the same rhetorical tension in his second address to his own people, repeatedly pointing out their rebellions under his leadership.

also described the superior qualities and abundance of the new land:

For the Lord thy God bringeth thee into a good land, a land of brooks of water, of fountains and depths that spring out of valleys and hills;

A land of wheat, and barley, and vines, and fig trees, and pomegranates; a land of oil olive, and honey;

A land wherein thou shalt eat bread without scarceness, thou shalt not lack any thing in it; a land whose stones are iron, and out of whose hills thou mayest dig brass.

When thou hast eaten and art full, then thou shalt bless the Lord thy God for the good land which he hath given thee. (Deuteronomy 8:7–10)

But as wonderful as that land and Jerusalem—its now-destroyed capital—might have been, Lehi and his descendants have inherited a land choice above all others:

Notwithstanding our afflictions, we have obtained a land of promise, a land which is choice above all other lands; a land which the Lord God hath covenanted with me should be a land for the inheritance of my seed. Yea, the Lord hath covenanted this land unto me, and to my children forever, and also all those who should be led out of other countries by the hand of the Lord.

Wherefore, I, Lehi, prophesy according to the workings of the Spirit which is in me, that there shall none come into this land save they shall be brought by the hand of the Lord.

Wherefore, this land is consecrated unto him whom he shall bring. And if it so be that

Lehi echoes, but also goes beyond, Deuteronomy in proclaiming the virtues of his land of promise. It is to be a land of liberty and a land protected from all save those whom the Lord should bring into it. These prophetic utterances become oft-repeated themes in Nephite discourse and history and include the recognition that the blessings of the land were given conditionally and could be replaced by cursings if the inhabitants failed to keep the commandments of the Lord.

The Covenant People and Their Land

Lehi explicitly notes that "the Lord God hath covenanted with me [that this] should be a land for the inheritance of my seed" (2 Nephi 1:5). In em-

Lehi evokes the foundational Israelite tradition that the Israelites' possession of a promised land was a consequence of their covenant with the Lord. Moses similarly reminds Israel that God himself declared his covenant unto them.

they shall serve him according to the commandments which he hath given, it shall be a land of liberty unto them; wherefore, they shall never be brought down into captivity; if so, it shall be because of iniquity; for if iniquity shall abound cursed shall be the land for their sakes, but unto the righteous it shall be blessed forever.

And behold, it is wisdom that this land should be kept as yet from the knowledge of other nations; for behold, many nations would overrun the land, that there would be no place for an inheritance.

Wherefore, I, Lehi, have obtained a promise, that inasmuch as those whom the Lord God shall bring out of the land of Jerusalem shall keep his commandments, they shall prosper upon the face of this land; and they shall be kept from all other nations, that they may possess this land unto themselves. And if it so be that they shall keep his commandments they shall be blessed upon the face of this land, and there shall be none to molest them, nor to take away the land of their inheritance; and they shall dwell safely forever. (2 Nephi 1:5–9)

phasizing this point, Lehi evokes the foundational Israelite tradition that the Israelites' possession of a promised land was a consequence of their covenant with the Lord. Moses similarly reminds Israel that God himself declared his covenant unto them; and he warns Israel not to forget the covenant, "for the Lord thy God is a merciful God [and] he will not forsake thee, neither destroy thee, nor forget the covenant of thy fathers which he sware unto them" (Deuteronomy 4:31). Throughout his discourses in Deuteronomy, Moses returns again and again to the covenant theme. He reminds the Israelites that this covenant not only comes from their fathers but was made at Sinai with "even us, who are all of us here alive this day" (Deuteronomy 5:3). He emphasizes that the Lord is faithful and will keep "covenant and mercy with them that love him and keep his commandments to a thousand generations" (Deuteronomy 7:9). But Israel may one day violate that covenant to such an extent that the Lord will revoke it and heap cursings upon the people. In reviewing such consequences, Moses prophesies what others would observe and say:

Even all nations shall say, Wherefore hath the Lord done thus unto this land? What meaneth the heat of this great anger?

Then men shall say, Because they have forsaken the covenant of the Lord God of their fathers, which he made with them when he brought them forth out of the land of Egypt:

For they went and served other gods, and worshipped them, gods whom they knew not, and whom he had not given unto them:

And the anger of the Lord was kindled against this land, to bring upon it all the curses that are written in this book:

And the Lord rooted them out of their land in anger, and in wrath, and in great indignation, and cast them into another land, as it is this day. (Deuteronomy 29:24–28)

A Choice and Favored People

Even faced with the near certainty that his older sons and their associates will suffer the full consequences of rebellion and disobedience, Lehi expresses the wish that they "might be a choice and a favored people of the Lord" (2 Nephi 1:19). In so doing he echoes the prophecies of Moses, who taught the Israelites that they were "an holy people unto the Lord thy God: the Lord thy God hath chosen thee to be a special people unto himself, above all people that are upon the face of the earth" (Deuteronomy 7:6). And if they will keep his commandments, they will "be blessed above all people" (Deuteronomy 7:14). That the Lord had chosen the Israelites was evident in the miraculous way that he liberated them from the grasp of the Egyptians "to be unto him a people of inheritance," and all this "because he loved [their] fathers" (Deuteronomy 4:20, 37). Moses returns to the initial theme in closing his third discourse: "And it shall come to pass, if thou shalt hearken diligently unto the voice of the Lord thy God, to observe and to do all his commandments which I command thee this day, that the Lord thy God will set thee on high above all nations of the earth" (Deuteronomy 28:1). Further, "the Lord shall establish thee an holy people unto himself, as he hath sworn unto thee, if thou shalt keep the commandments of the Lord thy God, and walk in his ways" (Deuteronomy 28:9). "And the Lord hath avouched thee this day to be his peculiar people, as he hath promised thee, and that thou shouldest keep all his commandments; and to make thee high above all nations which he hath made, in praise, and in name, and in honour; and that thou mayest be an holy people unto the Lord thy God, as he hath spoken" (Deuteronomy 26:18–19).

The Goodness and Mercy of the Lord

Lehi is also echoing a persistent Mosaic theme when he consistently explains God's actions toward his people in terms of his mercy and "infinite goodness" (see 2 Nephi 1:3, 10).

Moses explains that God is faithful and keeps "covenant and mercy with them that love him and keep his commandments to a thousand generations" (Deuteronomy 7:9). And so if the people of Israel will "hearken to these judgments, and keep, and do them, . . . God shall keep unto [them] the covenant and the mercy which he sware unto [their] fathers" (Deuteronomy 7:12).

Choosing between Good and Evil, Life and Death

In a statement that is mostly neglected by later biblical authors, Moses tells the Israelites, "See, I have set before thee this day life and good, and death and evil" (Deuteronomy 30:15). Moses repeats the point at the end of the passage: "I call heaven and earth to record this day against you, that I have set before you life and death, blessing and cursing: therefore choose life, that both thou and thy seed may live" (Deuteronomy 30:19).

Lehi elaborates extensively on this formula[12] by linking it to the transgression of Adam and Eve, which they committed in the hope of gaining a knowledge of good and evil and the difference between them. But, as Lehi goes on to explain, it is the redemption from this transgression accomplished by the Messiah in the fulness of times that makes men free to choose between the two (see 2 Nephi 2:18, 26). And so it is that men "are free to choose liberty and eternal life, . . . or to choose captivity and death"—the one through the mediation of the Messiah and the other through the power of the devil, "for he seeketh that all men might be miserable like unto himself" (2 Nephi 2:27). This seems to be the principal implication of Lehi's version of the Heraclitean principle that "it must needs be, that there is an opposition in all things" (2 Nephi 2:11). Given that Lehi is drawing here from the account in Genesis, we might speculate that he is referring directly to

Moses as his source when he concludes by stating that he has "chosen the good part, according to the words of the prophet" (2 Nephi 2:30).[13]

Acquittal before God

Both Moses and Lehi use the occasion of their final speeches to absolve themselves of responsibility for the future lapses of their people. Each asserts that he has done his duty and stands acquitted before God. Moses states, "Behold, I have taught you statutes and judgements, even as the Lord my God commanded me, that ye should do so in the land whither ye go to possess it" (Deuteronomy 4:15).

Lehi is even more explicit. His heart has "been weighed down with sorrow from time to time" because of his people's hard-heartedness and the fear that "God should come out in the fulness of his wrath upon [them], that [they] be cut off and destroyed forever." This has been the "anxiety of [his] soul from the beginning," and he pleads with his family members one last time to repent so "that [his] heart might leave this world with gladness because of [them]" and that they might not "incur the displeasure of a just God . . . unto the destruction, yea, the eternal destruction of both soul and body" (2 Nephi 1:17, 16, 21–22). But as for Lehi's own standing before God, we read, "Behold, the Lord hath redeemed my soul from hell" (2 Nephi 1:15) and "I have chosen the good part, according to the words of the prophet. And I have none other object save it be the everlasting welfare of your souls" (2 Nephi 2:30).

Address to Future Generations

The final Mosaic theme that Lehi weaves into his own discourse is the idea that, because of these covenants, the blessings and cursings that will come upon the people will affect multiple generations. The righteousness of their ancestors is a source of blessings and opportunities to all Israel, in the present and in the future, and to the descendants of Lehi and his family, with whom the covenant was specifically reestablished. Likewise, if they reject the covenant, "a cursing should come upon [them] for the space of many generations" (2 Nephi 1:18). Similarly, Moses saw the full weight of the cursing falling upon future generations that would corrupt themselves with graven images, "when thou shalt beget children, and children's

children, and ye shall have remained long in the land" (Deuteronomy 4:25). Moses emphasized the everlasting power of the covenant by teaching that its benefits to the faithful would endure "to a thousand generations" (Deuteronomy 7:9). And so he instructs each Israelite:

> Keep thy soul diligently, lest thou forget the things which thine eyes have seen, and lest they depart from thy heart all the days of thy life: but teach them thy sons, and thy sons' sons;
> Specially the day that thou stoodest before the Lord thy God in Horeb, when the Lord said unto me, Gather me the people together, and I will make them hear my words, that they may learn to fear me all the days that they shall live upon the earth, and that they may teach their children. (Deuteronomy 4:9–10)

Conclusions

When Nephi wrote his second record (the small plates) in such a way as to portray himself as a Moses-like figure, he was apparently following the pattern set almost three decades earlier by his father, Lehi. While there is no reason to think that Lehi or Nephi set out with an ambition to be compared to Moses, the circumstances into which the Lord's calls plunged them put them into leadership roles similar to that of Moses. And the connections were not lost on them. Lehi's last address to his people appears consciously to invoke at least 14 important themes and situational similarities from the final address of Moses as recorded in Deuteronomy. In so doing, Lehi added the weight of the testimony of Moses to his own. This is especially important because, as is often the case with the living prophet, his people were more accepting of the teachings of the long-dead Moses than of the living Lehi and his successor, Nephi. Though Lehi's appeal was successful with only part of the people in the short run, it provided a beacon and a witness to his descendants for centuries, giving them clear guidance whenever they were disposed to conduct themselves according to the will of the Lord. ▨

Metals

of the Book of Mormon

Wm. Revell Phillips

A small team of BYU geologists working on the south coast of Oman recently gave added credibility to the Dhofar coast as the land "Bountiful" that marked the end of Lehi's trail (1 Nephi 17:5). There, commanded by God to build an oceangoing ship, Nephi asked divine help to find ore so he might make tools for this seemingly impossible task. Considering the technology of Nephi's time, his tools could have been either bronze or iron, though iron is the more likely, as we shall see.

Although the northern regions of Oman were once famous for their copper deposits, the Dhofar was considered barren of metallic ores and has never had a mining industry. The BYU geologists, however, discovered two small iron occurrences on the south Oman (Dhofar) coast. Neither would sustain an iron industry, but either could yield tons of high-grade iron ore, more than adequate for Nephi's needs.

Several logical sites have been proposed for Lehi's camp and Nephi's shipbuilding. The inlet bay at Salalah, on the verdant Dhofar Plain, was proposed by Lynn and Hope Hilton;[1] the peaceful and pristine Wadi Sayq, where it enters the Arabian Sea a few kilometers east of the Yemen border, has been championed by Warren and Michaela Aston;[2] and

Richard Wellington and George Potter[3] make a case for Khor Rori, an Iron Age port about 40 kilometers east of Salalah and 20 kilometers west of Mirbat at the east end of the Salalah Plain. The exact site is probably unimportant, unknown, and likely to remain so; however, wherever Nephi built a ship in the land Bountiful, we now know he was within a few kilometers of a usable deposit of good iron ore.

The Dhofar coastal strip, only a few miles wide, is blessed with abundant rainfall during the monsoon months when dry wadis may become raging rivers and the land becomes green with dense, tropical vegetation—certainly a blessed relief from the harsh desert and the maze of barren canyons and dry wadis northward. The Dhofar coast is still noted for its fruit orchards and honeybees.[4] The Salalah Plain is a small oasis of agricultural land isolated by the Arabian Sea on the south and desert highlands to the north. Within this very limited area, the writer observed groves of papaya, bananas, mango, coconut, and other common fruits, most of which were probably introduced to the Dhofar long after Nephi's brief sojourn there. Native fig trees, date palms, and coconut palms, however, may have provided abundant and durable fruit for Nephi's long sea voyage.

Fieldwork

Intense LDS interest in the land Bountiful began with Hugh Nibley's publication of *Lehi in the Desert* in 1952.[5] Interest was kept alive by the Hiltons and Astons, finally attracting the attention of FARMS.

In February 1998 S. Kent Brown, director of Ancient Studies at BYU, assembled a diverse four-man team of BYU scientists to explore the Dhofar coast.[6] Thus began a welcome and long-overdue cooperation effort between science and religion at BYU. Brown and his team (Terry B. Ball, botany; Arnold H. Green, ancient history; David J. Johnson, archaeology; Wm. Revell Phillips, geology) explored the Dhofar area for a week. Each team member learned from the others and formulated a research project that would involve his own discipline and academic department in a meaningful study in this fascinating land. The objectives of each project were for team members to be completely professional, to produce research beneficial to the Omani government and its scholarly community, to foster a cooperative effort involving scholars from the host country, and to conduct a scientific mission of goodwill for BYU. Spinoffs from each project may well reward the participants and supporters with enriched understanding of the sojourn of Lehi and his family in the land Bountiful.

The geology team was assembled by the writer in the summer of 1998 and began preparations for fieldwork in the Dhofar. The team members were Jason G. Aase, a graduate student in geology at BYU; Eugene Clark, a former Exxon and Standard Oil geologist in Oman; Ronald A. Harris, a BYU professor of geology (earth tectonics); Talal Al Hosni, a graduate student in geology at Sultan Qaboos University in Oman; Jeffery D. Keith, field director and a professor of geology (economic geology); and Wm. Revell Phillips, a BYU emeritus professor of geology (mineralogy).

For three weeks in late February 2000, the team members concentrated their efforts in the coastal Dhofar and focused on the rocks that would most likely yield metallic ores of possible value to the Omani economy and that could have been used by Nephi of old for making tools to build a ship. Their effort was rewarded by exciting discoveries that will enrich, broaden, and perhaps even redirect the knowledge and understanding of the geology of Oman. This scholarly work will be reported in appropriate professional journals and presented at an international conference on the geology of Oman to be held in Muscat in January 2001.

By his own admission, Nephi needed timber for building the ship and metal tools for its construction. While the search for timbers falls more to the botany team, the geologists made a short detour to the coastal port of Sur, which boasts the only shipyard in Oman still building traditional Arab dhows by hand. We are uncertain of Nephi's vessel design and the materials he used in constructing it. The modern Omani workmen, however, say that local acacia trees, widely scattered over the arid Omani landscape, have trunks about the right size and curvature for a ship's ribs. The keel and outer planking, however, require long, straight, dense timber, apparently not presently available near Sur. Teakwood, they say, is ideal for shipbuilding and is imported from nearby India to the shipyard at Sur, where the huge logs are transported by narrow-gauge railway cars and fed into large horizontal band saws.

The shipping lanes between India and Africa, with a stop in southern Arabia, have transported teak for centuries.[7] Perhaps Nephi obtained teak timbers by trading frankincense, honey, or some other local product at the busy port of Kane, in Yemen, or Khor Rori, in the Dhofar, if local timber was not adequate. Khor Rori, dating to at least Roman times,[8] and Kane, dating somewhat earlier, were the principal ports for shipping frankincense from the Dhofar.[9] Nephi recorded only that he and his brothers "did go forth" for timber (1 Nephi 18:1), indicating that the necessary timber was not exactly where he was.

Iron Ores

In the context of Nephi's day, there were only two reasonable options for a metal to make tools: bronze and iron. Nephi lived at a time when iron and simple steel had become commonplace in Jerusalem, yet bronze was retained for special purposes like casting. Bronze was softer and generally inferior to steel for toolmaking, and producing it required a source for its components, copper and tin. Only minor traces of copper minerals have been reported in the Dhofar,[10] and tin is unknown there. Of course, tin and copper might possibly have been trade items on the India-Africa trade route suggested above.[11] Because the geologists found no trace of copper or tin along the Dhofar coast, they searched for iron deposits sufficient for ancient toolmaking.

The Dhofar has no economic ore deposits capable of sustaining a metal industry. It is almost completely covered with a thick sequence of Cretaceous and Tertiary limestones, essentially devoid of concentrations of any metal. Only east of Mirbat are the limestones eroded away to expose a broad plain of the Precambrian "basement complex" (i.e., very old igneous and metamorphic rocks). This represents an erosional window into the African-Arabian shield, about 60 kilometers long and 30 kilometers wide, lying between the Arabian Sea and the steep limestone face of Jabal Samhan. We reasoned that any significant concentration of metallic ore minerals should be exposed in this basement complex.

A small area west of the Salalah plain held a promising surprise. Gene Clark recalled seeing, several years ago, a very small exposure of early Paleozoic sediments and the earlier Precambrian rocks at the mouth of Wadi Nharat, only a few kilometers east of Wadi Sayq. Arriving at the tiny port of Rakhyut, the team hired a fishing boat and, instead of sailing west to Wadi Sayq, sailed east to Wadi Nharat. In the wadi the early Paleozoic Al Hota formation of greywacke rocks was cut by thin, igneous dikes of a light-colored, iron-stained rock that proved to be a fine-grained carbonatite composed largely of calcite ($CaCo_3$) and siderite ($FeCo_3$). The dikes sometimes widened to expose central pods of nearly pure hematite (Fe_2O_3). One pod, for instance, measuring about 8 feet by 10 feet in outcrop, would yield several tons of high-quality iron ore, more than enough for a few shipbuilding tools. This rich hematite ore would have much associated carbonate (i.e., limestone) impurities, like that added, as a flux, in modern steel furnaces. The carbonate does not react with the iron or lower its melting point, but it does combine with, and lower the melting point of, common silicate impurities to form a fluid molten slag. This carbonate may have enabled someone like Nephi to reduce the hematite to iron at a lower temperature and to forge from the iron a more fluid slag than would have been possible without the carbonate flux.

East of Mirbat, the geology team began its exploration of the broad, igneous-metamorphic basement complex at the east end of the broad Salalah plain, about 75 kilometers east of Salalah and 150 kilometers from Wadi Nharat. Here, almost on the outskirts of Mirbat, they made their most exciting and significant geological discovery. This

A deposit of iron mineral in southern Oman.

discovery will be the central theme of the professional reports and publications that the team expects to release in the coming year. Associated with this discovery were, again, carbonatite dikes rich in the iron-carbonate siderite, which weathers to a gossan-like mass of goethite-limonite ore ($Fe_2O_3.nH_2O$)—not enough for an iron industry, but quite adequate for forging a few tools. This site is about 10 kilometers east of Khor Rori. Hence, regardless of whether Nephi built his ship at Salalah, Wadi Sayq, Khor Rori, or any other site along the Dhofar coast, he was within a few kilometers of quality iron ore easily accessible from the sea.

Ancient Smelting

Let us consider what Nephi might have known about the smelting and working of iron and steel. The traditional Iron Age began in the eastern Mediterranean about 1200 B.C. However, manufactured iron objects appear much earlier in the human record. Native iron is unknown in nature, except as meteorites that fall to the earth's surface from outer space. Many of the earliest worked iron objects are meteoric iron, as determined by their high nickel content and unique microstructure. The early Hittites spoke of "black iron from heaven," and in ancient Egypt it was "iron of heaven."[12]

Iron is, of course, subject to disintegration by rusting, so we might expect most ancient iron to be lost to rust. Nevertheless, at least 14 remnants of fashioned iron objects have been dated to before the Early Bronze Age (3000 B.C.).[13] Only five of these have been chemically analyzed for nickel, and only three of them appear to be worked meteoric iron. The two remaining objects are smelted iron, one dated 3500–3000 B.C.

and the other about 5000 B.C.[14] Thirty iron objects are known from the Early and Middle Bronze Ages, and about half of the analyzed objects are smelted iron.[15] Most, if not all, of the 18 analyzed iron objects of the late Bronze Age appear to be meteoric.[16]

The Old Testament and Pearl of Great Price introduce Tubal-cain as "an instructor of every artificer in brass and iron" (Genesis 4:22; Moses 5:46). The name Cain *(qayin)* in Hebrew means "smith,"[17] and "Tubal" is a prominent iron locality cited in Ezekiel 27:13. Since Tubal-cain is the sixth-generation descendant of Cain and Noah is the eighth generation from Seth, these scriptures imply a date for ironworking prior to the great flood and place Tubal-cain over two millennia before the beginning of the so-called Iron Age in the eastern Mediterranean (1200 B.C.).

Although iron was known and smelting techniques were practiced, by intention or accident, before 1200 B.C., the dawn of the Iron Age saw a sharp increase in the number of iron objects, and iron gradually replaced bronze, first as farm tools and then as weapons. Two or three centuries earlier, the Hittites migrated to central Anatolia, perhaps bringing with them the secret of iron smelting from the "east."[18] Some historians believe the Hittites exploited their monopoly of iron for military advantage, and Hittite kings wrote about iron in correspondences sent to monarchs in Assyria (Shalmaneser I) and Egypt (Ramses II).[19] About the beginning of the Iron Age, Hittite lands were overrun by a wave of the indeterminate "Peoples of the Sea" and the secret of iron passed to the Philistines, a branch of those mysterious people.[20] Other than among the Hittites, the only serious use of iron before 1000 B.C.

In the geology of Oman researchers may yet find other iron mineral deposits.

was in Cyprus and Palestine, among the Philistines and their allies, the Canaanites.

Iron came late to Israel, and its enemies pressed their advantage. "Now there was no smith found throughout all the land of Israel; for the Philistines said, lest the Hebrews make them swords or spears: But all the Israelites went down to the Philistines, to sharpen every man his share and his coulter, and his axe and his mattock" (1 Samuel 13:19–20). "And the Lord was with Judah, and he drave out the inhabitants of the mountain; but could not drive out the inhabitants of the valley, because they had chariots of iron" (Judges 1:19). "And the children of Israel cried unto the Lord: for he [Jabin, king of Canaan] had nine hundred chariots of iron: and twenty years he mightily oppressed the children of Israel" (Judges 4:3). By the time of Israel's kings (1000 B.C.), Israel had mastered the technology of iron and there were smelting furnaces at Ezion-Geber at the head of the eastern arm of the Red Sea.[21]

Iron Making

The beginning of the Iron Age (1200 B.C.) was a period of great turmoil in the eastern Mediterranean. Trade routes were disrupted and Bronze Age civilizations collapsed (e.g., the Hittite Empire, Mycenaean Greece, New Kingdom Egypt, and the Ugarit Kingdom).[22] Tin was always expensive (15 to 18 times the price of copper), but with the loss of the tin trade, the price of bronze must have soared to hasten the conversion to iron. Iron ore was abundant and cheap, but the technology of smelting and working iron was different and difficult. Iron could not be melted and cast like bronze. The melting point of iron is 1535° C (2795° F), which was unattainable in primitive charcoal furnaces, and it had to be worked in the solid state, which was labor-intensive and time-consuming.[23]

China has no tradition of hammered iron, but as early as the eighth century B.C. the Chinese were able to melt and cast iron into molds to produce "pig iron."[24] High-temperature metallurgical furnaces may have developed in parallel with furnaces for the manufacture of Chinese porcelain, which required similar temperatures and which was not duplicated in Europe before the 18th century. West of India, however, all iron was forged wrought iron before the Industrial Age in Europe.[25]

In the New World, the Jaredite record makes early reference to iron (see Ether 11:23), and Shule,
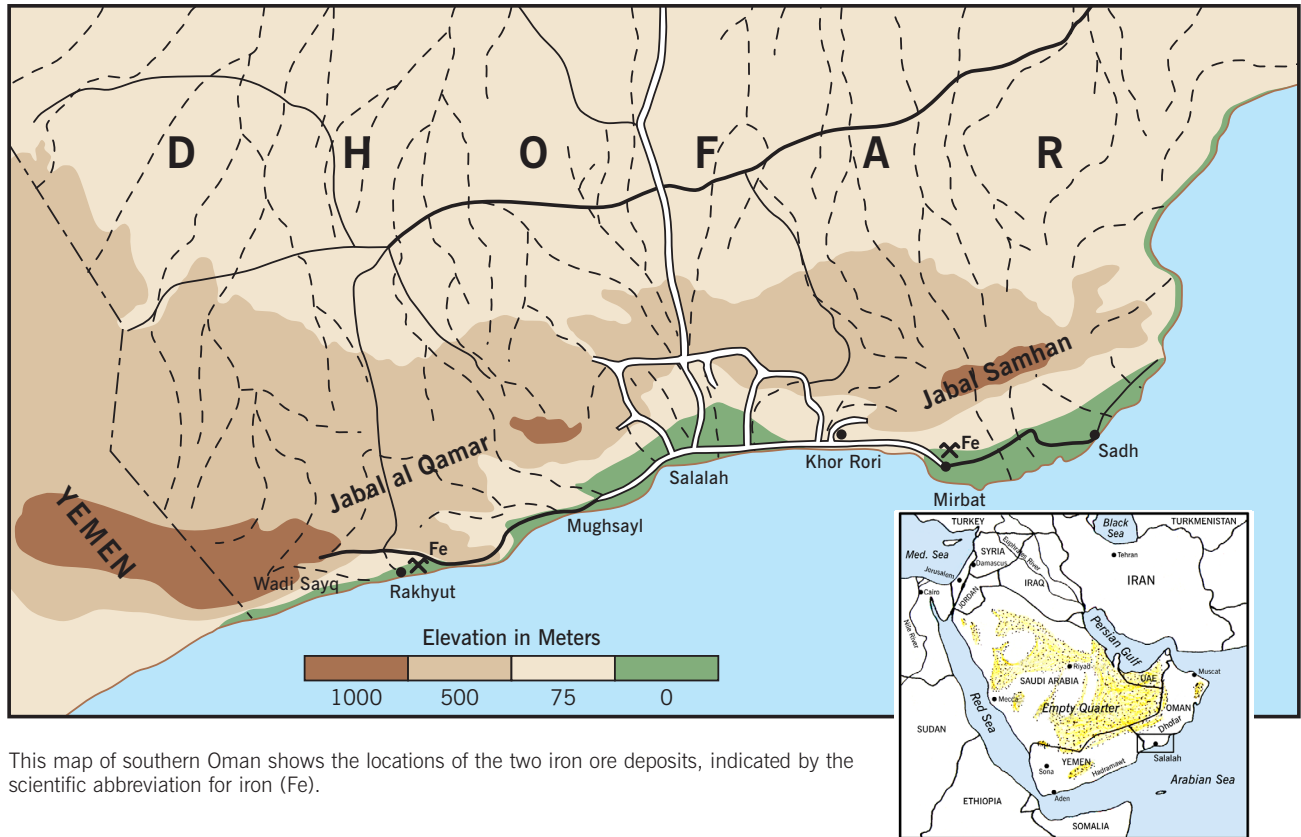
This map of southern Oman shows the locations of the two iron ore deposits, indicated by the scientific abbreviation for iron (Fe).

Jared's great-grandson, was said to be a maker of steel swords (see Ether 7:9). Because Jared and his brother departed the Near East for the Americas at the time of the great tower and the confounding of languages (see Ether 1:33), scriptures again note (the other instances being Genesis 4:22 and Moses 5:46) a date for iron and steel millennia before the Near East Iron Age. John L. Sorenson cites 16 authors who claim to have found ancient iron objects in the New World.[26] Most of these finds, however, are by amateur archaeologists who do not distinguish meteoric iron and may have no credible way to fix the antiquity or authenticity of their finds. Jaredite swords discovered by the explorers of King Limhi were said to be "cankered with rust" (Mosiah 8:11). One might cite this as evidence that the Jaredite swords were, indeed, of iron or steel; however, sacred texts may occasionally use *rust* as a metaphor for other forms of decay and corrosion. For example, the New Testament speaks of the "rust" of cankered gold and silver (James 5:3). Although research is very limited and incomplete, modern archaeologists have reported no artifacts of "smelted" iron in the New World of certainty earlier than the Spanish conquest.[27] Matthew Roper notes "no evidence from Mesoamerica archaeology or tradition to indicate the use of metal in the manufacture of swords,"[28] and Heather Lechtman writes, "There are indications that iron would not soon have been added to the Andean repertoire of metals."[29]

Lehi's journey, beginning about 600 B.C., falls well within the Mediterranean Iron Age and well after David and Solomon made smelted iron a common metal in Israel. Lehi or Nephi may have brought with them considerable knowledge of the smelting and forging of iron and steel and a few objects of these metals (e.g., Laban's sword and Nephi's bow). It would be possible and logical for Lehi to include at least an iron hammer and ax among the "provisions" he prepared for his journey (1 Nephi 2:4). Nephi states: "And I did teach my people to build buildings and to work in all manner of wood and of iron, and of copper, and of brass, and of steel, and of gold, and of silver, and of

precious ores" (2 Nephi 5:15). He implies knowledge in matters of smelting and working a variety of metals, and when required to make shipbuilding tools, he asks for divine help in finding ore but seems to know how to proceed from there (see 1 Nephi 12:8–11). Nephi may have learned these skills from the smiths in Jerusalem or from his multiple journeys between Jerusalem and the Red Sea, which required him to pass repeatedly through southern Wadi Arabah, the principal site for mining and smelting of both copper and iron in ancient Israel. He may have learned from the local smiths of the Dhofar or from the Indian traders that passed through nearby trading ports, and he would not have been the first prophet to be instructed by divine beings. Nephi struck stones together to make fire, built a presumably simple pit furnace, and constructed a bellows of animal skins to blow air into the glowing mass of charcoal and ore (see 1 Nephi 17:11). Bellows of skins are depicted in ancient Egyptian tomb paintings and were in common use in Palestine and throughout the Near East from the second millennium B.C.[30] Nephi's smelting furnace almost certainly never reached the melting point of iron (1535° C or 2795° F), but it didn't need to.

When air is introduced into a hot mixture of iron oxides and charcoal, carbon from the charcoal combines with oxygen from the air to form carbon monoxide, which is a reducing gas. This gas filters upward through the charcoal-ore mixture, removing oxygen from the iron oxides to form carbon dioxide; and tiny crystals of iron, freed of its oxygen, filter downward to accumulate at the base of the fire pit as a gray, spongy mass called a "bloom" or "sponge iron." This form of iron reduction, called the "direct process," begins at about 1200° C (2192° F), which is possible in a simple charcoal furnace. Although the bloom is not molten, silicate impurities in the ore form a molten slag (see 1 Nephi 17:16) that floats to the top to shield the hot bloom from the oxygen and cooling effect of the air above.[31] The white-hot bloom can be withdrawn from the furnace and hammered ("forged") to squeeze out remaining slag and to weld, or compress, the iron crystals into a solid mass called "wrought iron."[32] Iron produced by this direct process is quite pure (99.5 percent). It is softer and more malleable than good bronze and can-

not be hardened by any amount of additional forging.[33]

Wrought iron is not suitable for tools or weapons, and added forging drives more slag from the iron, making it even more malleable. Long heating of the wrought iron in direct contact with glowing charcoal, however, causes carbon atoms to diffuse into the outer layers of the iron, creating a simple form of steel (martensite).[34] This process is called "carburizing," and repeated carburizing and forging produce an outer layer of steel that can be very hard and sharpened to a fine edge. The iron is said to be "case hardened," and repeated sharpening will remove the carburized steel. In antiquity, all swords were not created equal. Common soldiers fought with inferior weapons that might dent and bend, but kings wielded swords of special steel, each created by a skilled smith after days or months of hard, hot work at his forge (e.g., Excalibur). The sword of Laban, said to be of "most precious steel" (1 Nephi 4:9), was perhaps one of those special swords.

Today we know that the smiths of Damascus fused together thin layers of carburized steel to form a single blade. Repeated forging produced a visible wavy pattern ("watering") of carbon-rich and carbon-poor layers visible in the famous Damascus steel.

In a different process, plunging hot steel into water ("quenching") increases its hardness, but the metal becomes brittle and tools and weapons made from it may break. Reheating to moderate ("red") temperature and slow cooling ("tempering") relieves stress in the quenched steel, making it less brittle with little loss of hardness.[35]

It is important to note that the direct process of iron reduction, forging, carburizing, quenching, and tempering were technologies known throughout the Near East of Nephi's day. All were possible for a learned or inspired man using a simple pit furnace with bellows and a simple forge. These techniques changed little for the arms makers of the Christian crusades or, indeed, for the blacksmiths of the pioneer communities of the American West. Nephi evidently knew all that he needed to know about smelting ore and producing metal tools. What he needed was to learn where he could find a deposit of iron ore. With the Lord's help he found one. Our geologists, too, found two deposits of iron ore in the broad area we believe to be the land Bountiful.

COPPER, BRONZE, AND BRASS

Although Nephi's tools were most likely made of iron or steel, bronze remains a possibility. Thus a review of the development of copper and its alloys may be in order and of special interest to readers of the Book of Mormon.

Most copper artifacts dated to before 5000 B.C. are of native metallic copper.[36] However, copper was the first metal to be smelted from its secondary ore minerals,[37] mostly malachite and azurite, and smelting slags from central Anatolia (Çatal Hüyük) have been dated to as early as 6000 B.C.[38] In the Near East native copper is found in a belt from northwest Anatolia to northern Iraq, with a second major source at the Talmessi Mine in Iran. The earliest copper mining appears near Ur before 4000 B.C., and copper was smelted at Ur by 3500 B.C.[39] Sea trade between Mesopotamia and Magan (northern Oman) brought impure copper ingots, via Dilmun (Bahrain), up the Euphrates River to Mari, in Sumeria, where the copper was refined.[40] This trade continued until about 1700 B.C., when copper mining on Cyprus began in earnest.[41]

Palestine had little or no native copper, and the metal was relatively rare there in the Bronze Age but became more abundant about the time of Abraham (Middle Bronze Age, about 2000 B.C.). Copper was seriously mined, as secondary carbonates and silicates, and smelted at Feinan in Wadi Arabah by the kings of Israel.[42] These colorful, secondary minerals, largely malachite and chrysocolla, are sold to modern tourists as "Elat Stone."

In the Americas artifacts of hammered native copper in the Lake Superior region date from 3000 B.C.[43] Complex and sophisticated metallurgical technologies in the pre-Columbian New World, however, are presently recognized only in the Andes Mountains of Peru and Chile,[44] where copper was smelted from rare copper arsenides, sulfates, and chlorides.[45] Smelted copper is not presently recognized before the first century A.D.,[46] when armaments of cast copper appear (e.g., mace heads, spear points, thrower hooks).[47]

In the modern world, brass is an alloy of copper and zinc, and bronze is an alloy of copper and tin. Understanding the copper alloys of the ancient or medieval world, however, requires an explanation.

The first copper alloy (Early Bronze Age, about 3500 B.C.) was arsenic-copper, sometimes called "arsenic-bronze," and was probably produced by accident.[48] Copper minerals of the Talmessi Mine were closely associated with arsenic minerals, and smelting likely produced an unintentional alloy[49] that melted at lower temperatures than pure copper and was more fluid and easier to cast.[50] The new alloy, if recognized as such, was not distinguished with a new name, and the Hebrew word נחשת and Greek word χαλκὸς were applied to both copper and the new arsenic-copper alloy.[51] Arsenic was soon a deliberate addition to smelted copper, but before the Middle Bronze Age (2000–1600 B.C.) in the Near East, a tin-copper alloy had largely replaced the earlier arsenic-copper alloy.[52] Tin-copper was far superior and was also absorbed by the Hebrew and Greek words noted above. No new word was created to distinguish this new copper alloy.

The zinc-copper alloy may also have been formed by accident, because the common secondary minerals of zinc (smithsonite and hemimorphite) may be closely associated with the common secondary minerals of copper (malachite, azurite, and chrysocolla) in weather-altered, near-surface deposits. Normal smelting of zinc ore does not yield metallic zinc, but smelting a mixture of secondary minerals of zinc and copper together may yield a zinc-copper alloy. Deliberate zinc-copper did not come into use before Roman times, and earlier accidental examples of this alloy are extremely rare.[53] This new alloy, too, was absorbed by the existing Hebrew and Greek words for copper, and the Latin word *aes* or *aeris* stood for copper and both of its major alloys.[54]

In antiquity the words *bronze* and *brass* did not exist. *Brass* is an English word derived from *braes* (Old English) and *bres* or *bras* (Middle English) about 1200 A.D.[55] In the language of Tudor England, *brass* stood for any copper alloy, and the King James Bible uses the word in that context.[56] Joseph Smith, favoring the King James Bible, translated the Book of Mormon using *brass* in the same manner. In a ew verses of the Old Testament the Hebrew word for copper is even translated "steel"[57] (2 Samuel 22:35; Job 20:24; Psalm 18:34; Jeremiah 15:12) and "amber" (Ezekiel 1:4, 27; 8:12).

The word *bronze* did not come into use before the 18th century and did not exist in Tudor England.[58] It does not appear in the King James Bible (it does appear in other versions of the Bible) or in the Book or Mormon, and the objects designated "brass" were most likely the tin-copper alloy.

The brass plates of Laban may have been copper, as bronze is harder and more difficult to engrave upon. The Liahona may well have been of supernatural origin and, hence, of any metal or alloy that Nephi chose to call "fine brass."

Pure copper can be "work hardened" by hammering and annealed by heating and slow cooling to prevent cracking with repeated hammering.[59] The tin-copper alloy was far superior, however, and bronze was the metal of choice throughout long periods of human history. The Bronze Age in the Near East began well before 3000 B.C. and lasted through 1200 B.C., when bronze was largely replaced by iron.[60] Even in the Roman period, however, spearheads and arrowheads (socketed items) were still cast in bronze,[61] as iron could not be melted and cast.

"Classical bronze" contained about 10 percent tin, but even 2 percent tin produced noticeable positive effects.[62] Tin is rare in the Near East, and the sources of tin for the Bronze Age are still speculative. Tin was quite possibly the catalyst for international trade, bringing tin from Italy, Sardinia, Greece, Crete, Portugal, Brittany, Spain, and faraway Cornwall (British Isles) in the west[63] and from Afghanistan, via the Indus Valley, in the east. By the mid-third millennium, native gold and cassiterite (SnO_2) were panned together from Himalayan riverbeds and transported to markets in the Near East.[64]

In the New World some arsenic-rich copper minerals of Peru and Chile may also have been smelted to produce accidental arsenic-copper, but deliberate addition of arsenic is apparent by at least 1000–1700 A.D.[65] The placer cassiterite from Bolivia[66] provided tin for the tin-copper alloy, characteristic of a much earlier Bronze Age in the Old World; and among the Incas, bronze was a rather common metal available to people of many social classes.[67] From the Andes, metal technology appears to move north into Panama and Mexico.[68] Spanish conquerors, however, found the Aztecs of Mexico still in a pre-bronze age,[69] a considerable regression from an earlier civilization. The last mention in the Book of Mormon of working iron, copper, brass, and steel is Jarom 1:8, scarcely 200 years after Nephi arrived in the New World. About 250 years later, however, King Noah taxed all people who possessed these metals (see Mosiah 11:3). Roper notes only fire-hardened, wooden weapons, some lined with obsidian chips, in Mesoamerica at the time of the Spanish conquest.[70]

Lechtman appears to say that the traditional sequence of Near East metallurgy from simple native metals to complex copper alloys to iron-steel does not seem to apply in the New World, where the sequence is related rather to the ideology, worldview, and values of its people.[71] That conclusion will need to be verified by further research and discovery, which may also shed light on the extent to which the highs and lows of New World metallurgy were determined by the influx of foreign migrations bringing new technology and by subsequent social decay and loss of technology. ▨

Last-Ditch Warfare in
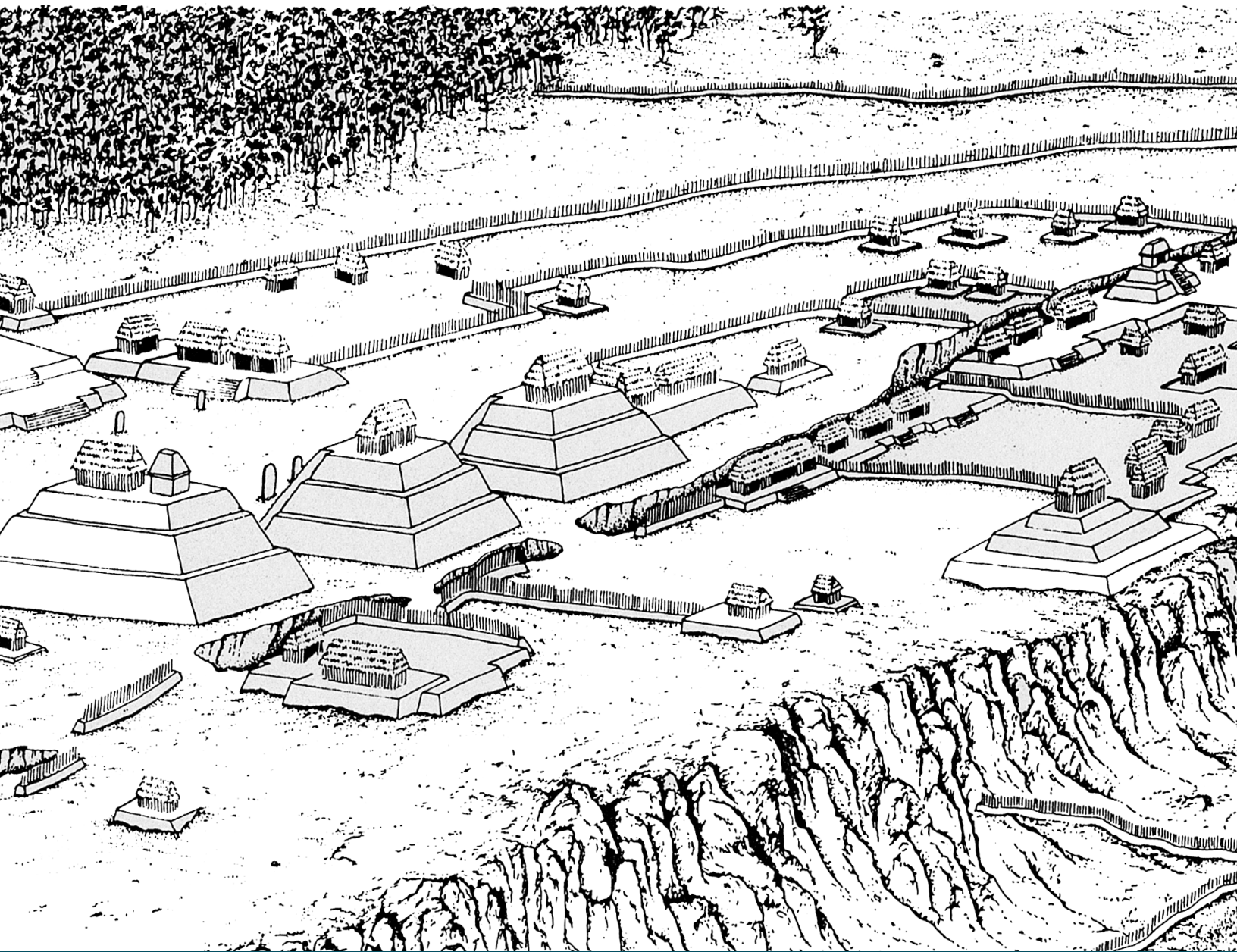
Overview of Aguateca Defenses, drawn by L. F. Luin, courtesy Vanderbilt University Press

John L. Sorenson

ANCIENT MESOAMERICA RECALLS THE BOOK OF MORMON

Combat scene on mural from Bonampak, Mexico. Photography by Daniel Bates, courtesy David A. Palmer and S.E.H.A.

According to the Book of Mormon, the peoples it deals with were frequently at war. Warfare is a constant theme in the record. The compiler and editor, Mormon, was a lifelong soldier. Approximately one-third of the text relates directly or indirectly to military matters.[1] Lamanites attacked Nephites and vice versa throughout most of their joint history, Mulekites fought among themselves for a time (see Omni 1:17), and battles among the Jaredites started not long after their arrival and continued until their final destruction (see Ether 7:3–5).

For much of the 20th century the Book of Mormon account appeared to contradict the picture of warfare in the culture of ancient Mesoamerica, the apparent area where the Nephites dwelt. The common view of the experts at that time was that the Maya and other peoples in that isthmus zone lived particularly peaceful lives. Armed conflict on a sizable scale was supposed to have been a development that took place only long after the Nephites were exterminated. But during the final three decades of the 20th century, archaeologists found it necessary to revise that view.

In the last 15 years point after point has emerged on which the archaeologists' findings concerning Mesoamerican combat agree with Book of Mormon statements about military action.[2] While it was established by the 1980s that warfare of significant scale had occurred in general within Book of Mormon times, the detailed chronology of such wars remained somewhat vague, and the extreme conditions pictured in the books of Ether and Mormon, where entire peoples were exterminated after their last desperate defensive measures failed, had not been documented from the excavated remains. Now, however, even those ultimate conditions have come to light as characteristically Mesoamerican. More than ever we can discern that the Book of Mormon relates events and circumstances that are in no way surprising in the history of Mesoamerica. This article updates the process of relating contemporary archaeological findings to what we learn from the Nephite record.

In order to appreciate the new discoveries in relation to Nephite history, it is necessary for us to take a fresh look at Nephite-Lamanite fighting in terms of the motives and intentions that moved them. We will also pin down the dates when Mesoamerican fighting patterns are visible and see how that information compares with the Nephite battles at Cumorah and earlier.

The Rising Scale and Changing Nature of War in the Book of Mormon

The Lamanites began attacking the Nephites within a few decades after 600 B.C. (see 2 Nephi 5:34).[3] In those early days the populations involved would have been small. Consequently, the fraternal conflicts could only have amounted to occasional raids rather than systematic military campaigns (see Jacob 7:24–25). The two groups occupied different ecological zones, an upland mountain zone for the Nephites and lowland coastal area for their rivals (see 2 Nephi 5:24; Enos 1:20–21). Thus they were not in economic competition. The Lamanites' intention was obviously to destroy their rivals' leaders—Nephi and Jacob (the chief priest)—and their descendants. For the Nephites we discover no hint of any motive except preservation of their people, goods, and lands.

The record also implies that internal quarrels split the Nephite faction (see Jarom 1:10–13; note the expression "contentions, and dissensions"). Around 200 B.C. a Nephite party under Mosiah$_1$ fled their home in the land of Nephi and traveled for a considerable distance to where they met and combined with "the people of Zarahemla," a different ethnic and linguistic group (see Omni 1:12–18). As the population of the combined Nephites and Mulekites on the one hand and the Lamanite faction on the other hand increased, the scale of their conflicts also escalated. The Lamanites continued to be the aggressors. Battles became increasingly bloody; by around 85 B.C. the total number of people slain in one complicated two-day engagement was too many to count but far exceeded 20,000 (see Alma 3:1).

The Lamanite motive early on was to avenge the mistreatment they claimed their ancestors had suffered at the hand of Nephi, first king over the Nephites. They charged that he stole the family record and the tokens of legitimate rulership; together those objects would have legitimated rule by Laman's descendants over a combined confederation of Lehi's descendants (see Mosiah 10:15–17).[4] The early wars were mainly angry lashings out justified by the aggressors in terms of this virtually mythical offense.

When ambitious Nephite dissenters began to influence the Lamanites, the aims of combat became more complicated. Not only did the descendants of Laman and Lemuel still want to gain the overall governing power, they also sought material bene-

fits—wealth (for their rulers at least). While the psychology of blood feud continued in the dissenters' propaganda, which they used to whip up the feelings of the reluctant Lamanite masses (see Alma 48:1–4; Amalickiah "began to inspire the hearts of the Lamanites against the people of Nephi. . . . He . . . hardened the hearts of the Lamanites and blinded their minds, and stirred them up to anger"), that extreme aim was tempered by those ambitious men's desire to milk the Nephite masses as a subject population rendering tribute. The prospect of obtaining Nephite property and people as a source of wealth rose to form a major basis for carrying on war.

Note that those people were living in desperate, violent times. Even the great Nephite leader Moroni$_1$ could fall into the hatred rhetoric of the day. In a chilling forecast of the total Cumorah slaughter still four centuries ahead, he threatened the Lamanite king, Nephite dissenter Ammoron, that if he did not cease his campaign of attempted conquest he would turn the tables on him: "I will come against you with my armies; yea, even I will arm my women and my children . . . , and I will follow you even into your own land, yea, and it shall be blood for blood, yea, life for life; and I will give you battle even until you are destroyed from off the face of the earth. Behold I am in my anger, and also my people" (Alma 54:12–13).

By early in the first century A.D., shortly before the crucifixion of the Savior, the troublemakers were still waving the old flag of ethnic hatred when it was useful to them. For example, dissenter and robber chief Giddianhi recited the old litany against the Nephites—"knowing of their [the Lamanites'] everlasting hatred towards you because of the many wrongs which ye have done unto them" (3 Nephi 3:4). But the countermotive is revealed in the invitation to the Nephite rulers to "unite with us and become acquainted with our secret works, and become our brethren that ye may be like unto us—not our slaves, but our brethren and partners of all our substance" (3 Nephi 3:7).[5] They faced the paradox that extermination of the Nephites would rob them of subjects who could be a source of the wealth that taxation or tribute payments would bring them in perpetuity.

As a result of the great destruction that took place at the time of the crucifixion, both of the motives for war that had prevailed were suddenly eliminated. The peaceful teachings of the Savior became dominant equally among those who had constituted the Nephite victims and among the descendants of those who had been Lamanite aggressors. The old feud lost its meaning in the light of the new faith (see 4 Nephi 1:15–17). Meanwhile, the new social and economic order shut down the political and economic motives to conquer and exploit (see 4 Nephi 1:2–3). A peaceful interlude of nearly three centuries followed.

Warfare was renewed soon after A.D. 300 (see Mormon 1:11). It hardly ceased over the next 80 years, at which point the historical record effectively ended (see Mormon 8:6–8).

All told, the Nephite account tells of 92 battles between Lamanites and Nephites,[6] but only near the end did annihilation of the enemy become a realistic goal (see Mormon 4:23; 5:2; 6:6). Clearly by the time of the Cumorah battle, conditions had set the stage for armed conflict and social chaos at a new, more terrifying level.

After the renewal of war early in the fourth century A.D., wholesale destruction, not just conquest and exploitation, became the aim of the Lamanite aggressors. At that point the victims had to either flee or die (see Mormon 2:3–8), whereas a few centuries before they only had to subject themselves to the new rulers to be left relatively undisturbed so long as they paid up. Nearing the final conflict at Cumorah, the wars became even more decimating and merciless (see Moroni 9:7–19). At length, around A.D. 380, the Nephites as a sociopolitical group were exterminated in one climactic battle wherein hundreds of thousands died in a single day (see Mormon 6:11–15).

We must note carefully, however, that the extermination of the Nephite group was only one episode in a widespread pattern of social and political collapse that was going on around them. Soon after the renewal of the Nephite-Lamanite wars, around A.D. 330, Mormon reported that "the land was filled with robbers and with Lamanites; . . . therefore there was blood and carnage spread throughout all the face of the land, both on the part of the Nephites and also on the part of the Lamanites; and it was one complete revolution throughout all the face of the land" (Mormon 2:8). Seventy years later, Moroni$_2$, the last custodian of the Nephite record, reported that his extinct people's enemies were engaged in fighting that was "exceedingly fierce among themselves" (Moroni 1:2). "The Lamanites [and, he implies,

independent robber groups] are at war one with another; and the whole face of this land is one continual round of murder and bloodshed; and no one knoweth the end of the war" (Mormon 8:8–9). So the Nephite retreat and defeat constituted only one episode within a more general pattern of widespread social and political degeneration quite unlike the less sharp conflicts of earlier times.

The Old View of War in Mesoamerica

Most students of the Book of Mormon who have approached its history on a scholarly basis agree that the scene where the Nephites dwelt was Mesoamerica (southern Mexico and northern Central America). Consequently, what is known about warfare in that area is what we can best compare to the fighting reported in the Book of Mormon.

Two or three generations ago, to maintain the Mesoamerican view of Book of Mormon geography posed a problem in relation to ancient warfare for Latter-day Saints who were trying to understand how the Nephites and Lamanites fit into ancient America. When I began studying Mesoamerican culture history 50 years ago, it was the universal view of archaeologists that no evidence existed for warfare during the Book of Mormon period (before A.D. 400). Instead it was claimed that the Maya, the most studied people of the area, who had inhabited many cities of eastern Mesoamerica during the period from about A.D. 300 to 900, were strictly peaceable. Leading authority Sylvanus G. Morley saw them being led by "priest-kings, gentle men without egos, devoted to prayer and temple building." Such inscriptions as had been deciphered, Morley claimed, tell "no story of kingly conquests, recount no deeds of imperial achievement."[7] His classic book, *The Ancient Maya* (1946), did not even index the words *war* or *warfare.* Most other scholars echoed his respected viewpoint.[8] The military orientation of Mesoamerican society that the Spaniards found when they invaded in the early 1500s was supposed to have arisen only around A.D. 1000.[9]

Yet today the picture of those supposedly peaceful Maya leaders and their people that was held by the early archaeologists has changed totally. Now those rulers are characterized in this manner: "Ego-maniacs all, they warred incessantly and sacrificed prisoners to build prestige."[10] How did such a drastic turnaround develop in the views of scholars?

Archaeological Facts vs. Fashions in Archaeological Interpretation

The information that archaeologists find is always incomplete; in fact, what has been learned from excavations is never more than a fragment of what exists in the ground. In turn, the little that we today can ever recover of yesterday's remains is a minute indicator of the actual lifeways of an ancient people. In attempting to make sense of the limited information about life at any given moment in history, archaeologists (and equally historians and other students of the past) start their interpretations where previous workers left off. A competent archaeologist moves cautiously, starting with the body of data that predecessors have made available as well as with the interpretive theories about the facts that their mentors have passed on to them. Regrettably, those previous views have tended to bind the minds of those making new discoveries. In order to overthrow established ideas, a great deal of new information must be accumulated that proves the old interpretations were inadequate.

The notion that warfare was absent until late in history—both in the Maya area and in Mesoamerica more broadly—always seemed suspect to some thinkers. After all, war has been pretty much a constant in every other civilization in the world. Why would Mesoamerica be the only exception? But the guardians of the interpretive status quo were so vigorous in rejecting new ideas that it took a long time for findings contrary to their pacifistic model to prove decisive.

The Paradigm Changes

In the 1950s archaeologist Robert Rands showed that the monument art of the Maya displayed a consistent pattern showing lords treading on rival warriors, presumably while crowing about their victories. But Rands's work was not published, so it was ignored.[11] The first major turnabout came with highly convincing research reported in 1976 by David L. Webster. At the site of Becán in the heart of the Yucatan Peninsula,[12] he not only demonstrated that a large city had been extensively fortified during the supposedly peaceful Classic era, but he also determined that the date when the protective deep ditch and wall had first been constructed was far earlier. Becán's defenses were probably built between A.D. 250 and 300, though Webster could not rule out the pos-
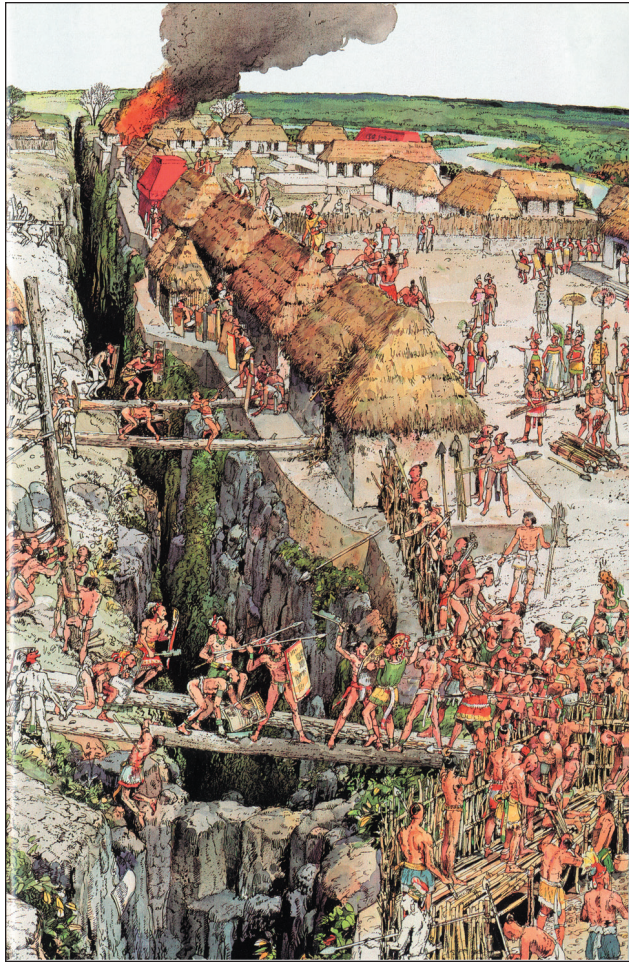
An artist's conception of the breaching of Aguateca's defenses, A.D. 761.

sibility that the true date was between A.D. 100 and 250.[13] (Exact dates of many remains have yet to be pinned down precisely, although current estimates are more or less accurate.)

Progress in reading the Maya hieroglyphic inscriptions in the 1960s and 70s began to raise questions from a different angle about the theory of the peaceable Classic-Period Maya. That deciphering made clear that at least local wars were regularly fought during the Classic era, especially after A.D. 650. But most scholars remained reluctant to fully change their interpretation about peace and war in Mesoamerica. As late as 1994 a standard textbook, the updated fifth edition of Morley's *The Ancient Maya,* still insisted that the "Maya did not practice large-scale warfare for conquest or other political ends, but instead limited conflict among polities, both in scale and in scope. But as the Classic period wore on, conflict certainly grew in intensity. . . . Still, for most of the Classic period, the primary objective of conflict was the demonstration of dominance by the taking of tribute and sacrificial captives from neighboring polities."[14] In other words, the claim now went, they played games of war but did not get really serious about it.

Mesoamerican Warfare in the Time of the Nephites

What was learned at Becán about the surprisingly early date for its fortifications was reinforced by new research done elsewhere in Mesoamerica. Angel García Cook demonstrated in the 1970s that the territory of the modern states of Tlaxcala and Puebla, east of Mexico City, displayed many fortified sites and other evidence of wide political disruption, particularly after A.D. 100.[15] Meanwhile, the center of that great metropolis Teotihuacan, in the Valley of Mexico, now appears to have been torched around A.D. 475–500, and the city fell to some sort of revolution or invasion at that time rather than in the eighth century, as most archaeologists have believed.[16]

Other areas have revealed their own evidence of unexpectedly early warfare. In the Mexican state of Chiapas, the Central Depression area was largely abandoned after about A.D. 350 or 400, [17] an event certain to have come about only through war. Furthermore, in neighboring highland Guatemala new evidence shows the rise of hostilities as early as between 200 and 100 B.C. By the second century A.D., a military confrontation is indicated between some unlabeled group from the western Guatemalan highlands and the people at Kaminaljuyu, the political and demographic center of the area (and considered by many Latter-day Saints to have been the city of Nephi).[18] Fortifications were erected at the big capital site against the threat of armed attack from some (presumably nearby) neighbor. All told, Juan Antonio Valdés concludes, "Around A.D. 200, the principal center of the highlands was passing through one of the worst socioeconomic moments of its history, a factor that resulted in a cultural decline of the sites in the Central Highlands area."[19] (We keep in mind that these dates may need modest readjustment as we learn more.)

The list of new discoveries goes on. In the Pacific lowlands of Guatemala, around A.D. 200 or a little before, a military expansion by a group pressing eastward from the western part of today's

Guatemala has become evident. The large site of Balberta, then an active city, was separated from the aggressors only by a river and had been fortified with a ditch and wall.[20]

Back in the Maya lowlands, R. E. W. Adams's Rio Azul project turned up other evidence of warfare and sociopolitical disruption dated to the end of the Pre-Classic (around A.D. 200–300). Adams's workers found little rural population around his site in the fourth century A.D. A motivating factor for people's moving into the city was thought to have been to seek protection from warfare.[21]

These very recent findings suggest a picture of warfare and sociopolitical disintegration at the very beginning of the period that the older archaeologists used to think of as peaceful. This also happens to be the time period when, according to Mormon's record, the Nephites were driven out of their homeland and "one complete revolution" was going on "throughout all the face of the land" (Mormon 2:8). What forces lay behind what was going on? Was all this simply a matter of "Lamanites" hating "Nephites"? Or were there larger causes for this time of troubles than simply interethnic friction here and there?

A Broader Picture

While further documentation of the same sort of local conflict conditions from other regions or sites could be provided,[22] certain researchers have been considering the evidence for this newly recognized period of troubles on a scale that encompasses all of southern Mesoamerica. The archaeological record now indicates that the transition from the end of the Late or Terminal Pre-Classic period into the Early Classic (from possibly a little before A.D. 100 to past 400) is fraught with disorder involving war and more. Bruce Dahlin and colleagues have gone so far as to explain what was happening as "a collapse of Terminal Preclassic" (i.e., of the civilization existing in Mesoamerica during the period of 4 Nephi 1:22 to Mormon 6:15). They see this collapse as involving "severe population reductions, site abandonments, an increasing Balkanization [i.e., fragmentation into very local styles] in material culture, and disruption of interregional communication networks."[23] The effects of this collapse in southern Mesoamerica around A.D. 200–400 "were almost as calamitous as those resulting from the [more famous] collapse of Late Classic Maya civilization" centuries later.[24] Juan Antonio Valdés tends to agree about the scale and nature of the cultural disruption seen by Dahlin.[25]

Dahlin thinks this revolutionary destruction of the old cultures resulted from climatic change, which in turn provoked extensive movements of population from place to place, as well as to warfare, plagues, shifts in trade routes, and so on.[26] Researchers have indeed found evidence for changes in climate; drought afflicted parts of the area beginning as early as the first century B.C. and grew worse until A.D. 300–400 before starting to reverse itself around A.D. 500.[27] Perhaps the severe drought recorded in Helaman 11:4–13 and the deforestation of the land northward emphasized in Helaman 3 were precursors in the Nephite record of the advent of this era of climatic stress.

Book of Mormon Warfare Fits the New Picture

These research findings go a long way toward changing the

Before A.D. 761

A.D. 761
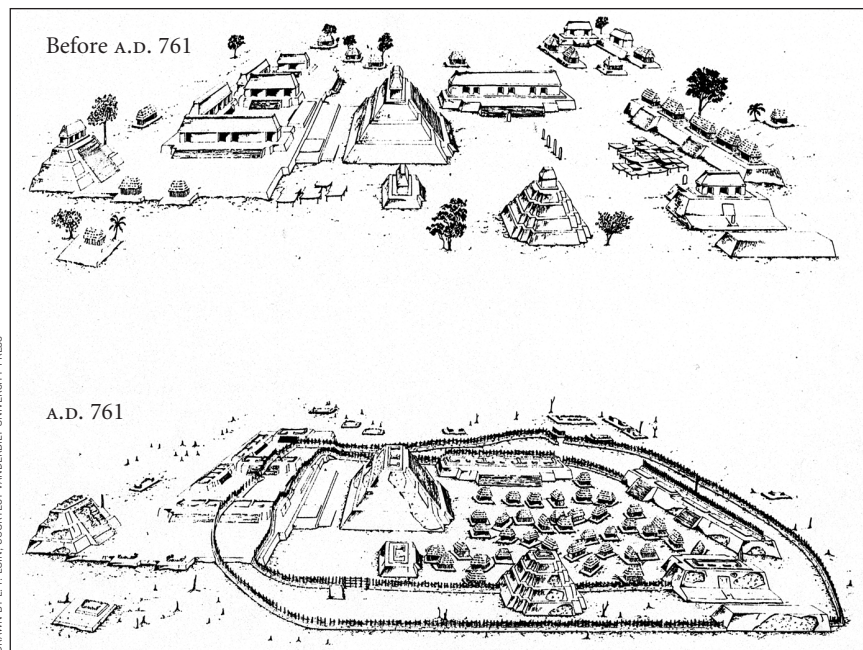
The final fortification of Aguateca before the site's fall.

DRAWN BY L. F. LUIN, COURTESY VANDERBILT UNIVERSITY PRESS

antiquated picture that claimed Mesoamerican civilization had progressed smoothly and peacefully from Pre-Classic into the Classic. There is good reason now to believe that the very period when the Nephites were being harried to destruction by their enemies was characterized in southern Mexico and Guatemala by widespread disruption rather than that orderly evolution into the Classic era that once was the standard claim of archaeologists. The destruction of the Nephite tribe or faction looks characteristic of that period in Mesoamerica in the same way as the Mormon pioneer trek to the Great Basin was a type of the broader historical migration westward across North America in the 19th century.

Is the Last-Ditch Warfare and Ethnic Extermination in the Book of Mormon Credible?

This issue had not been addressed until very recently. The question is, was the intensity and scale of the warfare detected by archaeologists in Mesoamerica ever great enough to account for the extermination of a people like the Nephites? Now the answer is a clear-cut yes.

Of particular relevance is work directed by Professor Arthur Demarest of Vanderbilt University. Under the title of the Petexbatun Regional Archaeological Project, personnel from Vanderbilt and other institutions worked in northern Guatemala from 1989 to 1996. Analysis and writing up the results have continued since then. The Petexbatun area (see map on p. 52) where they chose to work was already known to include sites with defensive walls. Sensitive to the skittishness with which many Mayanist scholars still viewed the question of warfare, Demarest's group took unusual precautions to get abundant and detailed data on the scale of ancient warfare for which they might find evidence.

The new discoveries reflect what happened in the eighth and ninth centuries A.D. That is not, of course, the same historical period—the range between A.D. 200 and 400—that we have been talking about and that included the Cumorah conflict. Yet the results from the Petexbatun excavations shed strong new light on the nature and scope of Mesoamerican wars. What the project found is that a whole region's population had been virtually destroyed by "a state of endemic siege and fortification warfare."[28] Hasty fortifications were thrown up in cities and villages of the area around A.D. 760. Based on deciphered inscriptions probably dated to A.D. 761,

the regional capital, the ruined city now called Dos Pilas, was overrun by attackers (probably from the nearby site called Tamarindito). That historical crisis left behind only straggling remnants of the Dos Pilas area's population huddled together in a few defensive strong points. Within a few years the remaining population in the region became "balkanized" into a series of tiny mini-kingdoms, in some cases hardly more than a single settlement in size. The little settlements perched atop the most naturally defensible hilltops, but farmers were left at peril from raiding parties if they went out to till their fields. Each petty lord over these groups may have assumed that with luck he could become master of the whole region and live in prosperity like the lords of Dos Pilas before their fall. But they were left without sufficient resources to carry on anything like the level of civilization from which they had recently fallen. Within decades the population of the area declined drastically. Only 5 to 10 percent of the original population remained.[29] The villages represented all the political structure left after the socioeconomic disintegration. Meanwhile, however, a few hundred miles away through the jungles, other regions were apparently still flourishing.

It took about 70 years to play out the whole process in the Petexbatun territory (the Nephites' decline and disappearance took a little over 60 years). The Petexbatun rulers left were only pitiful versions of the proud, wealthy masters who had controlled the area's cities a few generations before. Yet even after their zone had been destroyed as a social entity, the remnants could still huff and puff and hustle about in small-scale wars and commerce that were sort of ghostly imitations of what had been earlier. The Nephites spared by the Lamanites in the wake of their final retreat because they did "deny the Christ" (Moroni 1:2), as well as those who "deserted over unto the Lamanites" (Moroni 9:24), probably lived in tenuous conditions rather like the eighth-century survivors of Dos Pilas—alive but troubled by the social catastrophe that had hit them.

For generations Mesoamerican archaeologists had spoken of the great "collapse of the Maya" in the southern lowlands of the Yucatan Peninsula that took place about A.D. 830–900 as though it were a unique event. But now we are discovering that such historical crises in the Mesoamerican sequence owing to warfare, social chaos, and depopulation were not limited to that one most-

Central America

Puuc

Becán

Rio Azul

Chiapas
Central
Depression

Petexbatun

Kaminaljuyu
Balberta/Montana

Dos Pilas ▲   ▲ Seiba
▲ Tamarindito
▲ Aguateca

Sites and regions mentioned in this article. Left inset: enlargement of Petexbatun area.

that could also prove to be due to the annihilation of those who built the fortifications.[32]

Summary

The interpretive model of Mesoamerican development or history held by earlier generations of archaeologists assumed slow evolutionary changes taking place over four millennia. Interpretive speculation relied on unsupported idealization of the Mesoamericans as living peaceful, religion-laden lives under benign priest-rulers. Insufficient detail was known to allow constructing genuine *Mesoamerican* history in the normal use of the word *history*. In recent years a dimension has emerged that recognizes the presence of ambitious, chiefly rulers who used limited warfare for their glorification. But massive fighting and ethnic-based hatred and conflict have not been seen as part of history in this area. The kind of history we are used to from Old World centers speaks of particular kings and civilizations that rise and fall not according to some evolutionary metronome but in step with widespread social, economic, ideological, and perhaps natural forces. But finally Mesoamerican scholarship is approaching a stage where it is legitimate to propose that that area's past be interpreted in the same terms as, say, Egyptian or Greek or Chinese history. That is, the past may be seen as a stream of events punctuated by periods of peace followed by wars, demographic crises, and ethnic and political conflicts. Details of this history remain to be worked out as the exact chronology is sharpened. Yet one thing is sure. The days when vague terms like *Formative* and *Classic* had to serve in lieu of real event-full history are coming to an end. And warfare has been found to play a key role in that history.

discussed event. As we have seen, the Petexbatun debacle of the period A.D. 760–830 has proved to be a precursor or virtual rehearsal for the wider collapse from 830 on that left desolate most of the other southern Maya cities.

Two other regions display similar evidence for wars of annihilation. In one case 10 fortified sites in the northwestern Yucatan plains that probably date to about A.D. 900 have been investigated by archaeologist Bruce Dahlin.[30] Most of them are marked by makeshift barricades thrown up to defend against invasion. In some cases the thrown-together walls were of material scavenged from nearby structures, but the defenses were not even finished before they failed. Furthermore, they were left in place, from which Dahlin concludes those settlements must have been abandoned suddenly and not reoccupied—that is, their condition was a result of "military defeat in wars of annihilation."

A similar picture has emerged for the Puuc region of Yucatan. That zone had prospered temporarily even while the Maya cities in the south that centered on the great site we call Tikal were dying. Markus Reindel now postulates for the Puuc "a sudden collapse" and abandonment of its cities by the ruling elite around A.D. 900–925.[31]

In addition, there are reasons to believe that the pattern of military catastrophes began back in the days of the Jaredites. Some Olmec sites and art from the era before 500 B.C. seem to show destructions

Implications for the Book of Mormon

The material discussed in this article sheds light on two aspects of the Mesoamerican past that potentially tie in with the Book of Mormon story. The

first is that, for the first time in the history of archaeological research on Mesoamerica, we can see a period of some two centuries just preceding the Nephite destruction when revolutionary change in society, economy, and government was under way in connection with intensive warfare. The peaceful Classic Period proves to have been a fantasy. The new research shows that the chaotic, violent milieu depicted by Mormon for the fourth century actually did prevail on a wide scale in southern Mesoamerica. The second point is that archaeological evidence now shows that peoples or ethnic groups were not only subject to the uncomfortable consequences of war that we normally expect, but they, like other Mesoamericans of their time, could face ultimate extermination by their enemies.

The results of the Petexbatun Project and other recent research signify for the history of the Nephites that the final fate depicted for that people in Mormon's record need not be considered fictional nor a mere case of overdrawn military rhetoric. Instead it has the earmarks of genuine Mesoamerican history. What happened to the Nephites was not a unique occurrence. In light of recent evidence, the process of the complete destruction of the Nephites and their culture agrees with a recurrent pattern in Mesoamerican history.

We do not yet have evidence from excavation that dates to the place and precise date of the last battle at Cumorah. But the pattern of war and social collapse already demonstrated thrusts the final Nephite experience into a realm of realism so that the possibility of digging up concrete evidence of the military demise of Mormon's people some four centuries earlier than those at Dos Pilas becomes thinkable. ▨

Was There Hebrew Language in Ancient America?
An Interview with Brian Stubbs

A long-standing question of interest for students of the Book of Mormon is whether traces of Semitic or Egyptian language are preserved in New World languages. The following observations on this complex question are by Brian Stubbs, a specialist in Near Eastern and Native American languages who was interviewed by JBMS editor John L. Sorenson.

How did you come to study the question of the connection between American and Near Eastern languages?

Serving a Navajo-speaking mission sparked my interest in Native American origins and languages. In light of the Book of Mormon, I began studying Near Eastern languages, in addition to briefer looks at some in East Asia and scores of Native American languages throughout North and South America. Language similarities between the Americas and the Near East did not seem obvious, though I did find some language families that offered promising leads. I later earned an M.A. from the University of Utah in linguistics. That school had one of the strongest programs in the nation for Uto-Aztecan [hereafter UA] studies when Professors Wick Miller and Ray Freeze were there. UA was one of the language families in which I had noted what looked like possible Near Eastern ties. As I learned linguistic methodology and became better acquainted with both Near Eastern languages and UA linguistics, additional parallels emerged.

Your study has concentrated on the UA languages, but at the same time you have been studying languages of the Middle East, including Hebrew, Arabic, and Egyptian. Did you begin by assuming that these Old World and New World language groups are related to each other?

The Book of Mormon certainly made me curious to know whether traces or evidences of Near Eastern languages might be discernible among New World languages. On the other hand, I was also aware of the possibility that all such evidence could have been obliterated. For example, outside of the British Isles, the Celtic languages that once domi-nated much of continental Europe have nearly disappeared, except in some loanwords surviving in other European languages, even though Celtic ancestry and genes would be well represented in the mix that constitutes western European peoples today. So I did not assume anything in particular, but surmised that some Amerindian tongues might be recognizable as partly descended from or influenced by Near Eastern elements in fragmented, mixed, or diluted forms.

If Book of Mormon people spoke and wrote in a language related to Hebrew or Egyptian, where would you look for the descendants of those people?

I began the search without any preconceived notion of most likely places, but looked at dozens of language families from Alaska to Tierra del Fuego. The Book of Mormon describes populous peoples inhabiting numerous cities. Wherever the Nephites were centered, they would likely have exerted important influence on surrounding communities. I also kept in mind that diffusions and offshoots into remote or less populated areas sometimes allow better preservation of a language than might be allowed by the heavier modification that can occur in highly populated areas. An example is Icelandic, which because of its isolation preserved Old Norse better than modern Norwegian did. In any case, there ought to be surviving indications of a former high level of civilization in the languages spoken by later peoples. Most of my research has focused on the languages in the family called Uto-Aztecan [see map on next page], for I have discovered that these languages contain data that show viable linguistic evidence of Hebrew/Near Eastern influences. Yet, as I look into other languages, I am increasingly convinced that Semitic influence has affected and permeated many groups besides UA speech communities.

1.	Northern Paiute
2.	Southern Paiute
3.	Shoshone
4.	Mono
5.	Panamint
6.	Ute
7.	Hopi
8.	Kawaiisu
9.	Chemehuevi
10.	Comanche
11.	Tubatulabal
12.	Serrano
13.	Gabrielino
14.	Cahuilla
15.	Cupeño
16.	Luiseño
17.	O'odham/Papago
18.	Upper Pima
19.	Opata
20.	Eudeve
21.	Lower Pima/Nevome
22.	Tarahumara
23.	Yaqui
24.	Guarijio
25.	Tubar
26.	Mayo
27.	Northern Tepehuan
28.	Southern Tepehuan
29.	Huichol
30.	Cora
31.	Aztec/Nahuatl

Uto-Aztecan Languages

Our readers may be generally familiar with the Semitic language family, which includes Arabic and Hebrew. But please describe the Uto-Aztecan family better.

Uto-Aztecan is a family of about 30 languages that linguists have demonstrated to be related because they descended from a common parent language. The parent is now referred to as Proto-Uto-Aztecan (PUA), much like Latin is the common parent language of Spanish, Portuguese, French, and Italian. Two broad internal groupings are Northern and Southern UA, each containing four branches. In the north, Hopi in Arizona and Tubatulabal in California are single-language branches; the other two northern branches are Takic, in southern California, and Numic, which spread from southern California throughout the Great Basin and includes the Ute and Paiute languages in Utah. Southern UA includes (from north to south) the Tepiman branch, consisting of Pima and Papago or O'odham in Arizona and others in Mexico. The Sonoran branch is spread along the coast and mountains of western Mexico, as are Cora and

Huichol, which form the Corachol branch. The various Nahuatl or Aztecan dialects in central Mexico constitute the southernmost branch of UA.

How does a linguist decide if two languages are related?

Any two languages can have a few similar words by pure chance. What is called the comparative method is the linguist's tool for eliminating chance similarities and determining with confidence whether two languages are historically—that is, genetically— related. This method consists of testing for three criteria. First, consistent sound correspondences must be established, for linguists have found that sounds change in consistent patterns in related languages; for example, German *tag* and English *day* are cognates (related words), as well as German *tür* and English *door*. So one rule about sound change in this case is that German initial *t* corresponds to English initial *d*.[1] Some general rules of sound change that occur in family after family help the linguist feel more confident about reconstructing original forms from the descendant words or cognates, although a certain amount of guesswork is always involved.

Second, related languages show parallels in specific structures of grammar and morphology, that is, in rules that govern sentence and word formation.[2] Third, a sizable lexicon (vocabulary list) should demonstrate these sound correspondences and grammatical parallels.

When consistent parallels of these sorts are extensively demonstrated, we can be confident that there was a sister-sister connection between the two tongues at some earlier time.

Divisions or branches within a family can be identified when a subset of languages show shared innovations that are independent of other branches in the language family. When enough parallels have been demonstrated, a family tree can be drawn. However, the parallels are not necessarily obvious. But the similarities will prove systematic, and language features that seem different on the surface may, in fact, be found to display compelling similarities.

How many similarities are necessary to prove a genetic connection between languages?

It would be nice if the large number of parallels typical of Latin's descendant tongues was the rule, as

most of the vocabulary of Spanish, Portuguese, French, and Italian comes from Latin. However, most linguistic relationships are not as obvious as those in the Romance languages. When two languages share more than 10 percent of their lexicon, and the parallel words show systematic sound correspondences, that pair of tongues should catch a linguist's attention as serious contenders to have descended from a common ancestral language.

Some people believe that linguists have already shown that some American Indian languages are derived from Hebrew. Is that so? Have linguists already done a lot of the kind of research you are talking about?

Not really. Amateur efforts (mainly in the 19th century) led to some claims of connections between Amerindian and Semitic languages, but none of those speculations have proved acceptable, or even of interest, to qualified linguists. In fact, the lack of linguistic methodology in those early efforts had the opposite effect, callousing linguists against any proposals for connections between distant languages. The mere mention of a possible Hebrew-Amerindian tie would likely evoke a "roll of the eyes" or a "not-another-one-of-these" response from most professional linguists. No, no one has yet succeeded in demonstrating any Amerindian-Semitic connection to the satisfaction of the linguistic community. Furthermore, anyone trying to connect New World peoples and civilizations with the Old World risks accusations that he or she is a religious fanatic, pseudo-scientist, or racist who wants to downgrade the independent genius of American Indians. For those concerned about professional reputation, taking up an unpopular cause can definitely hurt their careers.

Besides the desire to avoid such negative labels, there are other reasons that conventional linguists have not dealt with the issue of interhemispheric language connections. First of all, there are not that many trained linguists actively doing historical research. Many earn their degree and then do something else for a living. Second, even among active researchers, a high percentage focus on or specialize in other aspects of linguistics—grammatical theory, language acquisition and teaching, psycholinguistic research, or sociolinguistics—instead of historical

linguistics, which deals with relationships between languages. Third, of the few active historical linguists in the world, most concentrate on a single language family or area; very few acquire sufficient familiarity with language families on different continents to be in a position to undertake interhemispheric research.

Is it a reasonable scientific hypothesis, then, to posit the connection you are investigating?

Yes—when the evidence becomes strong enough. Science requires that we go where the facts take us. Two hundred years ago, it was shocking for the average person to be told that English was part of the same language family as Sanskrit of India. But researchers accumulated so many strong parallels that it became clear that an Indo-European family of languages had once stretched halfway around the world.

Migration across an ocean poses bigger problems, of course, but science offers stunning surprises in every field. If the data provide solid results, we pursue them further. Bad ideas hit dead ends. Yet this UA-Near East case is becoming more convincing with each year of investigation.

From a lexical point of view, what is the best evidence you have found for Semitic influence on UA?

The following word pairs are a sample. (An asterisk signifies a hypothetical form in the parent language, a form that has been linguistically reconstructed from forms in the descendant languages.)

Hebrew/Semitic	UA
baraq 'lightning'	*berok* (derived from *pïrok*) 'lightning'
šekem/šikm- 'shoulder'	*sikum/sïka* 'shoulder'
kilyah/kolyah 'kidney'	*kali* 'kidney'
mayim/meem 'water'	*meme-t* 'ocean'

The meanings are clearly the same, or near to it, while the sounds are recognizably similar and appear in the same order. However, the real strength of this case is not in a handful of words, but in the

fact that perhaps a *thousand* comparable similarities have been identified, in accordance with phonological rules not easily explained in a short article for general audiences.

The lexical evidence is fairly extensive but not enough to suggest that Hebrew was the sole ancestor of UA. The Near Eastern element in the UA lexicon may constitute 30 percent to 40 percent, which is significant, well above the 10 percent lower limit mentioned earlier, but not as high as Latin's descendants show.

So you are saying that in these word parallels you find evidence for consistent sound changes of the type linguists demand?

Yes. A substantial number of primary sound correspondences are presented in my article in volume 5 of the *Journal of Book of Mormon Studies*.[3] Questions remain, of course, but that is the case for every established language family. Even in the great Indo-European family, which includes most European languages and whose basic sound changes were figured out long ago, many exceptions to the major rules existed. Many of the exceptions were later explained by discoveries of secondary phonological rules applying to special conditions or phonological environments. Nonetheless, anomalies still plague analysts looking at any language family.

What confirmation do you have of a UA-Semitic tie from patterns of grammar and word formation in the two families?

First of all, Semitic grammar and UA grammar are very different from each other. Certain grammatical structures in Semitic are usually found as "fossilized," or frozen, artifacts in UA. Nevertheless, many inactive traces of Semitic grammar are apparent in UA. Here are some interesting examples: Hebrew *ya-ʾamiin-o* 'he believes him/it' has three morphemes that align perfectly with UA **yawamino* 'to believe him/it', which also accords with the sound correspondences (Hebrew aleph [ʾ] becomes UA *w*); and Hebrew *makteš* 'grinding stone', *-ktoš* 'grind' (imperfect), and *kataš/kitteš* 'grind' (perfect) align with UA **maʾta* 'grinding stone', **tus* 'grind' (with loss of *k* in a consonant cluster), and *Yq kitte* 'grind flour' and *Yq kittasu* 'make into pieces'.[4] But the processes of change that produced these UA terms are "fossilized" in the

sense that no new UA terms are being formed along the same lines as once was the case.

Pronouns are important in establishing language ties because they are core, conservative elements of grammar. The whole system of reconstructed UA pronouns shows considerable correspondence in sound and structure to Semitic systems. Of the six standard pronominal slots (singular and plural of first, second, and third person), recognizably Hebrew-like forms occupy five of the six slots in UA languages. The only pronoun slot totally unknown to Semitic is UA first-person plural **tami* 'we'. Even though Semitic morphology may be fossilized (nonproductive) in UA, it is still possible to see a variety of Semitic morphological forms in UA words.[5]

How does all this compare with what linguists have established in the way of language relationships in other language families?

It compares very well, and in fact this evidence is much stronger than for many ties that linguists have accepted. For instance, the Zuni language is considered connected with the Penutian family, and that link has found its way into most encyclopedias on the basis of much slimmer evidence than this UA-Semitic tie.

The evidence for the UA-Semitic link is still in the rough. But the data exist for producing a solid, professional treatment. Many details remain to be worked out, yet the evidence for a Semitic element in UA includes all the standard requirements of comparative or historical linguistic research: sound correspondences or consistent sound shifts, morphological correspondences, and a substantial lexicon of as many as 1,000 words that exemplify those correspondences.

Though I have not yet written a full linguistic treatment of the proposed UA-Semitic tie, my work strictly in UA has been substantive enough to make me one of the most active contributors to historical linguistic research in that family. To garner that kind of professional standing is essential if my propositions are to be taken seriously by other linguists. Besides publishing a half dozen articles on UA in professional journals[6] and presenting well-received papers at conferences, I am nearing completion of the largest book ever published on the UA language family.

Tell us about how linguists look at genetic, or mother-to-daughter, descent of languages and how that is different from language mixing.

Genetic descent means that a single language, over time, develops into areal dialects; then with further time and decreased contact, those dialects eventually become distinct languages. Different patterns of change in different areas allow multiple languages to evolve directly from one common earlier language. For example, English, German, Dutch, Swedish, Danish, and Norwegian all have roots in Old Germanic, which is a branch of Indo-European. Those genetic roots can be seen in vocabulary, sound changes, and grammar.

Also common to language change is the borrowing of words (called "loanwords") from surrounding tongues. For example, an original Germanic *sk* had changed to *sh* in Old English but remained *sk* in North Germanic Scandinavian languages. Because English borrowed some of those words from North Germanic, modern English has pairs such as *shirt* and *skirt*, *ship* and *skipper*. The sound correspondences reveal the source from which the terms came. Words genetically descended from Old English show *sh*, while those borrowed from North Germanic show *sk*.[7] Though modern English has borrowed heavily from North Germanic, French, Latin, and Greek, its proper genetic descent is through West Germanic.

Beyond borrowing and beyond genetic descent, sometimes two speech communities merge in some sort of constant contact that requires, if they are going to communicate, a special speech medium with characteristics of both languages. Sometimes one or the other language may dominate the mixed relationship. Or a creole, or distinct hybrid, language may emerge, containing more or less equal contributions from both languages. English has been so heavily influenced by Latin languages, mainly Latin and Norman French, that some consider English a mixed language, although others do not. Whether called "mixed" or not, modern English has kept only 15 percent of the Old English vocabulary; the other 85 percent was lost primarily because new rival terms came in from neighboring languages.[8] While most of our basic words derive from Old English, about half the vocabulary in modern written English is Latin based, and perhaps 90 percent of the words in an unabridged dictionary would be from sources other than the original ancestor, Old English.

Some of the clearest examples of creole languages developed in colonial times when, for example, French rule was imposed on speakers of some native languages. In each situation, parts of the French were absorbed into the hybrid language. Sometimes the mixing can be said to have created a new language, called a creole (for example, in Haiti).

I believe such a process may explain the combination of Semitic and non-Semitic elements apparent in UA. Whether these differing elements are the result of the sudden rise of a distinct creole language or of gradual heavy influences over time, or both, I am not yet sure. But I do see language mixing as a huge factor in the prehistory of Amerindian languages. I believe this widespread multidimensional mixing has made Amerindian languages difficult to sort out genetically. It may also partially explain the variety of views and hypotheses offered to explain their relationships.

What is your best guess about when Semitic and UA came into contact?

I can see either of two possible scenarios: (1) that UA was at its core Near Eastern but later was heavily influenced by non-Semitic ("native") tongues, or (2) that UA began as the result of a creole or language mix in which Semitic was a significant to dominant component from the start. Four points lead me to that opinion. First, the Semitic elements appear prominently in all eight branches of UA. If a Semitic element had joined a non-Semitic UA base after the language family began dispersing, then we would expect that only some branches would show the Semitic influence while other branches would be free from the Near East influence. Second, since pronouns are usually one of the more stable features of language, more resistant to change, the fact that Near Eastern pronouns are prominent in five of the six slots mentioned earlier also speaks for the Near Eastern component being part of the beginnings of UA. Because English third-person plural pronouns—*they, their, them*—are Scandinavian replacements of Old English *hie, hiera,* and *him*,[9] the ratio of five of six slots of modern English pronouns being from Old English parallels what we find in UA, where five of six slots come from the Semitic.

Third, the fact that the sound changes or correspondences apply to most of the Semitic forms in all

branches of UA suggests Semitic involvement from the beginnings of PUA. The few lexical (word) exceptions to those rules may have come into UA later or may have been borrowed between branches. Many of such details remain to be worked out. Fourth, it appears that UA involves contributions from two different variants of Hebrew. Some Hebrew phonemes (basic sound units) show two sets of correspondences. That complicates the case for a presentation to linguists, but I can't help that. The data suggest the merger of two different strains of Hebrew, each with its own set of rules. The contrast between the mutually unintelligible languages of the Nephites and Mulekites naturally comes to mind, but we do not know that what happened with UA had anything to do with that particular historical relationship. Nevertheless, the fact that both Hebrew extracts appear in all branches, and for some terms in all 30 UA languages, suggests not only an original Semitic element in PUA, but possibly two such elements from the beginning of UA. For example, UA *$kwasï$ 'boil, cook, ripen' (Hebrew *bašal* 'boil, ripen') and UA *$kwasiy$ 'tail, penis, flesh' (Hebrew *basar* 'flesh, penis') show the change of Hebrew *b* > PUA *kw (the sign > means "became" or "changed to"), and they appear in all branches and nearly all the descendant UA languages. On the other hand, UA *$poow$ 'road, path, way' (Hebrew *booʾ* 'coming, way') exemplifies Hebrew *b* > PUA *p and Hebrew ʾ > PUA *w, and this shift also appears in all 30 UA languages. Showing that same correspondence is UA *$pïrok$ 'lightning', which aligns with Hebrew *baraq* 'lightning'. The Semitic glottal stop similarly corresponds to both *w* (UA *$poow$ 'road' above) and ʾ (glottal stop).

I hesitate to put a time frame on UA, for a number of reasons. One is that even though Uto-Aztecanists tend to throw around UA's "presumed" glottochronological time-depth of 5,000 years, many questions have been raised about the accuracy of glottochronological dating.[10] Isolation versus intense contact can skew—i.e., either slow or speed up—rates of change tremendously. The Old English of only 1,200 years ago has lost 85 percent of its vocabulary, leaving only 15 percent of the original Old English vocabulary intact a mere 1,000 years later.[11] Much of that change occurred rapidly during the intense contact of the three centuries of Norman French rule in England. So if I am seeing UA containing 30 percent Semitic, that is twice as much as

modern English has of Old English, even though the 2,600 years of a potential Lehi tie is more than twice as long as 1,200 years. In other words, UA may have retained Semitic four times better than modern English has retained Old English. So I do not see UA prehistory needing to be pushed back any further than 2,500 years necessarily. Furthermore, the rise of a sudden 50/50 mix of Semitic and some other language element(s) could easily make an actual time-depth of 2,500 years look like a glottochronological time-depth of 5,000 years. On the other hand, the Latin languages have preserved a much higher percentage of vocabulary in a comparable length of time. So it is perhaps too early to put a definite date on the appearance of PUA.

Nevertheless, my best *guess*, subject to change as more discoveries are made about the languages, is that originally UA was basically Semitic but then was heavily influenced by other languages. Another reason for that guess is that the time-depth of UA's Semitic element could not be too great, because the UA plural suffix *$-ima$ agrees with the Northwest Semitic genitive plural suffix *$-iima,$ which is a later development even in Semitic, not occurring at all in Akkadian or East Semitic, and is most salient in Hebrew. A derivative even from other non-Eastern Semitic languages would more likely contain the nominative vowel *-uu(ma)* instead of *-ii(ma),* but UA shows *$-ima,$* not *$-uma.$*[12]

I have tried to answer your question fairly, even though I may have allowed myself to be drawn into giving answers that still are uncomfortably tentative.

What Semitic language or languages appear to be involved? Your comparisons seem to depend primarily on Hebrew, but are other Semitic languages, such as Arabic mentioned earlier or Egyptian/Coptic, involved or helpful in the comparison process?

Hebrew seems to be the Near Eastern language most represented in UA. But the longer I look, the more parallels I find to Arabic and Egyptian. But I also realize that our knowledge of Hebrew is partial. The Hebrew Old Testament is our primary source for ancient Hebrew, and while it seems like a big book, it yields only a limited sample of the ancient Hebrew language. We can be sure that many more words and variant uses of existing words were part of Israelite speech but did not happen to be used in

the scripture. Besides, there were influences from other dialects and area vocabularies not represented in the ancient Hebrew writings per se. Furthermore, the various parts of the Old Testament reflect only the dialect of the writer of that part. Hence, much remains unknown about ancient Hebrew. So noting similarities to related languages, whose forms may not be in the written records we have, is reasonable, if done with care and restraint.

Arabic seems to surface more regularly as a source for UA words than we might expect for a group, say the Nephites, who mention only Hebrew and Egyptian as languages known among them. For example, Arabic *ragul is the common Arabic word for 'man', comparable to UA *tïholi 'man' as found in several UA languages (and Kiowa taguul 'man'). (UA *t corresponds to Hebrew r in initial position, a natural change since both are dental consonants.)[13] But no sign of this Arabic word appears in the Old Testament, where words for 'man' occur so frequently that if ragul existed in the authors' dialects, it should have appeared in the Old Testament. Enough Arabic words show up in UA to make one wonder if Lehi's group adopted some Arabic speakers during their decade in the Arabian peninsula, or if Lehi's dialect was like Job's, peppered with more Arabic-like features than other Hebrew dialects. The fact that the first five male names in Lehi's family—Lehi, Laman, Lemuel, Sam, and Nephi—are or were all more prominent in Arabic or Arabic-speaking areas south of Jerusalem or east of the Red Sea, where many Israelites used to live,[14] makes me wonder if some of Lehi's or Sarah's ancestors were from there.

The Book of Mormon mentions both Hebrew and Egyptian. An exciting dimension of this linguistic research is that, from UA and other language families offering similar data, I now consider it probable that we can eventually reconstruct, to a degree, the amount of Egyptian versus Hebrew used in Lehi's language, if Lehi's language is in fact the source of the apparent Semitic element in UA. Thus, the linguistic material may also tell us the kind (area and date) of Egyptian and Semitic and a basic vocabulary of each. Besides the handful of Egyptian possibilities discussed previously,[15] I have since noticed many other striking similarities between Egyptian and UA. A few are listed in the table below. (Keep in mind that Egyptian shows only consonants and semivowels, although we can sometimes supplement these with a later Coptic form, which descended from Egyptian and does show vowels.)

Most interesting to me is Egyptian ḥmꜥ 'salt' and UA *homwa 'salt'. This is consistent with the sound correspondences of Semitic ꜥ > UA w and pharyngeal ḥ > ho/w/o/u in UA.[16] There are perhaps a dozen or fewer UA cognate sets (groups of related words) that show a reflex (word or form) in all 30 UA languages; *homwa 'salt' is one of them.

Egyptian	UA
iꜥw 'old'	*yoꜥo 'old'
sd 'tail'	*sari 'tail, dog'
qdi/qty 'go round'	*koti/koli 'turn around, return'
(Coptic kote 'go round, turn self')	
tẖw 'drunkard'	*tïku '(be) drunk'
dbḥ 'ask'	*tïpina/*tïpiwa 'ask'
qni 'sheaf, bundle'	*kuni/kuna 'bag'
bit 'bee'	*pita 'wasp, bee'
km '(be) black'	*koma 'dark color, black, brown, gray'
(Coptic kmom v., kame adj. '[be] black')	
dqrw 'fruit'	*taka/tuku 'fruit'
sbk 'crocodile god'	sipak-tli 'crocodile' (Nahuatl)

Does the nature of the Semitic influence in UA tell us anything about the range of usage in the lives of the speakers? Are the Semitic influences concentrated in a certain field, like trade relations, religion, politics, or agriculture?

In judging genetic relationships, linguists usually give more weight to basic words that refer to body parts, nature nouns (sun, moon, land, water, stone, etc.), pronouns, and basic activities associated with family, food, and making a living. The Near Eastern lexicon definitely suggests more than trade relations because it exists in most dimensions of UA vocabulary: pronouns, persons (man, woman), body parts, clothing, nature nouns, weapons, plants, foods, verbs, adjectives, and so on. For example, Egyptian

hmꜣ and UA *homwa 'salt' discussed above could feasibly be a term spread through trade; however, Egyptian *smꜣ* 'lung' with the same second and third consonants as Egyptian *hmꜣ* 'salt', is not an item typically associated with trade or borrowing and likewise matches UA *somwa 'lung' with the same phonological correspondences in the same languages, exhibiting the same consonant cluster as 'salt'. Religious and mythological terms seem represented as well. However, one aspect of UA vocabulary in which Near Eastern terms seem scarce is kinship. That could indicate a merging of two peoples, or at least heavy influence, since the kinship organization patterns of UA are rather typical of Native American groups generally. The prominence of Near Eastern pronouns in all branches may suggest that the Near Eastern people(s) were at least equal to, if not dominant over, whatever other components might have constituted early UA peoples. Whether relative social strata are apparent in a possible mixing pattern of early UA is a good question to keep in mind during future work. For example, a Semitic-using social and political elite could have mixed with "native" commoners. Of course, the answer to that question for UA may not be the same for other language families that might have been influenced by Semitic or that might have received a Semitic infusion, particularly if the social relationships were very different.

What proportion of the potential evidence for a language connection have you uncovered? Is there a prospect that the scale and scope of the evidence will be increased or strengthened by further research?

I regularly find more evidence, which leads me to suspect that I am looking only at the tip of the language iceberg, so to speak. How big the iceberg is I could not say at this stage of the investigation.

While a sizable Hebrew vocabulary seems to exist in UA, does this represent a relationship only between spoken languages? Or have you found anything possibly relating to written Semitic scripts?

The great majority of the evidence is necessarily oral, for that is what linguists have been able to record of Amerindian tongues. Nevertheless, every once in a while something surfaces that makes me wonder if the spoken language did not adopt some features from a written language.

For example, in Arabic writing, the same letter—aleph—is used for the consonant pronounced as a glottal stop as well as to mark a long *aa* vowel. The aleph originally and usually signifies a glottal stop, as in Arabic *faꜣr* 'mouse' (from Semitic *paꜣr), which shows up in UA **paꜣi/puꜣwi* 'mouse'. On the other hand, the Semitic root *nwr* 'give light, shine, flame, fire' is the source of Hebrew *ner* 'lamp', Arabic *nuur* 'light', and Arabic *naar* 'fire'. Arabic *naar* shows an orthographic (unpronounced, non-language) aleph as a placeholder for the long *aa* vowel. We find in the Uto-Aztecan language family no less than 14 languages exhibiting a similar stem **naꜣay/naꜣy* 'fire',[17] pronounced with a glottal stop. Where did the glottal stop come from? It is as if ancient readers who did not completely understand it imitated a written format and pronounced both of the written alephs with the same glottal-stop value.

Another case involves Arabic writing that also contains an orthographic aleph at the end of a word that has the suffix *-w* for plural verb forms. Similarly, spoken classical Nahuatl—the language of the Aztecs—added a final glottal stop at the end of many plural verb forms. However, these possible influences from written texts cause me a couple of looming doubts. First, an instance or two may be coincidence, so we would not want to try to build a case on those alone. Second, neither Hebrew nor Egyptian shows that post-verbal aleph, but only Arabic, which is not one of the written languages attributed to Book of Mormon peoples. However, taken together and added to the fact that we see other surprising Arabic kinds of things in UA, these examples are interesting enough to make one wonder and watch for other such possibilities.

You alluded to other language families earlier. Do you think a Semitic element is as prominent in other American Indian languages or families as it appears to be in UA?

Definitely. The more I look, the more I find languages and language families that show such similarities with Semitic, and sometimes they show the same correspondences and words as UA. The larger picture of the Americas is the iceberg, and I suspect that what I presently see is only the tip.

Are you the only one to notice these facts?

In the past, a few others have noted similarities

or proposed interhemispheric influences, some involving Semitic and others involving non-Semitic Old World languages. However, none of these has been generally accepted by the linguistic community.

I have not found any of the Semitic proposals convincing either, except two. One includes the observations of three persons: A prominent linguist, Morris Swadesh, once alluded to a few Hebrew-like similarities in Zapotec (a language of southern Mexico). Pierre Agrinier, under Swadesh's tutelage, produced a list of Near East–Zapotec similarities that is still unpublished. Robert F. Smith then followed up on Agrinier's work with three brief studies of his own on Egyptian/Semitic and Zapotec comparisons.[18] His work offers interesting leads. The other useful example is Arnold Leesburg's work on lexical similarities between Hebrew and Quechua, the language of the Incas of Peru.[19] Leesburg's lack of linguistic methodology means that linguists ignore it. Nevertheless, a number of his "word comparisons" could feed a competent linguistic treatment, while others may have to be discarded. Observations on Semitic in Quechua have long interested me, and becoming aware of Leesburg's work added to that interest and to previous observations I had made.

Other continents aside, I find John Sorenson's, Mary Ritchie Key's, and David Kelley's proposed ties between the Pacific islands and the Americas to be interesting and meriting further investigation.[20] While Mormons tend to focus on Hagoth's group(s) going out into the Pacific, to mix with Austronesians who came or were coming from the other direction, we must keep in mind that the Austronesian movement was mainly eastward and that the Samoan and Tongan islands were settled a half millennium before Lehi even left Jerusalem. That Polynesian eastward expansions sometimes reached American shores seems logistically very probable. How would those expert oceanic explorers find almost every inhabitable dot and speck of land in the huge Pacific expanse yet miss a land mass that extends from the North Pole to the South Pole? Further Oceania-American studies may identify larger vocabularies of various migrations from both directions. Sorenson's and Key's works note similarities in vocabulary without specifying direction. Kelley's work, on the other hand, suggests a migration from the Americas to Polynesia, and, interestingly, the language family

that he cites as the origin of that infusion into Polynesia is UA.

Returning to the original question, I am not aware of any other linguist seriously working at the present time on a Semitic-Amerindian tie. We might ask why anyone would want to, in light of 100 percent rejection by the linguistic community generally of all such efforts undertaken thus far. But I consider it important work; it is an interest I can hardly let go of, in spite of its immensity and tedium, something like moving a mountain with a shovel. I feel like I'm racing against time to see which will be finished first—me or the research projects on my to-do list. My precursory surveys of language families throughout the Americas have me interested in perhaps a dozen of them, but three or more linguist lifetimes could be spent in one language family. So I must prioritize and hurry. I would also welcome help.

What is needed to see that this area of study moves forward vigorously?

A few more enthusiastic linguists, interested in the problem enough to invest the years of preparation needed to learn the discipline of historical linguistics, to immerse themselves in Near Eastern languages and an Amerindian language family or two, and to establish themselves as published authorities in the language family of their choice. It is admittedly a heavy investment, especially without prospects of earning a living at it, though I do so: teaching English, Spanish, and ESL in a community college, while working on the side at this fascinating lifetime hobby. The scale of the required investment, of course, explains why there is so little help in this matter. Nevertheless, I often think how wonderful it would be if two or three young linguists were to become interested, do the preparation, become acknowledged authorities in their languages of specialization, and then all of us collaborate on the larger historical puzzle. The work of each would shed light on the larger picture and would help one another. Three or four can do a five-million-piece jigsaw puzzle much faster than one person can, and together we could collectively accomplish as much every 5 years as I have over the last 20.

When will a credible case on this issue be ready to present to doubting linguists?

Before publishing it for that audience, anyone should build an unassailably strong case, presented in standard linguistic fashion according to the comparative method. Even then it may meet with vigorous resistance. Yet even that could be a good sign, since it would take a strong case to make unbelieving linguists pay enough attention to cause a controversy, rather than to be ignored as usual. But to have the matter made public by one who has not demonstrated linguistic competence as a published scholar in any relevant language family would be counterproductive. The baby of the distant connection to Semitic would then easily be thrown out with the bathwater of inadequate methodology. To avoid such premature dumping, I aim to finish my book, *A Comparative Vocabulary of Uto-Aztecan Languages,* eight years in process, with perhaps two more to go. It contains nearly five times as many cognate sets as the last comprehensive book published on UA (about 2,400 versus 514). I hope it will serve as a cornerstone of UA linguistics and will establish my position as a linguist and Uto-Aztecanist deserving to be heard, while laying a foundation for Semitic comparisons.

I also feel the need to make professionally accepted linguistic contributions in two other language families, since the Near Eastern element in America will eventually involve several language families anyway, I am confident. Furthermore, we cannot put together the best case until the rate of discovering new Hebrew and Egyptian elements in Amerindian languages slows and the body of data stabilizes. As long as I continue discovering new evidence of this connection at the present rate, it must mean that I am nowhere near the end. The whole pattern cannot be characterized accurately until we have most of the data in hand.

Perhaps in a decade, after finishing the UA book and making other substantial contributions, I would be ready to publish on this matter (involving multiple language families) for the linguistic community. The time might be reduced if a few competent and interested linguists, willing to devote the time, would collaborate.

Do your observations in language agree or conflict with your reading of the Book of Mormon?

I see no conflict whatever, and my observations agree very well with the Book of Mormon account.

The languages mentioned in that scripture are (1) a Lehi dialect of Hebrew (with Arabic, Hebrew, and Egyptian names), (2) a Mulekite Hebrew dialect, (3) Egyptian, and (4) the unknown Jaredite language or languages.[21] And in Amerindian languages I find two strains of Hebrew, some Egyptian, some Arabic, and many languages of improbable or unknown Old World connections. Not all of the unknowns would be Jaredite, of course. What I just said is an oversimplification of the matter, since many languages are part of America's prehistory aside from what is reported in the Book of Mormon. Undoubtedly, East Asian languages have entered the Americas, whether via the land bridge, coastal boating, transoceanic crossings, or all three. In addition, the Jaredite peoples were in the Americas some millennia before Lehi and Mulek arrived and were likely to be more widespread and more numerous than the later arrivals. Various Jaredite offshoots probably reached into North and South America, to places out of touch with the warring kingdoms, and thus were not involved in the conflicts recorded in Ether and are among the ancestors of today's Amerindians, perhaps primarily so in some language families. And perhaps others besides East Asians and Book of Mormon peoples entered pre-Columbian America as well. Nevertheless, I see enough evidence in enough language families that I am optimistic that we can eventually reconstruct some of these Book of Mormon languages to a significant degree.

The Book of Mormon text says it has not room to tell us a hundredth part of historical happenings, which would include the language histories of its peoples. So American languages offer us a tremendous potential to refine and further define Book of Mormon languages, peoples, and relocation patterns as evidenced by language connections. The Book of Mormon contains few comments on language besides its mention of Hebrew and Egyptian. Lehi's language may have been a different dialect than biblical Hebrew, so we should not jump to too many conclusions about Book of Mormon language(s). I think we are going to be surprised in many ways. For me the prospects in this area of study are exciting.

NEPHI

Paul Y. Hoskisson

When seeking to explain the Book of Mormon names of Lehi, his people, and their descendants, the researcher would do well to first explore Hebrew possibilities, since that is the background out of which the Lehites came. If nothing is found in the Hebrew sources, then the search should be expanded to other closely related North-West Semitic languages. Only after these sources have been exhausted should the researcher turn to other Semitic and non-Semitic, particularly Egyptian, sources.

When searching within Semitic language sources, the researcher should pay close attention to the established noun and verbal patterns common to almost all Semitic languages. For example, most words in Semitic languages are built on a base of three sequential consonants. For any given base, nouns, verbs, adjectives, and other words are formed by following certain patterns of adding to the consonant base various vowels, prefixes,

infixes, suffixes, and consonant doublings. At times one or two of the consonants may elide, that is, be unrepresented in the script. But even these elisions follow regular patterns.

The name *Nephi* appears to conform to the common Semitic noun pattern CvCCi, where *C* stands for "consonant," *v* stands for "vowel," and *i* stands for itself. This pattern is exemplified by biblical names, such as *Zimri* and *Omri,* and by the Book of Mormon name *Limhi* and possibly *Lehi.* These names appear to be shortened names of the type well known from North-West Semitic Amorite personal names of the Middle Bronze Age, such as *Zimri-Lim.* Thus, the root for *Nephi* should be sought under the following possible consonantal structures or roots: *npy, npꜥ, nꜥp, nvp, nʾp,* or *npʾ,* where in the case of the name *Nephi* either the [*y*], the [ꜥ], or the [ʾ] has elided as a consonant. ([ꜥ] ayin and [ʾ] aleph are consonants that are represented in the Semitic lan-

guages but have no corresponding character in the English alphabet.) Present and apparently earlier LDS pronunciation of the name *Nephi* (i.e., *nē-fi*) would, however, preclude the root *nph/ḥ,* which would require a pronunciation approximating *nep-hī.*

None of the six possible consonantal roots appear in Hebrew in any form that can be applied to the name *Nephi.* The next best place to look for an etymology would be another North-West Semitic language. Ugaritic is one of the better candidates because it is very closely related to Hebrew.[1] It was spoken at a site on the Syrian coast north of Lebanon. After the destructions that brought the Late Bronze Age to a close at about 1200 B.C., there is no evidence that it continued to exist as a written language. Thus, Ugaritic apparently ceased to be written about 600 years before Lehi left Jerusalem. Nevertheless, Ugaritic has proven extremely valuable to students of Hebrew because it opens a win-

dow into the North-West Semitic languages and literature at a time prior to the appearance of the first Hebrew inscriptions.

Of the six possible consonantal roots listed above, *npy* and *npꜥ* are attested in Ugaritic. Ugaritic *npy* appears to mean "to expel, to drive away."[2] It is not attested in any personal name, but the meaning could be something like "expelled one." This root may also be behind the personal name *nfy* found on inscriptions in the Arabian peninsula.[3]

The Ugaritic root *npꜥ* could also yield *Nephi*. This root means "to flourish"[4] and is probably related to the Arabic *nfꜥ*, "to flourish," and possibly to Arabic *yfꜥ,* meaning "to be grown up, climb." To date, I am not aware of this root being used in a personal name in any Semitic language. Nevertheless, it would not be far afield to posit a meaning for the name *Nephi* from this root, such as "increase [of God]."

Admittedly, it would have been better to have evidence from the time and place where Lehi and Sariah lived prior to leaving Jerusalem. Despite the lack of such evidence for the present from the sixth and fifth centuries B.C., it is good to know that an etymology for *Nephi,* possibly meaning "expelled one" or "increase," can be suggested from tangential material that predates (Ugaritic) and postdates (texts of the Arabian peninsula) the time of Lehi. This tangential evidence also brackets the geographic area considered to be Lehi's homeland, that is, north and southeast of Israel.

Etymologies from Egyptian for the name *Nephi* cannot be ruled out. Though Egyptian is not a Semitic language, it certainly should be the first non-Semitic language the researcher should turn to if a Semitic etymology is not readily found. Therefore, I would be remiss if I did not mention that other scholars have offered Egyptian etymologies for *Nephi.*[5] Hugh Nibley has noted that an Egyptian captain was named *Nfy,* but he offered no etymology.[6] Others have suggested that Egyptian *nfw/nfy* may mean "captain." It has also been suggested that *Nephi* may come from Egyptian *nfr* or from Hebrew *nbi,* neither of which seems as plausible as the other suggestions.

As the previous articles on the personal names in the Book of Mormon printed in this journal have made clear, onomastic studies are composed of informed guesses punctuated with uncertainty. Only time, better knowledge of the sources, and new evidence will help to give precision and resolve questions. Until then, students of the Book of Mormon must be content to live with some degree of uncertainty and imprecision. In the meantime, it is my hope that the discussions of Book of Mormon names in this journal will help to create a sense of wonderment about a book we honor as God's word and thereby foster a climate of belief. ▨

The Problematic Role of DNA Testing in Unraveling Human History

Much in the news these days is the "DNA method" for calculating affinities of individuals or populations. FARMS regularly receives inquiries from members about the validity and significance of the results of such studies that have been reported in the press. A general characterization and evaluation of the use of this source of "new light" is given here for *JBMS* readers.

New Tools, New Zeal

From time to time over the last century, new techniques of scientific analysis have been developed that have been applied with the intent to clarify the course of human history. These techniques characteristically exhibit a life cycle consisting of six stages.

First, the technique is applied experimentally and produces certain results that seem to sharply modify the conventional picture. Second, these preliminary findings lead developers or proponents of the new tool to loudly proclaim that their technique will revolutionize the interpretation of history once it is widely applied. Third, it is announced that sweeping modifications must be made to established views, while in quieter tones the qualification is added, "although further research is needed." Fourth, basing their views especially on apparent flaws in logic and methods used in the early studies, critics point out problems with the claims that have been made. Fifth, more critics join the counterattack, and some of the early enthusiasts grant that they may have overstated their case. Sixth, expectations and use of the "new" technique gradually sink until it occupies a specific, highly qualified place in the kit of previously developed tools for the study of history, or it may even drop out of use altogether because seemingly superior tools have been developed.

Two past cases exhibit this pattern. In the late 1950s linguist Morris Swadesh announced the development of "glottochronology," a special version of "lexicostatistics."[1] He claimed that the basic vocabulary (defined as a standard list of 100 or 200 everyday words, like *hand, water,* or *night*) evolves at a constant rate of about 13 percent of the terms changing per 1,000 years; the rate was calculated from historical cases like Latin. So if two languages share a certain percentage of the basic vocabulary, the elapsed time since they split from their common ancestral tongue could be approximated in years. A flurry of excitement and reinterpretation of linguistic history followed;[2] then critiques began appearing on the heels of the enthusiasm.[3] Before long it became clear that the method, which had appeared to be quite objective, actually involved subjective steps (when are words "the same"?) that rendered the result far more uncertain than it had first appeared.[4] Nowadays the scheme is rarely used, because the resulting dates are not generally seen as trustworthy or significant.

A parallel case in the development of a technique involved the identification of human blood groups. All of us are acquainted with the fact that the blood of any human falls into one of four broad classes or groups, AB, A, B, or O, according to the specific substances contained in the blood that cause clumping of the cells when blood serum from a person of one type is injected into a sample of blood of a different type. These groups become significant in a practical sense since the differences prevent successful blood transfusions between groups. The four classes

are inherited by simple (Mendelian) rules of heredity. Early in the 20th century it was noted that different population or ethnic groups were characterized by the frequencies with which the blood types occur among their members (e.g., one people might show 13 percent having type B and 67 percent with type O, while a second people has 41 percent B and only 9 percent O). Subsequently, the frequencies of other factors—M, N, and S as well as numerous Rh features—were found to distinguish the blood of various groups.

For a couple of decades immediately after World War II, blood group data seemed to provide a magic key to open up the history of the world's populations. To illustrate, in the wake of Thor Heyerdahl's Kon Tiki voyage, much attention went to the question of possible relationships between American Indians and Polynesians based on blood group frequencies. J. J. Graydon in 1952 claimed that the blood group systems in the eastern Pacific "are all consistent with Heyerdahl's theory." "A large part of the genetic constitution of the Polynesians can be accounted for on the basis of . . . especially a North-West Coast (of North America) origin."[5] A. E. Mourant (1954) used not only ABO data but that from MNS and Rh systems in concurring that all were "consistent with the theory of Heyerdahl."[6] R. T. Simmons and his colleagues in 1955 reached a similar conclusion—that further data did not invalidate the position that there was a close blood genetic relationship between American Indians and Polynesians, but not between Polynesia and the islands in the western Pacific.[7]

But critics soon gave reasons to backtrack from those hasty conclusions. By 1962 Mourant had decided that the blood group evidence did *not* support Heyerdahl's thesis.[8] R. I. Murrill in 1965 explained at length the difficulty, exhibited in most previous studies, of drawing a sample of "pure" natives unmixed with Europeans.[9] Further, it was increasingly recognized that during the period of European expansion and colonization throughout much of the world, the blood group composition of surviving populations changed by a process of, apparently, natural selection because of exposure to new diseases.[10] Furthermore, the notion had been held that scientists could draw their sample for blood group studies from all who spoke a particular "native" language, on the assumption that common language would mean common biology.[11] Eventually this assumption was recognized as unrealistic and misleading.[12] In fact, this criticism called into question the whole concept of trying to compare the biology of, say, "Polynesians" with "American Indians." In this case the former "group" was defined only in linguistic or geographical (not biological) terms while the genetic makeup of speakers of the same language turned out to be highly variable[13] and the basis for an American Indian sample might be as much geographical as biological.[14]

So doing historical reconstruction today using blood group comparisons is essentially passé. D. Allbrook felt that studies have shown but little historically sensible patterning when viewed against linguistic and archaeological data.[15] Rubén Lisker decided that only an integrated analysis of all the known blood group systems would serve to justify statements as to the origins and relationships of New World populations.[16] This has not yet been attempted on a comprehensive scale. L. Cavalli-Sforza

Sampling of Jews here and on the next page shows a wide range of physical features. © *Wayne State University Press, Detroit, Michigan*

and associates[17] tried something of the sort in 1994; however, much of their synthesis has proved to be tentative and flawed by numerous qualifications about the use of outdated archaeology, contradictions in their explanations, and gaps in the data.

These two cases suggest that adopting a fashionable new scientific technique is something like a youth receiving a telescope for Christmas. At first it is enthusiastically turned in all directions, until the owner finds that effective use of the instrument actually requires investing heavily in an increased study of astronomy and mathematics and a discomforting exercise of critical judgment in interpreting what is observed. At that point the initial fervor to apply the tool indiscriminately palls, particularly if some new "toy" comes on the scene to divert attention.

The new toy in human biology and anthropology is DNA analysis. Despite cautions from

absence of certain mutations at particular identified points in the coded gene sequence. If another population group has the same mutation record in its members' DNA, it is certain that the two groups shared a common ancestor. Or, in general terms, the number of mutations by which samples differ allow estimation of the approximate time since the two populations separated.

The Trend from Simple Interpretive Schemes to Complex Puzzles

But DNA information never interprets itself. The meaning or significance of—the story behind—the data is necessarily furnished by the minds of the scientists who examine the information.

The temporary, even faddish, nature of historical reconstructions based on DNA analysis is illustrated by what happened with one widely publicized interpretation early in the develop-

Mitochondria are special bodies within a cell that serve as power sources for the cell's contents. DNA in the mitochondria (mtDNA) were involved in the analysis that led to the idea of "Eve." That DNA passed to the next generation only from mother to daughter. All mtDNA is reproduced in a daughter unchanged, except for rare random mutations that may occur. If a female suffers a mutation, she will pass on that disruption in her DNA to her daughters. Thus the daughters' DNA sequence provides a kind of biological record of their entire female ancestry.

In 1989 an analysis of samples of mtDNA from 147 women from diverse parts of the world was interpreted by Dr. Rebecca Cann and colleagues as indicating that all the present-day women tested descended from the same ancestress, for they all shared certain mtDNA features that they could have received only from a common female
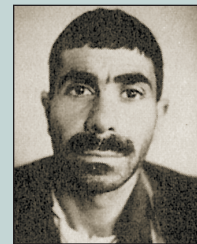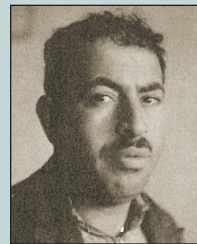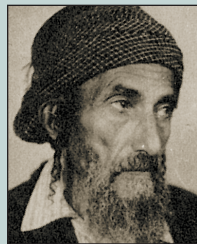
the best scientists about the limits the new findings have for interpreting human history, some enthusiasts without adequate critical acumen claim too much for DNA study. DNA is usually obtained from a sample of body fluids in a population. It occurs in the nuclei of all cells. Examination of the DNA sequence from a person shows the presence or

ment of present methods. The proposition was put forward that an ancestral human female, dubbed "Eve" for journalistic pizzazz, must have lived in Africa very long ago. Here is how the notion came about. Unlike most DNA, which occurs in the nuclei of all cells, DNA found in cellular structures called mitochondria acts somewhat differently.

ancestor. Using estimates of the rate of mutations in mtDNA as a basis, the investigators reasoned that this hypothetical common ancestor of the women from four continents had lived about 200,000 years ago in sub-Saharan Africa.[18] This postulation, fertilized by journalistic simplification and hype, was parlayed into unhesitating statements in the

press to the effect that "all human beings alive today shared one female ancestor—a kind of 'Eve'—in Africa 200,000 years ago."

Before long, however, another investigator, Alan Templeton, pointed out serious problems with this "Eve Hypothesis." He argued that the analysis was invalid because it used improper statistical tests and sampling methods biased in favor of an African origin. Its results, he said, were actually dictated by the order in which the information was fed into the computer! When the same mtDNA data was treated according to different procedural rules, instead of producing one family tree pointing back to ancient Africa, that data could produce thousands of simpler descent trees, some of which did not have African roots.[19] Others compounded the criticism. Today the only correct answer to the question, "Does mtDNA analysis demonstrate that there was a shared common ancestress in Africa for all human beings?" is, for the moment, "We don't know." And the chances are slim that we will ever know.

Another highly publicized reconstruction of the past involving genetics, this time for the settling of the Americas, was put forward in 1985 by a trio of anthropologists. Joseph Greenberg, a prominent linguistic anthropologist at Stanford, argued that there were three, and only three, language groups who entered the New World via the Bering Strait (later he softened to say "at least" three). Christy G. Turner cited studies of unique tooth forms to support Greenberg's three-group theory.

Stephen Zegura interpreted blood group and related genetic studies based on blood groups (though none was on DNA) to come to the same conclusion: there were three distinct peoples who entered the northwestern gateway to America and all American Indians descended from them.[20] A subsequent small-scale DNA analysis also claimed to find "three distinct migrations across the Bering land bridge."[21] Such follow-the-leader studies soon provided the basis for sweeping popularized statements like, "Recent genetic research . . . has helped to reconstruct native American population history, and to confirm the hitherto controversial classification of the native American languages into just three major macrofamilies."[22] But other scientists were much less kind to the proposition. Many commentators on Greenberg, Turner, and Zegura's major article were mostly unsupportive verging upward to outraged.[23] By 1998 Michael H. Crawford concluded that the triple-migration hypothesis had "slowly unravel[ed]."[24]

What had happened is that the early work was followed with more comprehensive sampling and more sophisticated analysis that have yielded results far more complicated than anything Greenberg and his associates detected. M. S. Schanfield and fellow workers found significant markers that genetically distinguished four Amerindian groups that they considered to represent four migrations, not three, and Joseph G. Lorenz and David G. Smith found a broadly comparable fourfold grouping.[25] Yet another group of scientists was

led to conclude that there were nine founding mtDNA sequences behind native American peoples.[26] A more elaborate study went on to sequence 403 nucleotides in the mitochondrial control region that were drawn from seven tribes and that omitted South America from consideration at all. They identified "30 distinct lineages," from which they inferred that "mitochondrial variability within Amerindian populations" is greater than many researchers had previously claimed.[27]

For the moment many geneticists choose to simplify the confusion by talking about four Amerindian haplogroups—A, B, C, and D. (A haplogroup is composed of those descent lines that share the major characteristics in their mtDNA sequences.) Yet a significant "other" category remains beyond the accepted A-to-D set. A miscellany of odd mtDNA haplotypes have been dumped into this vague category, often because their presence in America is suspected to be due to the intrusion of European or black slave genes among American Indians in the last few generations. But that assumption may be wrong. From the "other" rubric a fifth haplogroup has now been extracted, called X. Haplogroup X has been found in the DNA of certain North American groups such as the Ojibwa of eastern Canada as well as in some very early American skeletons on this continent. But the more interesting development is the discovery that X is also found in scattered populations in the Old World—in Italy, Finland, and especially Israel, and probably nearby areas. (Some have suggested

that the "European-like" characteristics exhibited by the notorious skull from Kennewick, Washington, and related ancient remains from western North America could be due to haplogroup X people from Europe who reached America, perhaps across the ice-covered North Atlantic Ocean, tens of thousands of years ago. At least T. Schurr is confident that "haplogroup X was brought to the New World by an ancient Eurasian population in a migratory event distinct from those bringing the other four lineages to the Americas.")[28] Yet X may not be the last new haplogroup to be winnowed from the residual "other" category. A haplotype among the Maya Indians has already been noted that appears to be the same as European haplogroup H, the most commonly observed mtDNA lineage in populations of Europe and the Caucasus.[29]

Thus so many disagreements have arisen as new discoveries have complicated previously simpler interpretations that linguist Greenberg now chooses simply to ignore the new genetic data: "Every time, it [mtDNA research] seems to come to a different conclusion. I've just tended to set aside the mtDNA evidence. I'll wait until they get their act together."[30] But it is in the nature of scientific research that new discoveries will continue; who knows if a time will come when "they get their act together" to his satisfaction? Rather, what we can look forward to is reiteration of that catchall slogan of the scientist—"More research is needed"—rather than final consensus. A recent assessment of "progress and perspectives" in DNA studies

concluded that any comprehensive solution to questions about the relationships among and origins of the American Indians must await a substantially larger, and more costly, suite of tests on DNA than those now in use.[31]

Clearly the DNA technique is not the ultimate answer to the problems of ancient population movements that lay people (and some experts) have hoped it might be. In general, we have seen, the advent of new tools or techniques in a scientific field leads to overexpectation. That has certainly been so with DNA study. Yet short of any full consensus, fascinating new information of value in untangling the threads of history has come forth when research has been done right.

A case in point is the surprising identification of a group of black South Africans as descendants of Jewish priests, a development that press and television coverage has brought to the attention of many. Oral tradition among the Lemba people had long maintained that they were of Jewish origin. A few years ago a unique genetic signature was discovered by a group of Jewish geneticists; it occurs in the Y chromosome (which passes only from male to male) and has been identified in a majority (about 53 percent) of Jewish Cohanim, or holders of the priesthood that is passed on from father to son in certain families. Researchers set out to determine if the Cohen-line genes showed up among the Lemba. They did indeed! Lemba males carried the unique Y-cell haplotype previously shown to have been possessed only by traditional Jewish priests. Interpretation of documented Jewish
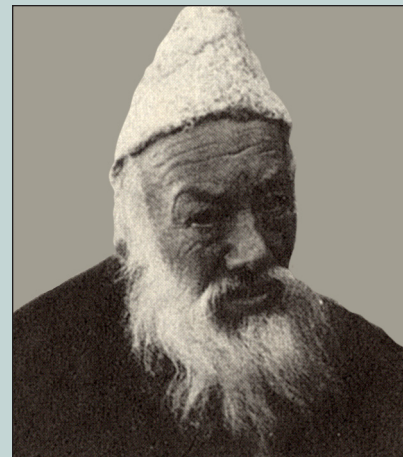
Are there "Mongoloid" Jews? Yes. This gentleman is from Afghanistan.

history and of Lemba tribal traditions, combined with the biological findings, led to the conclusion that a group of Jews that included Cohen priests migrated to Yemen in southern Arabia some 2,700 years ago, then moved to southern Africa more than 20 centuries ago. Although the members of this group have lost most of their Jewish cultural characteristics and have taken on the external characteristics (the racial or biological features and language) of surrounding black groups, they still identify themselves as of Israelite origin, and the DNA data has decisively confirmed their tradition.[32]

All genetic data does not come from tests on living persons. The ability to recover substances from mummies and skeletons has opened new vistas for the exploration of the human past. For instance, a quarter century ago Marvin Allison and fellow researchers working in Peru found that all four ABO blood groups occurred in mummies dated from 3000 B.C. to A.D. 1450, while in the last 500 years only A and O were seen. But mummies

from present-day Chile as early as the second century A.D. showed no B or AB, although in modern times those groups often show up in that area. Meanwhile, studies of mummies from Peru contrast sharply with those from Chile; that is, prior to the Spanish conquest the natives who lived in Peru were genetically different from those living in the territory of today's Chile.[33] DNA samples have also been taken from remains of the dead in other areas, including Egypt, and may prove equally instructive about unsuspected relationships.[34]

It begins to look like a great deal of previously undetected travel, migration, and gene mixing must have been going on throughout the world in the past. For instance, studies of Polynesians have recently shown that those included under that ethnic label actually fall into at least three descent groups. Group I includes about 95 percent of Hawaiians, 90 percent of Samoans, and 100 percent of the Tongans sampled. This group's characteristic pattern of mutations first appeared in Taiwan many generations before Polynesia was settled. A second group among nominal Polynesians includes a small minority in Hawaii, Samoa, and the Cook Islands that shows "an interesting possible phylogenetic connection between Group II and a group of African pygmy sequences from central Africa" (possibly transmitted by way of New Guinea)![35] Group III links some Samoans to Indonesia.[36] Still, some 2 percent of the "Polynesians" studied do not fit any of the three recognized groups; they belong to 14 other distinct DNA lineages, each represented by a single individual. The 14 individuals display remarkable diversity, some, though probably not all, possibly springing from mixture with Europeans in the islands in recent generations (much care was taken in drawing the sample to try to avoid such cases).[37] Two of the 14, for instance, have genetic markers that closely compare with those in American Indians ("which may be the first genetic evidence of prehistoric human contact between Polynesia and South America").[38] Another study found one Samoan who shared the same DNA sequence as a Native American.[39]

of American Indians, the researchers held open the possibility that the pair represented survivors of ancestors who "came into the Pacific as a result of secondary contact [from America] of the kind that also introduced the Andean sweet potato."[40] Dr. Rebecca Cann recently observed: "More and more people are thinking there's a group of native Americans that may have closer genetic ties to Pacific Islanders. That would make a lot of sense. Why would the Polynesians get to Easter Island [from the west] and [just] stop [there]?" Evidence has surfaced that Polynesians may have sailed to Chile or Peru and returned home, she continued.

The rescue of Falasha Jews from Ethiopia a few years ago made the existence of that ethnically different group very noticeable in Israel.

The possibility of an Amerindian-Polynesian connection is of unusual interest to some of our readers. Regarding the two persons in the Polynesian study whose DNA patterns match that

Genetic studies of Indians in both North and South America show that some are linked to certain Polynesians. "The related tribes include the Cayapa, Mapuche, Huillichi, and Atacameño in

South America and the Nuuchal Nulth [Nootka] of Vancouver Island, British Columbia." These findings are "consistent with direct but low levels of gene flow across the entire Pacific Ocean [to America],"[41] as well as with the likelihood of some west-bound voyages that brought a few Amerindians into Polynesia.

Unexplained gene connections are not as rare as one might think. They reflect the historical potpourri of gene mixing that apparently was more characteristic of prehistoric peoples than is acknowledged by our normal supposition that "a people" are biologically homogeneous.[42] For example, Sykes and his colleagues found that one person in their Polynesian sample showed a DNA mutation history that was closely related to that of Basques of western Europe! How does history as we know it handle that? James L. Guthrie, not a geneticist but a careful scientist nonetheless, has reexamined the data in the massive work by Cavalli-Sforza[43] and associates, *The History and Geography of Human Genes* (1994), in the light of accumulated cultural data that suggests specific ancient migrations. In an unpublished monograph Guthrie has identified a substantial number of cases in which unexpected Old World gene features show up about where and when some of the migrations indicated by cultural evidences also occurred.[44] More sophisticated studies of this type could at least multiply the number of interesting questions still facing geneticists as they try to interpret human history through the lens of DNA/molecular studies.

DNA Studies and the Book of Mormon

The interest of most readers of this journal will be on the relation that DNA analysis might have for the Book of Mormon. Is there a way in which sound DNA research could shed new light on the peoples and history described in the Book of Mormon? This ancient record, which Latter-day Saints hold sacred, reports the arrival by sea, apparently to Mesoamerica, of three different Near Eastern groups, one in the third or second millennium B.C. and the other two soon after 600 B.C. So is there evidence from DNA studies of populations in America having Near Eastern/Jewish characteristics?

It may be helpful to shift to a dialogue format at this point. Suppose that a DNA scientist were talking with a wealthy person anxious to fund a study of "DNA and the Book of Mormon." Their hypothetical conversation can bring out important issues.

DNA expert: I appreciate your anxiety and enthusiasm to have a study carried out, but we have to get some things straight before I can seriously consider being involved. First, what result would you expect to see for the money you put out?

Donor: I'd like to see you get in there and prove that the genes of the Nephites and maybe the Lamanites were like those of the Jews. That ought to prove that the Book of Mormon is true.

DNA expert: I see. But, hold on a minute. Lehi and his folks left Jerusalem about 2,600 years ago. Over that period of time the biological characteristics of both

the Jews Lehi left behind and those of his own party would have changed, possibly dramatically. If Lehi, Ishmael, their wives, and Zoram were not genetically "typical" of the Jews in Jerusalem in his day—and five people could never be "typical" of a gene pool of thousands—then the unique features in those Lehites would skew the characteristics of all their descendents in unknown ways. We call that "founder effect." Adaptation to conditions in the new promised land as well as mutations would further shift their gene patterns away from whatever had been Jewish in their day.

Donor: Well, I see that. But "the Jews" continued on as a group, didn't they?

DNA expert: Many were killed in the Babylonian conquest and captivity that followed on the heels of Lehi's departure. Others surely died off in captivity. There is a good chance that the demographic crisis of the Babylonian conquest was also a genetic crisis for "the Jews." We can't tell how those massive deaths may have varied the pattern of biology in those who came back from Babylon with Ezra and Nehemiah.

You see, just because a group keeps its ethnic name over centuries does not mean that its biology has stayed anywhere near constant. The later history of the Jews offers a lesson on this point. The Ashkenazim, those Jews from eastern Europe who constitute the largest proportion of the identifiable Jewish people existing today, have actually descended from a group of only a few thousand ancestors who lived in and around the territory of

Poland about five centuries ago.[45] The characteristics of those few thousand have come to define the biology of "the Jews" of today— far out of proportion to their number in relation to all Jews before A.D. 1500. The Lembas, the "Black Jews" of southern Africa, show "thoroughly Negroid blood groups."[46] The Falasha Jews from Ethiopia also differ little from their neighbors in their blood groups.[47] Likewise, the Bene-Israel group of Jews that developed in the Bombay area of India descended from a mere seven founding families settled there hundreds of years ago. By early in the 20th century their descendants numbered in the tens of thousands, and some of them were absorbed into the population of the state of Israel. But in Bombay they were essentially similar in biological features and speech to their non-Jewish neighbors.[48] The modern Jewish population as a whole will show a mix of the genes of various subgroups like the Ashkenazim, Lemba, Falashas, and so on that developed historically and biologically in different regions of the world. We have no way to tell how any sample of modern Jews we might select would relate to the Jews of Lehi's day, except that there is no reason to think today's sample would be very similar.[49]

Donor: But I understand that you can get DNA from old bones. Couldn't you get some of those from tombs of about 600 B.C.? Their DNA would give you approximately what Lehi's DNA was, wouldn't it?

DNA expert: Unfortunately, tombs or burials from that date in the land of Israel are very scarce, and those that have been found almost never contain bones, for whatever reasons. Besides, just imagine the problems involved in overcoming the objections of orthodox Jews to having a scientist meddling with the bones of their ancestors!

Donor: Hmmm.

DNA expert: From what I have been told about the American side of the equation, the problem of getting a useful sample is just as much a problem, if not worse. The Book of Mormon text does not make clear just how and when Lehi's descendants got mixed up with other peoples in their new land of promise, but it is clear that they did.[50] That complicates terribly our forming any idea of what they became genetically over the thousand-year history recorded in Mormon's account. After A.D. 400 the problem would be still more complicated.

Tell me, do you have any idea where I would go to get a DNA sample of Lehi's direct descendants? No one I know seems to have a specific idea.

Donor: Haven't LDS archaeologists found evidence among some tribes in Mexico that they descended from the Israelites?

DNA expert: Not according to what they have told me. At the level of culture and language there is evidence indicating that people from the Near East were involved in Mesoamerica, but that wouldn't help the particular problem I'd face. A 1971 paper showed that there is a large, detailed body of parallels between the civilizations of the Near East and Mesoamerica in sacred architecture and practices, astronomy, calendar, writing, beliefs, symbolism, and other aspects of culture.[51] A Jewish scholar, Cyrus H. Gordon, and other notable researchers have compiled interesting data on that point.[52] A man named Alexander von Wuthenau published images of ceramic figures from Mesoamerica that definitely show Jewish faces.[53] And linguists have some evidence for possible connections between Semitic languages and Mesoamerican Zapotec and related tongues on one hand and Uto-Aztecan on another.[54] A University of California linguist, Mary L. Foster, has argued for a connection between "Afro-Asiatic" languages, especially Egyptian, and old Mesoamerican languages such as Mixe-Zoquean.[55]

Those studies lead me to think that there is a distant chance that someday we might know enough to identify one group in Central America where I might go with some prospect to locate genes descended from Lehi, but today I have no informed notion. Simply to go take DNA samples at random from this or that group of Mexican Indians would be like a geologist with no geological maps in his hands looking for uranium ore by simply wandering across the landscape hoping his Geiger counter will start to click.

Donor: You're not very encouraging, are you?

DNA expert: I must be pessimistic from the point of view of responsible scientific methods and ethics. I would like to accommodate your interest, and I wouldn't mind having half a million dollars from you to play with, but the honest fact is, I wouldn't know what to do with it.

However, there is one little project that might be fun to try

out. Remember the Lembas of South Africa? They have dark skins and speak a language that has no relation to Hebrew, but they do have a tradition of Jewish ancestry. In other parts of the Old World there are other little enclaves—people of yellow, brown, or white skin—that claim to have a Jewish or Israelite connection. In a number of cases there seems to be some basis for their claims.[56]

Well, it happens that there is, or was, a small group of Mexican Indians who claim a Jewish origin. Raphael Patai, who became one of the greatest scholars on Judaism, went to Mexico as a young man in the 1930s to see what he could learn about those people. After several months he discovered that they indeed had some customs that looked Jewish, and they claimed to have a Torah. Patai ended up saying that he did not know what to make of them, unless they were Jews who came from Spain in colonial days and found it convenient to "fade into the Indian woodwork," so to speak.[57] Now, if they really were of Jewish descent and they had priests along who carried the distinctive Cohen Y-chromosome, like the Lemba, that would be a leverage point. Maybe careful study by a modern scholar would shed more light than Patai could get on who they really were. If they came from Spain 300 years ago, that would be interesting, but not in reference to the Book of Mormon. Yet the tiniest possibility might exist that they actually descended from a pre-Spanish group of Indians. One would then like to know much more. Interestingly, Dr. Tudor Parfitt, director of the Center for Jewish Studies at the School of Oriental and African Studies in London, an expert on the Lemba who was instrumental in seeing that study made, has expressed interest in having a study made of the Mexican group—if they can still be found.[58]

Frankly, working with that little Indian enclave looks like the only show in town along the lines you want to see. My hunch is that there would only be one chance in thousands that it would pay off. But if you want to risk the money, maybe I could find the time.

Donor: I didn't expect you to discourage me as much as you have, but I guess we ought to stick to what is scientifically sound. Okay, plan it out and send me a budget.

By the way, do you happen to know any explorer-type guys who'd like to look for a tribe of white Indians I've heard about and then write a book about it?

Finding Things Where They Are "Not Supposed to Be"

Less than one lifetime ago, school textbooks considered ancient civilization as that of the Greeks and Romans, with bits on the Egyptians and Mesopotamians thrown in. Periodically since then, successive cohorts of students have been exposed to one or another "canned" version of history that they have accepted uncritically as truly "what happened." But in recent years the pace of discovery has quickened; new finds exceed the abilities of the textbook writers to even come close to keeping up. Here are a few items of "news" about the old.

In the extreme northeast tip of Syria at the site of Hamoukar, an international archaeological team has discovered evidence that a genuine city existed by 3700 B.C. A widely accepted theory has been that cities developed in northern Mesopotamia well after those in the south, where Uruk, "the Rome of ancient Mesopotamia," gives its name to the archaeological period around 3500 B.C. Yet, Hamoukar already had a wall around it, indications of an elite class and government, and signs of specialized division of labor, like large ovens that hint at industrial cooking and brewing.[1]

Far to the south, archaeologists are unearthing a temple and city that appear to have been the home of the fabled Queen of Sheba. The Mahram Bilqis temple near the ancient city of Marib has long been thought to be associated with "Sheba." Recent finds there prove that the sanctuary, also known as the Temple of the Moon God, existed as early as 1500 B.C. and was in continuous use until the sixth century A.D. It likely was a pilgrimage center during the famous queen's rule and also a significant political and economic force at the time Lehi's party was in the area. If Lehi's and Ishmael's families were "in bondage" in that vicinity for several years, as S. Kent Brown has argued,[2] then the new excavations should shed light not only on relations between King Solomon and the "Queen of Sheba" but also on conditions prevailing when the Book of Mormon group was thereabouts. Bill Glanzman, an archaeologist at the University of Calgary, is heading the excavation of the sanctuary. He says that the site is packed with artifacts, pottery, artwork, and inscriptions. The full extent of the site, which is mostly covered with sand, has been revealed by ground-penetrating radar.

Near this capital of the kingdom of Saba is the ruin of a 2,230-foot-long dam, built in the seventh or eighth century B.C., that allowed irrigation of a large area of Saba for centuries. It could take another 15 years to get a full picture of the city. Excavation first began in 1951 under American archaeologist Wendell Phillips, but within months members of his party were forced to flee for their lives because of threats from the local governor who accused them of failing to decipher inscriptions that, he claimed, told where gold was buried. Dangers exist even today for the new excavators because the central government is not in full control of local tribesmen, who have been known to take hostages for ransom.[3]

"Noah's Flood" has been a renewed topic of discussion also. In 1998 geophysicists William B. F. Ryan and Walter C. Pitman published a daring but heavily documented claim that they believe explains many questions about ancient life in the center of Eurasia. Building on the work of many other physical scientists and archaeologists, they have utilized sea-bottom cores and other

underwater data that have allowed them to reconstruct a plausible geophysical history of the Black Sea and Mediterranean basins over many thousands of years along entirely new lines. From Ice Age times down to 5600 B.C., the Black Sea basin contained a freshwater lake—400 feet lower than today's Black Sea—around which flourishing ancient cultures grew up. But due to changes involving the melting of the ice and the rising of the waters of the Mediterranean Sea, the basin was overwhelmed by torrents of saltwater that flowed in from the Mediterranean through the Bosporus (adjacent to today's Istanbul). The filling of the Black Sea basin with saltwater took only a few years.

The impressive spectrum of physical and cultural data gathered by these two scientists and their colleagues at the Lamont-Doherty Earth Observatory of Columbia University and abroad casts dramatic new light on a whole range of ancient phenomena. The heavily documented book by Ryan and Pitman that reports their fascinating discoveries and inferences, *Noah's Flood: The New Scientific Discoveries about the Event That Changed History,*[4] became an immediate must-read for all students of ancient history. The two scientists think that the stories of Noah's Flood in the Bible and comparable tales in Mesopotamian tradition and elsewhere hark back to the catastrophic event they describe. The Sumerians, who inhabited Mesopotamia from about the sixth millennium B.C., passed on their own version of a flood tale very much like that in the Bible about Noah.

The reigning interpretation of the "development of civilization" has been that that level of human attainment was reached earliest in the Near East, whence it spread into Europe and elsewhere. Ryan and Pitman's picture calls much of that explanation into question. The Near-East-was-first notion also fails to meet the challenge of other new data. For example, the earliest pottery in the world is now known to have been developed in northern Japan by the Jomon people about 12,700 years ago.[5] (They are considered to be ancestors of the non-oriental Ainu people of Japan.)

Other archaeologists are now claiming a role for Africa in the pottery sweepstakes. The first African pottery is now claimed to date to the eighth millennium B.C., within the zone now known as the southern Sahara and Sahel.[6] That is long before any such craft is evident in the Near East.

British archaeologists have discovered further unexpected facts about the Sahara, although from a much later time. In an oasis zone 100 miles long and 2 to 3 miles wide roughly 700 miles south of Tripoli, Libya, dwelt the Garamantes people mentioned by classical historians Herodotus and Tacitus. The first to fourth centuries A.D. were the heyday of the Garamantes. They constituted enough of a threat to the empire that Rome sent an army against them. The area boasted flourishing agriculture made possible by tapping an aquifer with a system of underground channels (the foghara or chain-well system). They traded with both the Roman world and sub-Saharan Africa, and they built tombs

shaped like the Egyptian-stepped mastaba structures as well as pyramid tombs. Recent research has identified "a series of significant botanical horizons in their area—including a late medieval "maize horizon," which represents the arrival of certain plant species from the Americas (before the time of Columbus). The Garamantes also wrote in a Libyan script, a version of which, called Tifinag has persisted to modern times among the nomadic Tuareg people of the Sahara.[7]

In the Americas, too, data have come to light about unexpected human achievements. In a critical reexamination of past research on the pottery of the Amazon basin, North American archaeologist Anna C. Roosevelt has put together a plausible argument that the making of pottery in that area dates much earlier than has been acknowledged before. To support her case, she has published 22 radiocarbon dates that were done at the Smithsonian laboratory between 1972 and 1986 but were never published. It seems that Amazonian pottery began between 5000 and 6000 B.C. (some have suggested that it came from Africa) and is now the most securely dated New World ceramic tradition, existing at least 1,000 years before the next earliest, from Colombia.[8]

Furthermore, a dried-up human corpse, radiocarbon dated to around 5200 B.C., has been found in northeastern Brazil, not far from the early pottery center. There was evidence that the intestinal tract of this person had been infested with hookworms. The nature of the reproductive cycle of the hookworm rules out their having reached the New

World via a cold country (the Bering Strait, as is usually supposed). Specialists on parasites are absolutely sure that the only way for those organisms to have reached the Americas from the Far East, where they are known much earlier, was inside human hosts who traveled from East Asia by boat.[9]

Finally, the press, television, and the Internet have widely reported the discovery of a different kind of city in northern Guatemala. Excavation at a Maya center anciently named (according to inscriptions) Cancuén began this year. The archaeologists, from Vanderbilt and other universities and the Guatemalan government, report that what they have found is not the usual administrative or holy settlement of the Maya but a very wealthy commercial center. Some mundane manufacturing and trading activities not usually associated with sacred places were central to life at Cancuén and its wealth. This is the first time that a special-function city has been discovered in Mesoamerica; small settlements for specific purposes—making salt, fishing, and mining—have been found before, but nothing so massive and economically crucial as this place.[10]

All these examples of recent investigations warn us that the string-wrapped packages of knowledge we may have bought at the learning store—our places of education—a few years back may now be out of date. Our old contents need to be reexamined in the light shed by more recent discoveries. How these latest finds and claims will work out over time remains to be seen. Their significance will no doubt change as more research is done. The inevitable tentativeness of scientific or scholarly knowledge displayed in these cases underlines the wisdom of Brigham H. Roberts in counseling that "we need not follow our researches in any spirit of fear and trembling. We desire only to ascertain the truth; nothing but the truth will endure."[11] But it also whets our appetite for further challenging discoveries "out of the dust."

The *Journal* regrets that the table published in volume 9, number 1 (2000), page 58, contains errors. The table on the right corrects those errors.

PRONUNCIATION OF SELECTED BOOK OF MORMON NAMES

Text Word	Deseret Alphabet	Pronunciation	Reference	Guide Pronunciation
Abish		ā-bĭsh	Alma 19:16	ā-bĭsh
Aha		ā-hä	Alma 16:5	ā-hä
Alma		ăl-ma	Mosiah 17:2	ăl-ma
Ammonihah		am-a-nī-hä	Alma 8:6	ăm-a-nī'-hä
Chemish		shĕm-ĭsh	Omni 1:8	kĕm-ĭsh
Deseret		dēs-ē-rĕt	Ether 2:3	dēz'-a-rĕt
Hagoth		hā-gäth	Alma 63:5	hā'-gäth
Himni		hĭm-nĭ	Mosiah 27:34	hĭm'-nĭ
Isabel		ĭs-a-bĕl	Alma 39:3	ĭz'-a-bĕl
Jarom		jā-rum	Jarom 1:1	jĕ'-rum
Lehi		lē-hī	1 Nephi 1:4	lē'-hī
Luram		lĭur-um	Moroni 9:2	lūr'-um
Mathoni		ma-thō-nī	3 Nephi 19:4	ma-thō'-nī
Mathonihah		mă-thō-nī-hä	3 Nephi 19:4	mă-thō-nī'-hä
Muloki		mu-lō-kī	Alma 20:2	myū'-la-kī
Nephi		nē-fī	1 Nephi 1:1	nē'-fī
Sam		săm	1 Nephi 2:5	săm
Sariah		sā-rī-ä	1 Nephi 2:5	sā-rī'-ä

Centenary of a Giant
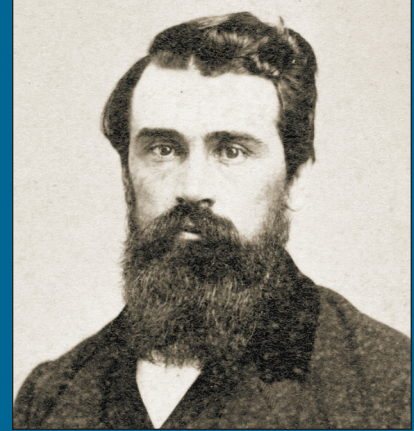
It is just 100 years since George Reynolds's massive work, *A Complete Concordance of the Book of Mormon*, came from the press in Salt Lake City. In some ways it might be considered the premier reference work for Latter-day Saint students of the Book of Mormon yet produced. "The amount of patient, painstaking labor required for the production of this magnificent work will never be known to the general reader. Only the close student of the Nephite scriptures will ever really appreciate it."[1] The anniversary calls for a tribute to a remarkable pioneer in the careful analysis of the Nephite scripture.

In the last five years alone, FARMS has published 33 books, totaling more than 10,000 pages. Such an outpouring of publications overshadows older studies from the pre-computer age. But authors today have so many conveniences—word processing computers, spell-check software programs, photocopy machines, digital color-photo reproduction, professional designers, and high-speed presses—that we are likely to undervalue what publishing a study on the Book of Mormon entailed a century ago.

Preparation of the manuscript for Reynolds's concordance spanned 21 years of his life. The conditions under which he began his work were often deplorable. He began the project while in the unheated Utah State Prison serving an 18-month sentence for having more than one wife. His "computer" was a pen and sheaf of paper. The manuscript was not typewritten until it had been completed.

In order to provide helpful context, Reynolds printed a portion of the sentence in which each cited word appeared. Virtually every word used in the Book of Mormon is tabulated except a few of the most common words (e.g., *a, an, the*). In only a few instances did he overlook a citation (e.g., he missed *exceeding* in Helaman 3:3 and 3:4).

Reynolds remarked, "In the direct work of arrangement, etc., I have received but little aid from others. . . . I have deemed it essential to entire correctness to compare every passage as it appeared in the proof sheets with the same passage in the Sacred Record."[2] Such meticulous proofreading, after the original tabulation of the references, means that

Reynolds must have read every word of the Book of Mormon hundreds of times. Like many others since his time who have processed massive volumes of detail, Reynolds confessed that had he realized at the outset the amount of labor involved in preparing such a work he "would undoubtedly have hesitated before commencing so vast, so tedious and so costly a work."[3]

His intent was not to build a career as a writer or to earn royalties. Rather, he felt that his volume was a "necessity as a help to the study of the Divine Work whose name it bears."[4] Yet the concordance did not consume his life as a writer. He published some 90 articles and books mainly on the Book of Mormon during the years while he was preparing the manuscript.[5]

Moreover, no institutional publisher backed him. He himself paid all the costs. The printing plates alone cost nearly $3,000, and, he noted dryly, "I have but little hope while I live of receiving this amount back through sales of the book, to say nothing of the other expenses such as printing and binding."[6]

All this was accomplished

while he was employed as Secretary to the First Presidency of the LDS Church. For 10 of the 21 years while he prepared his masterwork, he was a General Authority, one of the seven Presidents of the Seventy. He also labored at times as associate editor of the *Deseret News* and as assistant editor of *The Juvenile Instructor,* in addition to meeting important civic responsibilities and caring for three wives and 32 children.

There is a striking similarity in some ways between his life and that of fellow President of the Seventy B. H. Roberts. Both began their lives in disadvantaged conditions in England. George Reynolds was baptized at age 14, unknown to his parents, who violently opposed the church. As a young man he emigrated to America in 1865 and walked across the plains to Utah in a party of three men. Both Reynolds and Roberts were entangled with the law over plural marriage. Both were educated, almost entirely by self-effort, far above the level of most immigrants of similar background. Both were productive writers and editors for many years and were vigorous witnesses of the truthfulness and value of the Book of Mormon.

Because of his strenuous labors, George Reynolds died in 1909, at age 68, after a physical breakdown caused by overwork.[7] The *Concordance,* at its centennial, remains a nobler and more appropriate monument to this pioneer of Book of Mormon studies than any cemetery monument bearing his name. ▨

New Approaches to Teaching and Learning the Book of Mormon

The *Journal of Book of Mormon Studies* solicits short contributions by teachers of the Book of Mormon explaining successful methods they have used to help classes or individual students gain more enlightened, more memorable, and deeper understanding of the Nephite record and its messages than is attained in the typical class lecture format.

Each contribution should be 200 to 1,000 words in length. If more than one approach or method is submitted by one person, each should be independently stated. The *Journal* staff may edit or combine statements from several contributors when necessary to eliminate redundancy. If enough valuable contributions are received, they may be presented in the *Journal* in the form of a continuing department, amalgamated into one article, or made part of a special issue on teaching and learning. ▨

ENDNOTES

Desert Epiphany: Sariah and the Women in 1 Nephi
Camille Fronk

1. Phyllis A. Bird, "Women," in *The Anchor Bible Dictionary,* ed. David Noel Freedman (New York: Doubleday, 1992), 6: 952.

2. Two months after the 1978 revelation on priesthood was given, Elder Bruce R. McConkie quoted 2 Nephi 26:33 and gave the following commentary: "These words have now taken on a new meaning. We have caught a new vision of their true significance. . . . Since the Lord gave this revelation on the priesthood, our understanding of many passages has expanded. *Many of us never imagined or supposed that they had the extensive and broad meaning that they do have*" ("All Are Alike unto God," in *Charge to Religious Educators,* 2nd ed. [Salt Lake City: The Church of Jesus Christ of Latter-day Saints, 1982], 152).

3. Francine Bennion, "Women and the Book of Mormon," in *Women of Wisdom and Knowledge* (Salt Lake City: Deseret Book, 1990), 177.

4. John L. Sorenson, "The Composition of Lehi's Family," in *By Study and Also by Faith: Essays in Honor of Hugh W. Nibley,* ed. John M. Lundquist and Stephen D. Ricks (Salt Lake City: Deseret Book and FARMS, 1990), 2:190.

5. Jeffrey R. Chadwick, "Sariah in the Elephantine Papyri," *Journal of Book of Mormon Studies* 2/2 (1993): 196–98; see also a series of articles on the subject in "Seeking Agreement on the Meaning of Book of Mormon Names," *Journal of Book of Mormon Studies* 9/1 (2000): 28–39.

6. George Reynolds and Janne Sjodahl, *Commentary on the Book of Mormon* (Salt Lake City: Deseret News Press, 1955), 1:14; Chadwick, "Sariah," 198; Paul Y. Hoskisson, "Lehi and Sariah," *Journal of Book of Mormon Studies* 9/1 (2000): 30–31.

7. See Sorenson, "Composition of Lehi's Family," 182.

8. See Alfred J. Hoerth, *Archaeology and the Old Testament* (Grand Rapids, Mich.: Baker Books, 1998), 366.

9. See Roberta L. Harris, *The World of the Bible* (London: Thames and Hudson, 1995), 96.

10. See Mayer I. Gruber, "Private Life in Ancient Israel," in *Civilizations of the Ancient Near East,* ed. Jack M. Sasson (New York: Simon & Schuster Macmillan, 1995), 1:633; Martin Noth, *The Old Testament World,* trans. Victor I. Gruhn (London: Adam & Charles Black, 1966), 158–63.

11. Bird, "Women," 954.

12. See Lynn M. Hilton and Hope A. Hilton, "In Search of Lehi's Trail; Part 2: The Journey," *Ensign,* October 1976, 38.

13. See Charles M. Doughty, *Travels in Arabia Deserta* (New York: Random House, 1936), 268.

14. Hugh Nibley, *Lehi in the Desert* (Salt Lake City: Deseret Book, 1988), 36. John A. Tvedtnes suggested that Lehi was skilled in agriculture and metallurgy. See Tvedtnes, "Was Lehi a Caravaneer?" (Provo, Utah: FARMS, 1984).

15. See Nibley, *Lehi in the Desert,* 36–37.

16. See Camille S. Williams and Donna Lee Bowen, "Ordinary People in the Book of Mormon," *Ensign,* January 1992, 36–39.

17. Bird, "Women," 952.

18. See K. Roubos, "Biblical Institutions," in *The World of the Bible,* ed. A. S. Van Der Woude (Grand Rapids, Mich.: Eerdman's, 1986), 1:353.

19. Doughty, *Travels,* 278, 280; See Wendell Phillips, *Unknown Oman* (New York: David McKay Co., 1966), 141.

20. Doughty, *Travels,* 570.

21. See Hugh W. Nibley, *Teachings of the Book of Mormon: Semester 1* (Provo, Utah: FARMS, 1993), 58–105.

22. Doughty, *Travels,* 398.

23. See Phillips, *Unknown Oman,* 218; Nibley, *Lehi in the Desert,* 40.

24. See Erastus Snow, in *Journal of Discourses,* 23:184.

25. See Sorenson, "Composition of Lehi's Family," 186.

26. See Nibley, *Lehi in the Desert,* 70.

27. Doughty, *Travels,* 190–91.

28. Ibid., 190, 259.

29. Ibid., 190.

30. See Ibid., 381; Nibley, *Lehi in the Desert,* 53.

31. Doughty, *Travels,* 278–79.

32. Nibley, *Lehi in the Desert,* 53; see William G. Palgrave, *Narrative of a Year's Journey through Central and Eastern Arabia* (London: Macmillan, 1865), 1:12–13.

33. Nibley, *Lehi in the Desert,* 53–58; Hilton and Hilton, *Lehi's Trail,* 39; S. Kent Brown, "A Case for Lehi's Bondage in Arabia," *Journal of Book of Mormon Studies* 6/2 (1997): 205–6; S. Kent Brown, *From Jerusalem to Zarahemla: Literary and Historical Studies of the Book of Mormon* (BYU Religious Studies Center, 1998), 58.

34. Brown, "Lehi's Bondage," 205–17; Brown, *From Jerusalem to Zarahemla,* 55–67.

35. See Sorenson, "Composition of Lehi's Family," 181, for a discussion of health concerns in childbirth that accompanied the yearning for children in ancient societies.

36. Doughty, *Travels,* 281.

37. See Gruber, *Ancient Israel,* 644; Doughty, *Travels,* 189–90, 266.

38. Doughty, *Travels,* 257, 262.

39. Roubos, "Biblical Institutions," 350.

40. Doughty, *Travels,* 262.

41. Reynolds and Sjodahl, *Commentary,* 165.

42. Bryant S. Hinckley, *Not by Bread Alone* (Salt Lake City: Bookcraft, 1955), 54.

Nephi and His Asherah
Daniel Peterson

1. Michael D. Coogan, "Canaanite Origins and Lineage: Reflections on the Religion of Ancient Israel," in *Ancient Israelite Religion: Essays in Honor of Frank Moore Cross,* ed. Patrick D. Miller Jr., Paul D. Hanson, and S. Dean McBride (Philadelphia: Fortress Press, 1987), 115. Compare William G. Dever, *Recent Archaeological Discoveries and Biblical Research* (Seattle: University of Washington Press, 1990), 121, 128, 166.

2. Frank Moore Cross Jr., "Yahweh and the God of the Patriarchs," *Harvard Theological Review* 55 (1962): 240.

3. Ibid., 234, 241–42.

4. See Mark S. Smith, *The Early History of God: Yahweh and the Other Deities in Ancient Israel* (San Francisco: Harper & Row, 1990), 7; and Margaret Barker, *The Great Angel: A Study of Israel's Second God* (Louisville: Westminster/John Knox Press, 1992).

5. See Smith, *The Early History of God,* xxiii, xxvii, 8–11, 15, 21, 22, 23, 163; Raphael Patai, *Hebrew Goddess,* 3rd ed.(Detroit: Wayne State University Press, 1990), 133; Cross, "Yahweh and the God of the Patriarchs," 253–57; Otto Eissfeldt, "El and Yahweh," *Journal of Semitic Studies* 1 (1956): 25–37.

6. See John Day, "Asherah in the Hebrew Bible and Northwest Semitic Literature," *Journal of Biblical Literature* 105/3 (1986): 385–87, 398; Steve A. Wiggins, "The Myth of Asherah: Lion Lady and Serpent Goddess," *Ugarit-Forschungen: Internationales Jahrbuch für die Altertumskunde Syrien-Palästinas* 23 (1991): 384; and Steve A. Wiggins, *A Reassessment of "Asherah": A Study according to the Textual Sources of the First Two Millennia B.C.E.* (Kevelaer, Germany: Butzon und Bercker, 1993), 192.

7. See J. C. de Moor, "ʾashērāh," in G. Johannes Botterweck and Helmer Ringgren, eds., *Theological Dictionary of the Old Testament* (Grand Rapids, Mich.: Eerdmans, 1974), 1:439. On Asherah as divine wet nurse, see Wiggins, *Reassessment of "Asherah,"* 26–27, 71, 76, 89, 190; on her maternal aspect, see pp. 37, 71, 89.

8. Wiggins, *Reassessment of "Asherah,"* 27, 71, 108–10, 131, 190.

9. See John Wilson Betlyon, "The Cult of ʾAšerah/ʾĒlat at Sidon," *Journal of Near Eastern Studies* 44/1 (1985): 53–56; compare de Moor, "ʾashērāh," 1:440; and Day, "Asherah in the Hebrew Bible," 387–88.

10. Hugh Nibley, *An Approach to the Book of Mormon,* 3d ed. (Salt Lake City: Deseret Book and FARMS, 1988), 47.

11. See Patai, *Hebrew Goddess,* 34; Manfred Dietrich and Oswald Loretz, *"Jahwe und seine Aschera": Anthropomorphes Kultbild in Mesopotamien, Ugarit und Israel: Das biblische Bilderverbot* (Münster: UGAR-IT-Verlag, 1992), 120; Wiggins, *Reassessment of "Asherah,"* 149.

12. See Dever, *Recent Archaeological Discoveries,* 157–59.

13. See Patai, *Hebrew Goddess,* 39; and Thomas L. Thompson, "The Intellectual Matrix of Early Biblical Narrative: Inclusive Monotheism in Persian Period Palestine," in *The Triumph of Elohim: From Yahwisms to Judaisms,* ed. Diana Vikander Edelman (Grand Rapids, Mich.: Eerdmans, 1996), 119 n. 13.

14. See Smith, *Early History of God,* 6, 145.

15. See Patai, *Hebrew Goddess,* 47, 52.

16. See J. Glen Taylor, *Yahweh and the Sun: Biblical and Archaeological Evidence for Sun Worship in Ancient Israel* (Sheffield: JSOT Press, 1993), 58–59; and Erhard S. Gerstenberger, *Yahweh—The Patriarch: Ancient Images of God and Feminist Theology,* trans. Frederick J. Gaiser (Minneapolis: Fortress Press, 1996), 66.

17. J. Glen Taylor, "The Two Earliest Known Representations of Yahweh," in *Ascribe to the Lord: Biblical and Other Studies in Memory of Peter C. Craigie,* ed. Lyle Eslinger and Glen Taylor, Journal for the Study of the Old Testament Supplement Series 67 (Sheffield: JSOT Press, 1988), 566.

18. David Noel Freedman, "Yahweh of Samaria and His Asherah," *Biblical Archaeologist* 50/4 (December 1987): 248; see Herbert Niehr, "The Rise of YHWH in Judahite and Israelite Religion," in Edelman, *Triumph of Elohim,* 57, 59.

19. See Edelman, "Introduction," in *Triumph of Elohim,* 19; and Lowell K. Handy, "The Appearance of Pantheon in Judah," in *Triumph of Elohim,* ed. Edelman, 27–43.

20. Switching the roles of mother and father, Jeremiah 2:27 mocks the veneration of Asherah. See Saul M. Olyan, "The Cultic Confessions of Jer 2,27a," *Zeitschrift für die alttestamentliche Wissenschaft* 99 (1987): 254–59.

21. See Patai, *Hebrew Goddess,* 39, 41–42, 45–52; Wiggins, *Reassessment of "Asherah,"* 125; Smith, *Early History of God,* 80, 94; Saul M. Olyan, *Asherah and the Cult of Yahweh in Israel* (Atlanta: Scholars Press, 1988), 19, 70–72; and many other sources.

22. Smith, *Early History of God,* 98, 161–63; compare Gerstenberger, *Yahweh—The Patriarch,* 92, 136.

23. Wiggins, *Reassessment of "Asherah,"* 130.

24. Freedman, "Yahweh of Samaria and His Asherah," 248. See 1 Kings 18:1–46.

25. See 2 Kings 10:18–28; 13:6; see also Olyan, *Asherah and the Cult of Yahweh,* 4; Patai, *Hebrew Goddess,* 43–46; and Smith, *Early History of God,* 80.

26. Olyan, *Asherah and the Cult of Yahweh,* 73.

27. See ibid., 3–4, 9, 13–14, 22, 33, 43, 73–74; Smith, *Early History of God,* 150; Olyan, "The Cultic Confessions of Jer 2,27a," 257; and Baruch Halpern, "'Brisker Pipes Than Poetry': The Development of Israelite Monotheism," in *Judaic Perspectives on Ancient Israel,* ed. Jacob Neusner, Baruch A. Levine, and Ernest S. Frerichs (Philadelphia: Fortress Press, 1987), 83.

28. Dever, *Recent Archaeological Discoveries,* 159.

29. Smith, *Early History of God,* 89.

30. André Lemaire, "Who or What Was Yahweh's Asherah?" *Biblical Archaeology Review* 10/6 (1984): 46.

31. See Olyan, *Asherah and the Cult of Yahweh,* xiv, 74; and William Dever, "Is the Bible Right After All?" interview by Hershel Shanks, *Biblical Archaeology Review* 22/5 (Sept./Oct. 1996): 37.

32. Thompson, "The Intellectual Matrix of Early Biblical Narrative," 119 n. 10.

33. Smith, *Early History of God,* 19; compare 89, 92–93; and Olyan, *Asherah and the Cult of Yahweh,* xiv.

34. Olyan, *Asherah and the Cult of Yahweh,* 29, 33–34, 38, 74.

35. See Lemaire, "Who or What Was Yahweh's Asherah?" 42, 44; André Lemaire, "Les inscriptions de Khirbet el-Qūm et l'asherah de YHWH," *Revue biblique* 84 (1977): 602–03 (cf. pp. 596, 597); Ziony Zevit, "The Khirbet el-Qūm Inscription Mentioning a Goddess," *Bulletin of the American Schools of Oriental Research* 255 (1984): 39; Olyan, *Asherah and the Cult of Yahweh,* 23; and Day, "Asherah in the Hebrew Bible," 394.

36. See Lemaire, "Les inscriptions de Khirbet el-Qūm et l'asherah de YHWH," 608; Lemaire, "Who or What Was Yahweh's Asherah?" 44, 51; and Freedman, "Yahweh of Samaria and His Asherah," 246–49.

37. Freedman, "Yahweh of Samaria and His Asherah," 248.

38. See Ze'ev Meshel, "Did Yahweh Have a Consort?" *Biblical Archaeology Review* 5/2 (1979): 31; William G. Dever, "Asherah, Consort of Yahweh? New Evidence from Kuntillet 'Ajrūd," *Bulletin of the American Schools of Oriental Research* 255 (1984): 26–27; Dever, *Recent Archaeological Discoveries,* 140–49, which discusses the find at Kuntillet 'Ajrūd.

39. Dever, "Asherah, Consort of Yahweh?" 21; compare p. 30. See also Olyan, "Cultic Confessions of Jer 2,27a," 257, 259; Dever, "Is the Bible Right After All?" 37; Brian B.

Schmidt, "The Aniconic Tradition: On Reading Images and Viewing Texts," in *Triumph of Elohim*, ed. Edelman, 75–105; and Gerstenberger, *Yahweh—The Patriarch*, 33–34.

40. Patai, *Hebrew Goddess*, 52–53; compare Gerstenberger, *Yahweh—The Patriarch*, 33–34.

41. Freedman, "Yahweh of Samaria and His Asherah," 249; compare Day, "Asherah in the Hebrew Bible," 392; and Niehr, "Rise of YHWH in Judahite and Israelite Religion," 54–55, 59. See Proverbs 8:22–34. This image that is emerging from very recent scholarship—an enthroned God who sits with his consort in the midst of a divine council composed of his children, who are linked with the sun and moon and stars—sheds fascinating light on Lehi's vision as it is recorded in 1 Nephi 1:9–11. That account describes "One descending out of the midst of heaven," whose "luster was above that of the sun at noon-day" and who was followed by twelve others whose "brightness did exceed that of the stars in the firmament" and who then, together, "came down and went forth upon the face of the earth." Clearly, this refers to the Savior, Jesus Christ, and his twelve apostles. (Taylor, throughout his book *Yahweh and the Sun*, argues for an ancient link between Yahweh or Jehovah [whom Latter-day Saints identify as the premortal Jesus Christ] and the sun.) Read in light of recent biblical scholarship, however, the account of Lehi's vision also appears to imply notions of the premortal existence and the literally divine lineage of humanity that are often presumed to have arisen only in the later doctrinal development of Mormonism.

42. See Dever, "Is the Bible Right After All?" 36; and Patai, *Early History of God*, 52.

43. Cited in Patai, *Hebrew Goddess*, 39.

44. See ibid., 49; and Day, "Asherah in the Hebrew Bible," 397.

45. See Taylor, "The Two Earliest Known Representations of Yahweh," 558–60, 565 n. 19; Taylor, *Yahweh and the Sun*, 29; Dever, "Asherah, Consort of Yahweh?" 27; and de Moor, "ʾashērah," 1:441–43. Wiggins, *Reassessment of "Asherah,"* 13, thinks ancient Hebrews would have seen Asherah in the Garden of Eden's tree of life.

46. William G. Dever, lecture at Brigham Young University, 14 February 1997.

47. Steve A. Wiggins, "The Myth of Asherah: Lion Lady and Serpent Goddess," *Ugarit-Forschungen: Internationales Jahrbuch für did Altertumskunde Syrien-Palästinas* 23 (1991): 383, with references.

48. See Day, "Asherah in the Hebrew Bible," 397–98; 401–4, with references.

49. See Wiggins, *Reassessment of "Asherah,"* 92.

50. See ibid., 94–95, 101, 109, 129 (with rabbinic references); Patai, *Hebrew Goddess*, 38–39, 42, 45, 48; Smith, *The Early History of God*, 81–85; and Olyan, *Asherah and the Cult of Yahweh*, 1–3.

51. See Olyan, *Asherah and the Cult of Yahweh*, 26, 28, 31–32; W. L. Reed, "Asherah," in George Arthur Buttrick, ed., *The Interpreter's Dictionary of the Bible* (Nashville: Abingdon, 1962–), 1:250–52; de Moor, "ʾashērah," 1:441; Day, "Asherah in the Hebrew Bible," 408; and Dietrich and Loretz, *"Jahwe und seine Aschera,"* 82–85, 99.

52. Leon Yarden, *The Tree of Light: A Study of the Menorah, the Seven-Branched Lampstand* (Uppsala, Sweden: Skriv Service AB, 1972), 44–47, 103–6.

53. Smith, *The Early History of God*, 84; compare Wiggins, *Reassessment of "Asherah,"* 37, 71, 89; and Erich Neumann, *The Great Mother: An Analysis of the Archetype*, trans. Ralph Mannheim (Princeton: Princeton University Press, 1983), 48–50, 52, 241–43.

54. Patai, *Hebrew Goddess*, 20, 116, 139–40, 151–52, 199, 265, 280.

55. Quoting Olyan, *Asherah and the Cult of Yahweh*, 57 n. 82; compare Olyan, "Cultic Confessions of Jer 2,27a," 259.

56. Olyan, *Asherah and the Cult of Yahweh*, 56–61, 65–67.

57. See Ernest A. Wallis Budge, *Egyptian Tales and Romances: Pagan, Christian and Muslim* (London: Thornton Butterworth, 1935), 280.

58. 1 Nephi 11:18; emphasis added.

59. See Roland E. Murphy, *The Tree of Life: An Exploration of Biblical Wisdom Literature*, 2nd ed. (Grand Rapids, Mich.: Eerdmans, 1996), 1–4, 103.

60. See, for example, 1 Kings 4:29–34; Job 1:3; compare Murphy, *Tree of Life*, 23–25, 175, 195.

61. See Murphy, *Tree of Life*, 33.

62. See 1 Nephi 1:2; and Nibley, *Lehi in the Desert; The World of the Jaredites; There Were Jaredites* (Salt Lake City: Deseret Book and FARMS, 1988), 34–42.

63. See Murphy, *Tree of Life*, 22.

64. Proverbs 2:16 (compare 6:24; 7:5, 21–23); 20:19 (compare 12:6; 26:28; 29:5). See also Psalms 5:9; 12:2; 78:36.

65. See, for example, 2 Nephi 28:22; Jacob 7:2, 4; Mosiah 7:21; 9:10; 10:18; 11:7; 26:6; 27:8; Alma 20:13; 30:47; 46:5, 7, 10; 50:35; 52:19; 61:4; Helaman 1:7; 13:28; 3 Nephi 1:29; 7:12; Ether 8:2. Daniel 11:21 nicely summarizes a frequent effect of flattery in the Book of Mormon.

66. See Murphy, *Tree of Life*, 15, for this theme in the ancient Near East.

67. Compare Proverbs 26:12.

68. 2 Nephi 4:34; 28:31.

69. See 1 Nephi 11:35–36.

70. See Proverbs 1:20–21; 4:5–9, 13; 7:4; 8:1–3, 22–36; 9:1–3. The Hebrew term translated as "wisdom," *ḥokmāh*, is, of course, a feminine noun. Murphy, in *Tree of Life*, 133–49 and throughout, offers a useful discussion of "Lady Wisdom."

71. Patai supplies references that I do not have space here to discuss (see his *Hebrew Goddess*, 97–98). Proverbs 7:14 advises its audience to take Wisdom as a sister or kinswoman.

72. Smith, *Early History of God*, 95.

73. Wiggins, "Myth of Asherah," 383.

74. See Smith, *Early History of God*, 95.

75. If so, the language of the plates must be Hebrew, or something like it. Compare Genesis 30:13.

76. See Smith, *Early History of God*, 95; compare Proverbs 11:30; 15:4.

77. Again, from the root *ʾshr.*

78. Compare Proverbs 4:13 and 1 Nephi 8:24, 30; 15:24.

79. Compare Proverbs 1:4, 8, 10, 15; 3:1, 11, 21; 4:1, 3, 10, 20; 5:1, 7–8, 20; 6:1, 3, 20; 7:1, 7; 1 Nephi 8:12–18.

80. See Proverbs 1:15, 19, 20; 2:1, 8, 9, 12, 13, 15, 18–20; 3:6, 12, 17, 23; 4:11, 12, 14, 18–19, 26–27; 5:5, 6, 8, 21, 23; 6:12, 23; 7:8, 12, 25, 27; 8:2, 13, 20, 32; 9:6. Compare the "paths" (1 Nephi 8:20–23, 28) and "ways" (1 Nephi 8:23, 30–31) and "roads" (1 Nephi 8:32) of Lehi's vision. Compare also Psalm 1:1–6, quoted earlier.

81. See Proverbs 8:6–9; compare 1 Nephi 13:26–29, 32, 34–40; 14:23; 2 Nephi 4:32;

9:47; 25:4; 26:33; 33:5–6.

82. See 1 Nephi 13:26, 28, 29, 32, 34, 35, 40.

83. Compare Proverbs 3:14; 8:11, 19; also 2:4; Job 28:12–28; Wisdom of Solomon 7:8; 8:5.

84. Proverbs 1:20–21.

85. Proverbs 8:1–3.

86. Proverbs 9:3.

87. As in Proverbs 1:22; 3:34; compare 9:6–8, 12; 1 Nephi 8:26–27, 33; 11:35.

88. On wisdom equated with life, see Proverbs 3:2, 18, 22; 4:4, 10, 13, 22; 6:23–35; 8:35–36; 9:6–11. On unwisdom as the way to death, see Proverbs 2:18; 5:5; 7:22–23, 26–27; 9:18.

89. Proverbs 2:21–22.

90. Proverbs 2:18–19.

91. Murphy, *Tree of Life*, 29 (with references). See Widengren, *The King and the Tree of Life*. Proverbs 5:15–18 also mentions waters and rivers.

Lehi as Moses
Noel B. Reynolds

Matthew Grow contributed appreciably to this paper as a research assistant. I am also grateful for the helpful suggestions received from a number of readers, including S. Kent Brown, John W. Welch, James E. Faulconer, and Robert J. Matthews.

1. For an account of these political aspects of Nephi's small plates, see Noel B. Reynolds, "The Political Dimension in Nephi's Small Plates," *BYU Studies* 27 (fall 1987), 15–37. Not only does Nephi flee into the wilderness after slaying an official of an oppressive regime, but he then leads his people through that wilderness, across the water, and to the promised land. "Like Moses, he constantly has to overcome the murmuring and faithlessness of his people. Like Moses, he secures divine assistance to feed his people in the wilderness. And like Moses, he is caught up into a mountain to receive the word of God" (ibid., 33). Further, on two occasions Nephi explicitly invokes the historical model of Moses laboring with the murmuring Israelites as a device to persuade his brothers to come along and help him in the tasks the Lord has given to him—obtaining the brass plates (1 Nephi 4:1–3) and building the ship (1 Nephi 17:7ff.). See Noel B. Reynolds, "Nephite Kingship Reconsidered," (*in Mormons, Scripture, and the Ancient World*, ed. Davis Bitton [Provo, Utah: FARMS, 1998], 172–77), for a list of 21 points of comparison between Nephi and Moses. George S. Tate has demonstrated a pervasive dependence on Exodus typology generally by many Book of Mormon writers. See his "The Typology of the Exodus Pattern in the Book of Mormon," in *Literature of Belief: Sacred Scripture and Religious Experience*, ed. Neal E. Lambert (Provo, Utah: BYU Religious Studies Center, 1981), 245–62. Other writers who have documented extensive connections between the exodus of Israel and its leaders and the Lehite exodus recorded in the Book of Mormon include Terry L. Szink, "Nephi and the Exodus," in *Rediscovering the Book of Mormon*, ed. John L. Sorenson and Melvin J. Thorne (Salt Lake City: FARMS and Deseret Book, 1991), 38–51. In the same volume, see also Alan Goff, "Mourning, Consolation, and Repentance at Nahom," 92–99. Stephen D. Ricks and others have made related observations about Benjamin. See, Ricks's

"King, Coronation, and Covenant in Mosiah 1–6," in *King Benjamin's Speech*, ed. John W. Welch and Stephen D. Ricks (Provo, Utah: FARMS, 1998), 233–75.

2. This must be qualified to the extent that in 1 Nephi 4 and 17 Nephi does refer to the similarity between Lehi's family's experience and that of the Israelites in the wilderness, with implicit reference to the leadership issue. See note 1 above.

3. See Reynolds, "Kingship," 177.

4. The older brothers are to receive the first blessing only if they accept the leadership of the younger brother. And who is to judge? See a more detailed analysis in Reynolds, "Political Dimension," 32.

5. Moses calls "heaven and earth to witness against" Israel this day that they have been instructed in what they should do (Deuteronomy 4:26). John W. Welch and Daryl R. Hague have analyzed eight Book of Mormon farewell sermons, including Lehi's, using the pattern identified in ancient literature by William S. Kurz in "Luke 22:14–38 and Greco-Roman and Biblical Farewell Addresses," *Journal of Biblical Literature* 104, no. 2 (1985), 251, 262. See their "Benjamin's Sermon as a Traditional Ancient Farewell Address," in *King Benjamin's Speech*, ed. Welch and Ricks, 103–5. One of Welch's students addresses the larger question of Deuteronomy's impact on the Book of Mormon as a whole. See Julie Stevenson, "Deuteronomy and the Book of Mormon," 25 November 1980, unpublished MS on file in the BYU law library. In the final draft of this paper I was generously assisted by Drew Briney, who gave me access to his comprehensive analysis of Deuteronomic terminology that shows up in the Book of Mormon. His lists demonstrate that later Book of Mormon prophets also used Deuteronomy frequently.

6. See Stevenson, "Deuteronomy and the Book of Mormon," 1.

7. John L. Sorenson argues in his article "The 'Brass Plates' and Biblical Scholarship" (*Dialogue* 10 [autumn 1977]: 31–39) that the plates of brass would best fit the Elohist (E) northern kingdom version of the Old Testament as that has been hypothesized by Bible scholars. John W. Welch suggests that the plates of brass might have been produced for King Josiah himself, after the discovery of Deuteronomy (see his study "Authorship of the Book of Isaiah," in *Isaiah in the Book of Mormon*, ed. Donald W. Parry and John W. Welch [Provo, Utah: FARMS, 1998], 430–32).

8. I owe this clarification to James E. Faulconer.

9. I hope it is clear to readers that I am not claiming an isomorphism between Deuteronomy and 2 Nephi. The two texts have far more differences than similarities. Nor do I claim that Deuteronomy is the only possible biblical source for the Deuteronomic themes I identify in 2 Nephi. All I am claiming is that Lehi's invocation of so many of the themes we find concentrated and repeated in Deuteronomy, combined with the extensive similarity of his life situation to that of Moses at the time of his final speeches to his people, would have provided a powerful connection and rhetorical leverage for Lehi's immediate audience.

10. For an analysis of the awkward logic of Nephi's appointment, see Reynolds, "Nephite Kingship," 163.

11. See Deuteronomy 4:1, 5, 8, 14, 40, 45; 5:1, 31; 6:1, 17, 20; 7:11; 8:11; 11:32; 12:1;

26:16, 17; and 30:16. Compare Leviticus 26:46. It was Lehi's use of this language that gave me the first clue to the Deuteronomic influence.

12. I thank Julie Stevenson for noticing that this formulation, which we often credit to Lehi's originality, is actually present in less developed form in Deuteronomy. That two of John Welch's students make this same point 14 years apart suggests it was a connection gleaned from his lectures. See Stevenson, "Deuteronomy and the Book of Mormon," 19–20; see also Dan Packard, "The Influence of Deuteronomy in Lehi's Farewell Address," 18 April 1994, unpublished MS on file in the BYU law library, p. 19, on the same issue.

13. Alternatively, Lehi might have been referring to some later interpreter of Moses, like Zenos, whom Nephi had also referred to as "the prophet" (see 1 Nephi 19:10–14).

Metals of the Book of Mormon
Wm. Revell Phillips

1. See Lynn M. Hilton and Hope A. Hilton, *In Search of Lehi's Trail* (Salt Lake City: Deseret Book, 1976).

2. See Warren P. Aston and Michaela K. Aston, *In the Footsteps of Lehi: New Evidences for Lehi's Journey across Arabia to Bountiful* (Salt Lake City: Deseret Book, 1994).

3. See Richard Wellington and George Potter, "Nephi's Ship: The Key to Identifying the Place Bountiful," unpublished MS, 1999.

4. See Robert P. Whitcome and George Potter, "The Bedouin Bee," *Aramco World Magazine,* March–April 1984.

5. Hugh W. Nibley, *Lehi in the Desert* (Salt Lake City: Bookcraft, 1952).

6. See S. Kent Brown et al., "Planning Research in Oman: The End of Lehi's Trail," *Journal of Book of Mormon Studies* 7/1 (1998).

7. See ibid.

8. See L. Casson, *The Periplus Maris Erythraei* (Princeton: Princeton University Press, 1989); and W. Phillips, *Unknown Oman* (New York: David McKay Co., 1996).

9. See L. Casson, *The Periplus Maris Erythraei.*

10. K. Arita and M. Nishiie, "Report on the Geological Survey of the Sultanate of Oman" MS on file, Tokyo, Japan, International Cooperation Agency and Metal Mining Agency of Japan.

11. See L. Casson, *The Periplus Maris Erythraei.*

12. R. F. Tylecote, *A History of Metallurgy* (London: The Metals Society, 1976).

13. See Jane C. Waldbaum, "The First Archaeological Appearance of Iron and the Transition to the Iron Age," in *The Coming of the Age of Iron,* ed. Theodore A. Wertime and James D. Muhly (New Haven: Yale University Press, 1980).

14. See ibid.

15. See ibid.

16. See ibid.

17. Dennis Heskel and Carl C. Lamberg-Karlovsky, "An Alternative Sequence for the Development of Metallurgy," in *The Coming of the Age of Iron,* ed. Wertime and Muhly.

18. See *The Interpreter's Dictionary of the Bible* (Nashville: Abington, 1962), s.v. "iron"; Carl G. Johnson and William R. Weeks, *Metallurgy* (Chicago: American Technical Society, 1977); J. Gordon Parr, *Man, Metals, and Modern Magic* (Cleveland: American Society for Metals, 1958); and Tylecote, *Metallurgy.*

19. See James D. Muhly, "Mining and Metalwork in Ancient Western Asia," in *Civilizations of the Ancient Near East,* ed. Jack M. Sasson (New York: Charles Scribner's Sons, Macmillan, 1995).

20. See ibid.

21. Johnson, *Metallurgy;* and Parr, *Man, Metals, and Modern Magic.*

22. See John Bright, *A History of Israel,* (Philadelphia: Westminster Press, 1981).

23. See James D. Muhly, "Metals," in *The Oxford Encyclopedia of Archaeology in the Near East,* ed. Eric M. Meyers (New York: Oxford University Press, 1997).

24. See ibid.

25. See Heskel and Lamberg-Karlovsky, "Development of Metallurgy"; Johnson and Weeks, *Metallurgy;* and Muhly, "Metals."

26. See John L. Sorenson, *Metals and Metallurgy Relating to the Book of Mormon Text* (Provo, Utah: FARMS, 1992).

27. See Tylecote, *History of Metallurgy.*

28. Matthew Roper, "Swords and 'Cimeters' in the Book of Mormon," *Journal of Book of Mormon Studies* 8/1 (1999): 34–43.

29. Heather Lechtman, "The Central Andes: Metallurgy without Iron," in *The Coming of the Age of Iron,* ed. Wertime and Muhly.

30. See Muhly, "Metals."

31. See Johnson and Weeks, *Metallurgy.*

32. See ibid.; and Parr, *Man, Metals, and Modern Magic.*

33. See Johnson and Weeks, *Metallurgy;* and Muhly, "Mining and Metalwork."

34. See Johnson and Weeks, *Metallurgy;* and Parr, *Man, Metals, and Modern Magic.*

35. See James W. Evans and Lutgard C. DeJonghe, *The Production of Inorganic Materials* (New York: McMillan, 1991).

36. See Muhly, "Metals."

37. See Parr, *Man, Metals, and Modern Magic.*

38. See Muhly, "Mining and Metalwork."

39. See Parr, *Man, Metals, and Modern Magic.*

40. See Muhly, "Mining and Metalwork" and "Metals."

41. See ibid.

42. See *Interpreter's Dictionary of the Bible,* s.v. "copper"; and Muhly, "Mining and Metalwork."

43. See Sorenson, *Metals and Metallurgy.*

44. See Lechtman, "Metallurgy without Iron."

45. See ibid.; and Heather Lechtman, "Issues in Andean Metallurgy," in *Pre-Columbian Metallurgy of South America,* ed. Elizabeth P. Benson (Washington, D.C.: Dumbarton Oaks Research Library and Collections, 1979).

46. See Tylecote, *History of Metallurgy.*

47. See Lechtman, "Metallurgy without Iron."

48. See Muhly, "Metals."

49. See Heskel and Lamberg-Karlovsky, "Development of Metallurgy"; and Muhly, "Mining and Metalwork."

50. See Muhly, "Mining and Metalwork."

51. *Funk and Wagnalls New Standard Bible Dictionary,* s.v. "metals—copper"; and *Interpreter's Dictionary of the Bible,* s.v. "bronze."

52. See Muhly, "Metals."

53. See Muhly, "Mining and Metalwork."

54. See Roland W. Brown, *Composition of Scientific Words* (Baltimore: Brown, 1954).

55. *The Barnhart Concise Dictionary of Etymology,* ed. Robert K. Barnhart (New York: Harper Collins, 1988), s.v. "brass," "bronze"; and Ernest D. Kline, *A Comprehensive Etymological Dictionary of the English Language* (London: Elsevier Publishing Co., 1966), s.v. "brass."

56. *The Oxford English Dictionary,* 2nd ed., s.v. "bronze," "brass."

57. *Interpreter's Dictionary of the Bible,* s.v. "copper."

58. *Barnhart Concise Dictionary of Etymology,* s.v. "bronze."

59. See Lechtman, "Metallurgy without Iron"; and Muhly, "Metals."

60. See Evans and DeJonghe, *Production of Inorganic Materials.*

61. See Muhly, "Metals."

62. See Lechtman, "Issues in Andean Metallurgy."

63. See Muhly, "Mining and Metalwork."

64. See ibid.; and Muhly, "Metals."

65. See Lechtman, "Metallurgy without Iron."

66. See ibid.

67. See Lechtman, "Issues in Andean Metallurgy."

68. See Lechtman, "Metallurgy without Iron."

69. See Tylecote, *History of Metallurgy.*

70. See Roper, "Swords and 'Cimeters.'"

71. See Lechtman, "Issues in Andean Metallurgy"; and "Metallurgy without Iron."

Last-Ditch Warfare in Ancient Mesoamerica Recalls the Book of Mormon
John L. Sorenson

1. See Hugh Nibley, *Since Cumorah,* vol. 7 in The Collected Works of Hugh Nibley, 2nd ed. (Salt Lake City: Deseret Book and FARMS, 1988), 291; cited by William J. Hamblin in "The Importance of Warfare in Book of Mormon Studies," in *Warfare in the Book of Mormon,* ed. Stephen D. Ricks and William J. Hamblin (Salt Lake City: Deseret Book and FARMS, 1990), 483.

2. See, for instance, articles in John W. Welch, ed., *Reexploring the Book of Mormon* (Salt Lake City: Deseret Book and FARMS, 1992); and Matthew Roper, "Swords and 'Cimeters' in the Book of Mormon," *Journal of Book of Mormon Studies* 8/1 (1999): 34–43.

3. For additional information regarding the topic of this section, see John L. Sorenson, "Digging into the Book of Mormon: Our Changing Understanding of Ancient America and its Scripture," *Ensign,* September 1984, 33; and "Fortifications in the Book of Mormon Account Compared with Mesoamerican Fortifications," in *Warfare in the Book of Mormon,* ed. Ricks and Hamblin, 425–29.

4. Regarding the value of the sacred artifacts, see John L. Sorenson, "The Book of Mormon as a Mesoamerican Record," in *Book of Mormon Authorship Revisited: The Evidence for Ancient Origins,* ed. Noel B. Reynolds (Provo, Utah: FARMS, 1997), 424–27.

5. For a detailed explanation of how material benefits were connected to political authority in the Nephite system of governance and economy, see John L. Sorenson, "The Political Economy of the Nephites," in John L. Sorenson, *Nephite Culture and Society: Selected Papers* (Salt Lake City: New Sage Books, 1997), 195–236.

6. See John L. Sorenson, appendix in "Seasonality of Warfare in the Book of Mormon and in Mesoamerica," in *Warfare in the Book of Mormon,* ed. Ricks and Hamblin, 462–74.

7. Quoted and paraphrased in T. Patrick Culbert, "The New Maya," *Archaeology,* September/October 1998, 49.

8. Notably J. E. S. Thompson, *The Rise and Fall of Maya Civilization,* 2d ed. (Norman: University of Oklahoma Press, 1967).

9. For the late "militaristic" stage or period, see Julian H. Steward, "Cultural Causality and Law: A Trial Formulation and Development of Early Civilizations," *American Anthropologist* 51, no. 1 (1949): 1–27.

10. Culbert, "The New Maya," 49.

11. See Robert L. Rands, "Some Evidences of Warfare in Classic Maya Art" (Ph.D. diss., Columbia University, 1952).

12. See David L. Webster, *Defensive Earthworks at Becan, Campeche, Mexico: Implications for Maya Warfare,* Publication 41 (New Orleans: Tulane University Middle American Research Institute, 1976).

13. See Webster, *Defensive Earthworks,* 87.

14. Robert L. Sharer, ed., *The Ancient Maya,* 5th ed. (Stanford: Stanford University Press, 1994), 143.

15. See Angel García Cook, "The Historical Importance of Tlaxcala in the Cultural Development of the Central Highlands," in Jeremy A. Sabloff, ed., supplement to the *Handbook of Middle American Indians, Vol. 1: Archaeology* (Austin: University of Texas Press, 1981), 263–69.

16. According to the late Daniel Wolfman, the expert on archaeomagnetic dating, as cited by Frederick J. Bove in his "The Terminal Formative-Early Classic Transition," in *University of Pittsburgh Memoirs in Latin American Archaeology,* no. 6, ed. Frederick J. Bove et al. (Pittsburgh: The Balberta Project, 1993), 183. A set of radiocarbon dates from the 1970s indicated a similar early date for the climax of Teotihuacan's culture, but they were rationalized away.

17. See Gareth W. Lowe and J. Alden Mason, "Archaeological Survey of the Chiapas Coast, Highlands, and Upper Grijalva Basin," *Handbook of Middle American Indians, Vol. 2: Archaeology of Southern Mesoamerica,* pt. 1 (Austin: University of Texas Press, 1965), 226.

18. See Marion Popenoe de Hatch, *Kaminaljuyú/San Jorge: Evidencia arqeológica de la actividad económica en el Valle de Guatemala, 300 a.C. a 300 d.C.* (Guatemala: Universidad del Valle de Guatemala, 1997), 98–100; and Frederick J. Bove, "Dedicated to the Costeños: Introduction and New Insights," in *New Frontiers in the Archaeology of the Pacific Coast of Southern Mesoamerica,* ed. Frederick J. Bove and L. Heller, Anthropological Research Papers, no. 39 (Tempe: Arizona State University, 1989).

19. Juan Antonio Valdés, "Desarrollo cultural y señales de alarma entre los mayas: el Preclásico Tardío y la transición hacia el Clásico Temprano," in *The Emergence of Lowland Maya Civilization: The Transition from the Preclassic to the Early Classic; A Conference at Hildesheim, November 1992,* ed. Nikolai Grube (Markt Schwaben, Germany: Verlag Anton Saurwein, 1995), 77.

20. See Marion Popenoe de Hatch, "Observaciones sobre el desarrollo cultural

en la costa sur de Guatemala," in *Investigaciones Arqueológicas en la Costa Sur de Guatemala,* ed. David S. Whitley and Marilyn P. Beaudry (Los Angeles: UCLA Institute of Archaeology, 1989), 29.

21. See R. E. W. Adams, "Early Classic Maya Civilization: A View from Rio Azul," in *Emergence of Lowland Maya Civilization,* ed. Grube, 35–48.

22. See, for example, Juan Antonio Valdés, "El Proyecto Miraflores II dentro del marco preclásico de Kaminaljuyú," in *X Simposio de Investigaciones Arqueológicas en Guatemala,* ed. Juan Pedro Laporte and Héctor L. Escobedo (Guatemala: Museo Nacional de Arqueología y Etnología, Ministerio de Cultura y Deportes, Instituto de Antropología e Historia, y Asociación Tikal, 1997), 1:81–86; Kuniaki Ohi et al., "Los resultados de las investigaciones arqueológicas en Kaminaljuyú," in ibid., 1:93–100; and Arlen F. Chase and Diane Z. Chase, "External Impetus, Internal Synthesis, and Standardization: E Group Assemblages and the Crystallization of Classic Maya Society in the Southern Lowlands," in *Emergence of Lowland Maya Civilization,* ed. Grube, 87–101.

23. Bruce H. Dahlin, Robin Quizar, and Andrea Dahlin, "Linguistic Divergence and the Collapse of Preclassic Civilization in Southern Mesoamerica," *American Antiquity* 52 (1987): 367.

24. Ibid., 379.

25. See Valdés, "Desarrollo cultural," 72–73.

26. See, for example, Nicholas P. Dunning, *Lords of the Hills: Ancient Maya Settlement in the Puuc Region, Yucatán, Mexico* (Madison, Wis.: Prehistory Press, 1992), 25–28; Bruce H. Dahlin, "Climate and Prehistory on the Yucatan Peninsula," *Climatic Change* 5 (1983): 245–63; William J. Folan et al., "Paleoclimatic Patterning in Southern Mesoamerica," *Journal of Field Archaeology* 10 (1983): 453–68; William T. Sanders et al., *The Natural Environment, Contemporary Occupation and Sixteenth Century Population of the Valley,* Occasional Papers in Anthropology, no. 3 (University Park: Pennsylvania State University Department of Anthropology, 1970), 88; and Nicholas P. Dunning, "Coming Together at the Temple Mountain: Environment, Subsistence, and the Emergence of Lowland Maya Segmentary States," in *Emergence of Lowland Maya Civilization,* ed. Grube, 61–69.

27. See Dahlin, Quizar, and Dahlin, "Linguistic Divergence," 379.

28. See Arthur A. Demarest et al., "Classic Maya Defensive Systems and Warfare in the Petexbatun Region: Archaeological Evidence and Interpretations," *Ancient Mesoamerica* 8 (1997): 229–53; Takeshi Inomata, "The Last Day of a Fortified Classic Maya Center: Archaeological Investigations at Aguateca, Guatemala," *Ancient Mesoamerica* 8 (1997): 337–51; and Arthur A. Demarest, "The Violent Saga of a Maya Kingdom," *National Geographic,* February 1993, 95–111.

29. See Demarest et al., "Classic Maya Defensive Systems," 231.

30. See Bruce Dahlin, "The Barricade and Abandonment of Chunchucmil: Implications for Northern Maya Warfare," *Latin American Antiquity* 11/3 (2000): 283–98.

31. Markus Reindel, "El abandono de las ciudades Puuc en el norte de Yucatán," in *50 Years of Americanist Studies at the University*

of Bonn: New Contributions to the Archeology, Ethnohistory, Ethnolinguistics and Ethnography of the Americas, Bonn Americanist Studies, vol. 30 (Markt Schwaben, Germany: Verlag Anton Saurwein, 1998), 239–56.

32. See Sorenson, "Fortifications in the Book of Mormon," 425–44, regarding instances of early militarism.

Was There Hebrew Language in Ancient America? An Interview with Brian Stubbs

1. For other examples, see Brian D. Stubbs, "Looking Over vs. Overlooking Native American Languages: Let's Void the Void," *JMBS* 5/1 (1995): 16. This article may be purchased from FARMS in reprint form.

2. See ibid., 27–32, for examples.

3. See ibid., 17.

4. See ibid., 24, 25, 28.

5. Details can be found in ibid.

6. See, for example, Brian D. Stubbs, "The Labial Labyrinth in Uto-Aztecan," *International Journal of American Linguistics* 61/4 (1995), 396–422; and "More Palatable Reconstructions for Uto-Aztecan Palatals," *International Journal of American Linguistics* 66/1 (2000): 125–37.

7. See Albert C. Baugh and Thomas Cable, *A History of the English Language,* 2nd ed. (New York: Alfred A. Knopf, 1967), 96.

8. See ibid., 55.

9. See ibid., 101.

10. See Martha Schulte and Beverly Seckinger, "The Dating Game: One Last Look at Glottochronology: The Case of Some Arabic Dialects," in *Atlatl Occasional Papers, No. 5,* ed. Barbara Roth and Susannah Hexer (Tucson: University of Arizona, 1984–85), 41–77.

11. See Baugh and Cable, *History of the English Language,* 55.

12. See the discussion in Stubbs, "Native American Languages," 13.

13. See Stubbs, ibid., 26.

14. Brian D. Stubbs, "The Male Names in Lehi's Family," unpublished MS in FARMS library.

15. See Stubbs, "Native American Languages," 36.

16. See ibid., 21, 24.

17. For *r > y,* see ibid., 17–19.

18. Pierre Agrinier compiled an unpublished list of similarities between Hebrew and Zapotec. Robert Smith's unpublished papers of 1969, 1971, and 1977 followed up on Agrinier's work with further comparisons under the title "Sawi-Zaa Word Comparisons."

19. See Arnold Leesburg, *Comparative Philology: A Comparison between Semitic and American Languages* (Leyden: Brill, 1908).

20. See John L. Sorenson, "Evidences of Culture Contacts between Polynesia and the Americas in Precolumbian Times" (master's thesis, BYU, 1952); Mary Ritchie Key, *Polynesian and American Linguistic Connections* (Lake Bluff, Ill.: Juniper Press, 1984); and David H. Kelley, "Tane and Sina: A Uto-Aztecan Astronomical Cult in Polynesia," in *Circumpacifica: Festschrift für Thomas S. Barthel,* ed. Bruno Illius and Matthias Laubscher (Frankfurt: Peter Lang, 1990), 2:137–56.

21. For further discussion, see Brian D. Stubbs, "Book of Mormon Language," in *Encyclopedia of Mormonism,* ed. Daniel H.

Ludlow (New York: Macmillan, 1992), 1:179–81.

Nephi
Paul Y. Hoskisson

1. The suggested roots are not attested, as far as I can determine, in other North-West Semitic languages, i.e., Phoenician, Ammonite, Moabite, etc. Aramaic is another candidate, but the sources I have checked produced negative results. Someone with more expertise in Aramaic than I have should make a thorough search of the numerous Aramaic dialects.

2. See Manfried Dietrich and Oswald Loretz, *Analytic Ugaritic Bibliography,* Alter Orient and Altes Testament 6 (Neukirchen-Vluyn: Verlag Butzon & Bercker Kevelaer, 1996), 777, s.v. *"npy."*

3. In South-West Semitic languages, the *p* of other Semitic languages corresponds to an *f.* As far as I am aware, Hugh Nibley was the first person to draw attention to the relevance of the personal name *nfy* to *Nephi.* See his *An Approach to the Book of Mormon,* 2nd ed. (Salt Lake City: Deseret Book, 1964), 239, n. 27 (or [Salt Lake City: Deseret Book and FARMS, 1988], 290, n. 28).

4. Cyrus H. Gordon, *Ugaritic Textbook,* Analecta Orientalia 38 (Rome: Pontificum Institutum Biblicum, 1965), 446, s.v. *"npᶜ."* See also Dietrich and Loretz, 778.

5. Not being an Egyptologist, I am not in a position to evaluate the Egyptian suggestions and so offer them here with little comment.

6. Hugh W. Nibley, *Lehi in the Desert; The World of the Jaredites; There Were Jaredites* (Salt Lake City: Deseret Book and FARMS, 1988), 27.

New Light

1. See Morris Swadesh, "Linguistics as an Instrument of Prehistory," *Southwestern Journal of Anthropology* 15 (1959): 20–35.

2. See Morris Swadesh, "Lexicostatistic Classification," in *Linguistics,* ed. N. A. McQuown, vol. 5 of *Handbook of Middle American Indians* (Austin: University of Texas Press, 1967), 79–116; and Dell H. Hymes, "Lexicostatistics So Far," *Current Anthropology* 1 (1960), 3–44.

3 See R. E. Longacre, "Swadesh's Macro-Mixtecan Hypothesis," *International Journal of American Linguistics* 21/1 (1961): 9–29; K. Bergsland and H. Vogt, "On the Validity of Glottochronology," *Current Anthropology* 3 (1962): 115–53; and D. L. Olmsted, "Lexicostatistics as 'Proof' of Genetic Relationship: the Case of 'Macro-Manguean,'" *VI Congrès International des Sciences Anthropologiques et Ethnologiques,* Paris, 1960 (Paris: 1964), 2/2: 69–73.

4. See C. A. Callaghan and W. R. Miller, "Swadesh's Macro-Mixtecan Hypothesis and English," *Southwestern Journal of Anthropology* 18 (1962): 278–85; and K. V. Teeter, "Lexicostatistics and Genetic Relationship," *Language* 39 (1964): 638–48.

5. J. J. Graydon, "Blood Groups and the Polynesians," *Mankind* 4 (1952): 329–39.

6. A. E. Mourant, *The Distribution of Human Blood Groups* (Springfield, Ill.: C. C. Thomas, 1954), 144–47.

7. See R. T. Simmons et al., "A Blood Group Genetical Survey of Cook Islanders,

Polynesia, and Comparisons with American Indians," *American Journal of Physical Anthropology* 13 (1955): 667–90.

8. See A. E. Mourant, "Blood Groups in the Pacific Area," *Eighth Congress of the International Society of Blood Transfusion (Tokyo 1960), Proceedings* (Tokyo: 1962), 149–53.

9. See Rupert I. Murrill, *Cranial and Postcranial Skeletal Remains from Easter Island* (Minneapolis: University of Minnesota Press, 1968), 77–79.

10. See Frank B. Livingstone, "An Analysis of the ABO Blood Group Clines in Europe," *American Journal of Physical Anthropology* 31 (1969): 1–10; M. Allison et al., "ABO Blood Groups in Chilean and Peruvian Mummies, II: Results of Agglutination-Inhibition Technique," *American Journal of Physical Anthropology* 49 (1978): 139–42; and T. E. Reed, "The Evidence for Natural Selection Due to Blood Groups," *World Population Conference (Belgrade, 1965), Proceedings* 2 (New York: United Nations, 1967), 498–502.

11. This is still assumed in a current anthropology textbook. See Colin Renfrew and Paul Bahn, *Archaeology: Theories, Methods, and Practice,* 2nd ed. (London and New York: Thames and Hudson, 1996), 436: "The language spoken by a human community is the best predictor of what genetic characteristics . . . that community will have."

12. See, for example, Juan Comas, "Características físicas de la familia lingüística Maya," *Universidad Nacional Autónoma de México, Serie Antropológica* 20 (México: UNAM, 1966). Comas compared the results of more than half a century of study of Maya-speaking groups to find marked biological differences among distinct groups within the language community, apparently due to intermarriage with non-Mayan groups, genetic drift, endogamy, and adaptive selection. See also M. Layrisse, Z. Layrisse, and J. Wilbert, "Blood Group Antigen Studies of Four Chibchan[-speaking] Tribes," *American Anthropologist* 65 (1963): 36–55; the tribes do not form a homogeneous genetic group.

13. See R. T. Simmons, "The Biological Origin of Australian Aborigines: An Examination of Blood Group Genes and Gene Frequencies for Possible Evidence in Populations from Australia to Eurasia," in *The Origin of the Australians,* ed. R. L. Kirk and A. G. Thorne (Canberra: Australian Institute of Aboriginal Studies and Atlantic Highlands; New Jersey: Humanities Press International, 1976), 307–28.

14. See, for example, S. M. Borgognini Torli and G. Paoli, "Survey of Paleoserological Studies," *Homo* 33/2 (1982): 69–89; and J. Comas, *Antropología de los puebloos iberoamericanos* (Barcelona: Editorial Labor, 1972), 35: "It seems that the beginning of the second half of the twentieth century coincides with the end of the myth of the (single) 'American homotype.'"

15. See "The Human Biology of the Western Pacific Basin," *Yearbook of Physical Anthropology* 18 (1975): 202–45.

16. See Rubén Lisker, "El origen de los grupos humanos en América: serología y hematología en general de los Ameríndios y sus posibles relaciones trans-pacíficas," *Thirty-Sixth International Congress of Americanists (Barcelona and Seville, 1964), Proceedings* 1 (Barcelona and Seville: 1966), 43–51.

17. See L. Cavalli-Sforza et al., *The History and Geography of Human Genes* (Princeton: Princeton University Press, 1994).

18. See Rebecca L. Cann, M. Stoneking and A. C. Wilson, "Mitochondrial DNA and Human Evolution," *Nature* 325 (1987): 31–36.

19. See A. R. Templeton, "Human Origins and Analysis of Mitochondrial DNA Sequences," *Science* 255 (1992): 737.

20. See J. H. Greenberg, Christy G. Turner II, and S. Zegura, "Convergence of Evidence for the Peopling of the Americas," *Collegium Antropologicum* 9/1 (1985): 33–42. An expanded version by the same three authors appeared in 1986 as "The Settlement of the Americas: a Comparison of the Linguistic, Dental, and Genetic Evidence," *Current Anthropology* 27 (1986): 477–97.

21. R. C. Williams et al., "GM Allotypes in Native Americans: Evidence for Three Distinct Migrations across the Bering Land Bridge," *American Journal of Physical Anthropology* 66 (1895): 1–19.

22. Renfrew and Bahn, *Archaeology*, 437; see note 11.

23. See Greenberg, Turner, and Zegura, "The Settlement of the Americas," 488–92. Commenting on this article, Lyle Campbell urged that "the whole speculative venture should be abandoned," and Emöke J. E. Szathmary charged that Turner "interprets his analytic results in the light of a preexisting hypothesis that he simply assumes to be true" (ibid., 488–91).

24. See Michael H. Crawford, *The Origins of Native Americans: Evidence from Anthropological Genetics*, rev. English version (Cambridge: Cambridge University Press, 1998), 21–24.

25. See M. S. Schanfield, "Immunoglobulin Allotypes (GM and KM) Indicate Multiple Founding Populations of Native Americans: Evidence of at Least Four Migrations to the New World," *Human Biology* 64 (1992): 381–402; and Joseph G. Lorenz and David G. Smith, "Distribution of Four Founding mtDNA Haplogroups Among Native North Americans," *American Journal of Physical Anthropology* 101 (1996): 307–23.

26. See S. Pääbo et al., "Mitochondrial Evolution and the Peopling of the Americas," *American Journal of Physical Anthropology* 81/1 (1990): 277.

27. See Ann Gibbons, "The Peopling of the Americas," *Science* 274 (4 Oct. 1996): 32–33.

28. Roger Highfield, "Europeans Colonised America in 28,000 BC," Electronic Telegraph, issue 1730 (19 Feb. 2000): 1 (www.telegraph.co.uk).

29. See Theodore G. Schurr, "Mitochondrial DNA and the Peopling of the New World," *American Scientist* 88/3 (2000), 246–53; and Virginia Morell, "Genes May Link Ancient Eurasians, Native Americans." *Science* 280 (24 April 1998): 520.

30. Ibid., 33.

31. See Dennis H. O'Rourke, S. W. Carlyle, and R. L. Par, "Ancient DNA: Methods, Progress, and Perspectives," *American Journal of Human Biology* 8 (1996): 557–71.

32. See Nicholas Wade, "DNA Backs a Tribe's Tradition of Early Descent from the Jews," *New York Times,* 9 May 1999, 1, 10; Karl Skorecki et al., "Y Chromosomes of Jewish Priests," *Nature* 385 (2 Jan. 1997): 32; A. B. Spurdle and T. Jenkins, "The Origins of

the Lemba 'Black Jews' of Southern Africa: Evidence from p12F2 and Other Y-Chromosome Markers," *American Journal of Human Genetics* 59 (1996): 1126–33.

33. See M. J. Allison et al., "ABO Blood groups in Chilean and Peruvian Mummies," 139–42; see note 10.

34. See C. W. Griggs et al., "Evidences of a Christian Population in the Egyptian Fayum and Genetic and Textile Studies of the Akhmim Noble Mummies," *BYU Studies* 33/2 (1993), 215–44.

35. Bryan Sykes et al., "The Origins of the Polynesians: An Interpretation from Mitochondrial Lineage Analysis," *American Journal of Human Genetics* 57 (1995): 1463–75, 1470–72.

36. See Jim Borg, "The History Within," *Hawaii Magazine,* February 1997, 36–41, based on an interview with Rebecca Cann at University of Hawaii.

37. Sykes et al., "The Origins of the Polynesians," 1472.

38. See ibid., 1463.

39. See J. K. Lum et al., "Polynesian Mitochondrial DNAs Reveal Three Deep Maternal Lineage Clusters," *Human Biology* 66/4 (1994), 567–90, 573.

40. Sykes et al., "The Origins of the Polynesians," 1474.

41. Borg, "The History Within"; compare Sykes et al., "The Origins of the Polynesians," 1472.

42. See, for example, R. H. Ward et al., "Extensive Mitochondrial Diversity within a Single Amerindian Tribe," *National Academy of Science USA, Proceedings* 88 (1991): 8720–24.

43. See L. Cavalli-Sforza et al., *History and Geography.*

44. See James L. Guthrie, "Human Lymphocyte Antigens: Apparent Afro-Asiatic, South Asian, and European HLAS in Indigenous American Populations," MS in possession of John L. Sorenson.

45. See Kelly Owens and Mary-Claire King, "Genomic Views of Human History," *Science* 286 (15 Oct. 1999): 451–53.

46. A. E. Mourant et al., *The Genetics of the Jews* (Oxford: Clarendon Press, 1978), 39.

47. See ibid., 39.

48. See ibid., 25.

49. Some work on genetic aspects of blood groups has been done, but it is not systematic and comes to no clear conclusion about what the ancestral Jewish genes might have been. See Mourant et al., *The Genetics of the Jews;* and Raphael Patai and Jennifer Patai, *The Myth of the Jewish Race,* rev. ed. (Detroit: Wayne State University Press, 1989).

50. See John L. Sorenson, "When Lehi's Party Arrived in the Land, Did They Find Others There?" *Journal of Book of Mormon Studies* 1 (1, 1992), 1–34; republished in *Nephite Culture and Society: Collected Papers,* ed. Matthew Sorenson (Salt Lake City: New Sage Books, 1997), 65–104.

51. John L. Sorenson, "The Significance of an Apparent Relationship Between the Ancient Near East and Mesoamerica," in *Man across the Sea: Problems of Pre-Columbian Contacts,* ed. C. L. Riley, J. C. Kelley, C. W. Pennington, and R. L. Rands (Austin: University of Texas Press, 1971), 219–41.

52. See Cyrus H. Gordon et al., *Before Columbus: Links between the Old World and Ancient America* (New York: Crown, 1971); *Riddles in History* (New York: Crown, 1974);

and J. H. McCulloch, "The Bat Creek Inscription: Cherokee or Hebrew?" *Tennessee Anthropologist* 13/2 (1988), 79–123.

53. See Alexander von Wuthenau, *Altamerikanische Tonplastik: Das Menschenbild der Neuen Welt* (Baden-Baden: Holle, 1965); and *Unexpected Faces in Ancient America, 1500 b.c.–a.d. 1500* (New York: Crown, 1975).

54. See Pierre Agrinier, "Linguistic Evidence for the Presence of Israelites in Mexico," *Society for Early Historic Archaeology, Newsletter and Proceedings* 112 (1969): 4–5, which reports on glottochronological comparisons begun under M. Swadesh's guidance. Brian Stubbs's "Elements of Hebrew in Uto-Aztecan: a Summary of the Data" (FARMS, 1988), and subsequent reports have found at least 1,000 roots with phonological and other linguistic patterns consistent with creolization involving a Semitic language and Uto-Aztecan.

55. See Mary LeCron Foster, "The Transoceanic Trail: the Proto-Pelagian Language Phylum," *Pre-Columbiana* 1 (1998): 88–113; "Old World Languages in the Americas," unpublished paper presented at the eighth annual meeting of the Language Origins Society, Selwyn College, Cambridge University, 7–10 Sept. 1992 (copy in the possession of John Sorenson).

56. *The Lost Tribes,* video documentary produced by Nova, copy in FARMS library.

57. See "The Jewish Indians in Mexico," *Jewish Folklore and Ethnology Review* 18 (1950): 1–12.

58. In an e-mail to John Sorenson dated 13 October 2000, he wondered if any LDS DNA specialists would be interested in collaborating.

Out of the Dust

1. Craig Savage, "Scientists find civilization where it isn't supposed to be," *Christian Science Monitor,* 25 May 2000, 3.

2. S. Kent Brown, *From Jerusalem to Zarahemla* (Provo, Utah: BYU Religious Studies Center, 1998), 55–74.

3. Mike Theodoulou, "Traces of the Queen of Sheba under antiquity's dust," *Christian Science Monitor,* 20 September 2000, 7.

4. William Ryan and Walter Pitman, *Noah's Flood: The New Scientific Discoveries about the Event That Changed History* (New York: Simon & Schuster, 1998).

5. C. M. Aikens, "First in the World: The Jomon Pottery of Early Japan," in *The Emergence of Pottery: Technology and Innovation in Ancient Societies,* ed. William K. Barnett and John W. Hoopes (Washington and London: Smithsonian Institution Press, 1995), 11–21.

6. Angela E. Close, "Few and Far Between: Early Ceramics in North Africa," in *The Emergence of Pottery,* ed. Barnett and Hoopes, 23–37.

7. David Mattingly, "Making the desert bloom: the Garamantian capital and its underground water system," *Archaeology Odyssey* 3/2 (March–April): 31–37.

8. Anna C. Roosevelt, "Early Pottery in the Amazon: Twenty Years of Scholarly Obscurity," in *The Emergence of Pottery,* ed. Barnett and Hoopes.

9. L. Fernando Ferreira et al., "Encontro de ovos de ancilostomídeos em coprólitos humanos datados de 7,230±80 anos, no Estado do Piauí, Brasil," in *Paleoparasitologia*

no Brasil, ed. L. Fernando Ferreira, A. Araújo, and U. Confalonieri. (Rio de Janeiro: Programa de Educaçao Pública, Escola Nacional de Saúde Pública, 1988).

10. See Will Weissert, "Ancient Mayan Marketplace Found," http://www.abcnews.go.com, 27 Oct. 2000; and Angela M. H. Schuster, "Maya Palace Uncovered," http://www.archaeology.org, 8 Sept. 2000.

11. Brigham H. Roberts, *New Witnesses for God: II, The Book of Mormon* (Salt Lake City: Deseret News, 1951), 503.

Centenary of a Giant

1. Harold Lundstrom, "George Reynolds," in *A Complete Concordance of the Book of Mormon* (Salt Lake City: Deseret Book, 1973), iv. For more information about the life and work of George Reynolds, see Bruce A. Van Orden, *George Reynolds: Secretary, Sacrificial Lamb, and Seventy* (Provo, Utah: Brigham Young University, 1986), 114–48; and Bruce A. Van Orden, "George Reynolds: Loyal Friend of the Book of Mormon," *Ensign,* August 1986, 48–51.

2. Reynolds's preface to the *Concordance.*

3. Ibid.

4. Ibid.

5. Tabulated from Donald W. Parry, Jeanette W. Miller, and Sandra A. Thorne, *A Comprehensive Annotated Book of Mormon Bibliography* (Provo, Utah: Research Press, 1996).

6. Ibid.

7. Lundstrom, "George Reynolds," iii.

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