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Title Last-Ditch Warfare in Ancient Mesoamerica Recalls the Book of Mormon

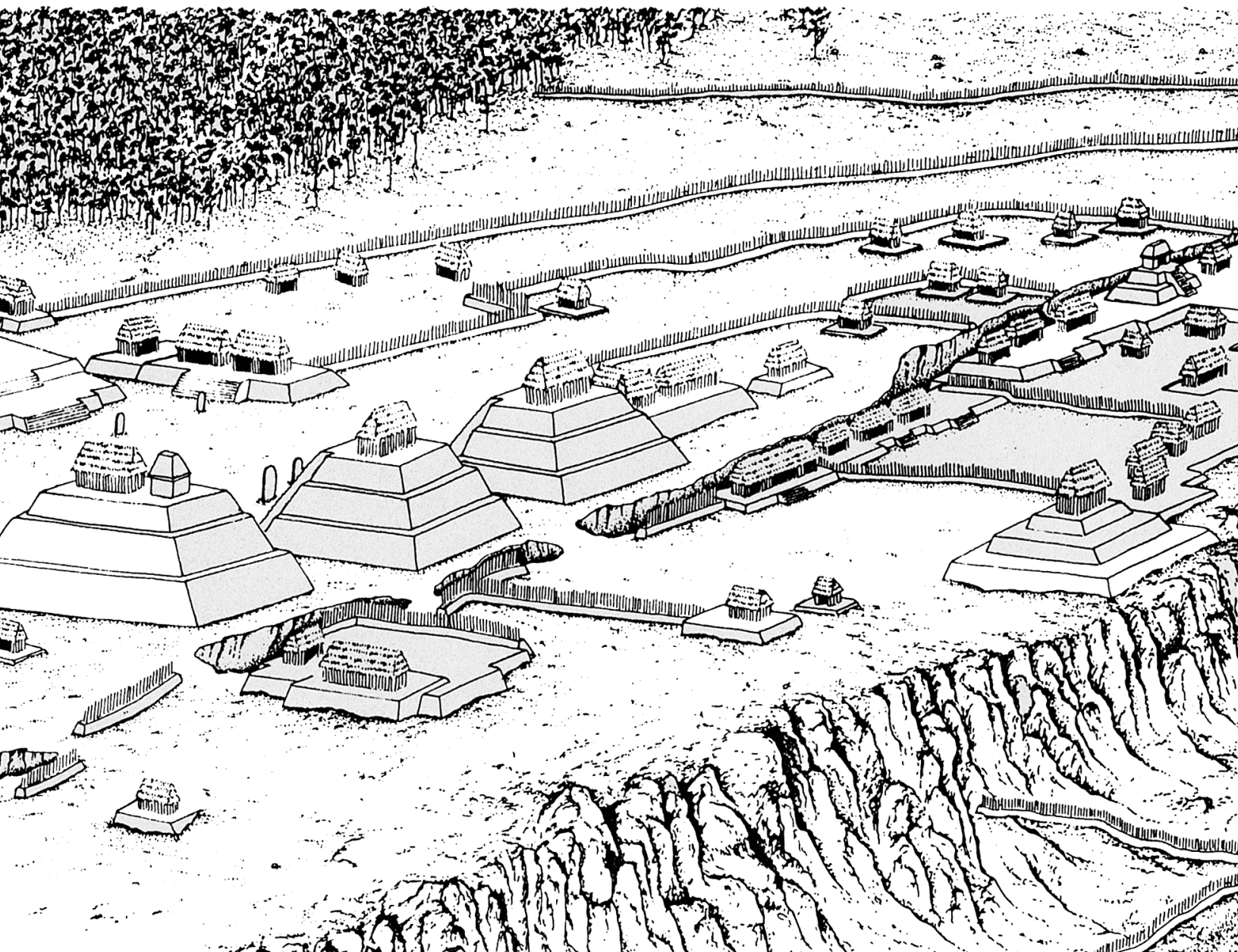
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Abstract Warfare is a constant theme in the Book of Mormon. Conflicts with varying motivations erupted between the Nephites and Lamanites from the beginning of their sojourn in the New World. Ultimately, the Nephites as a sociopolitical group were exterminated in one climactic battle when hundreds of thousands died in a single day. Have Mesoamerican archaeologists detected an intensity and scale of warfare great enough to account for the extermination of a people like the Nephites? Yes, there is now good reason to believe that the period when the Nephites were being destroyed by their enemies was characterized in southern Mexico and Guatemala by widespread disruption rather than an orderly evolution in the Classic era that once was the standard claim of archaeologists. The process of the complete destruction of the Nephites and their culture agrees with a recurrent pattern in Mesoamerican history.

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 Mosiah₁ 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 Moroni₁ 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, Moroni₂, 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?

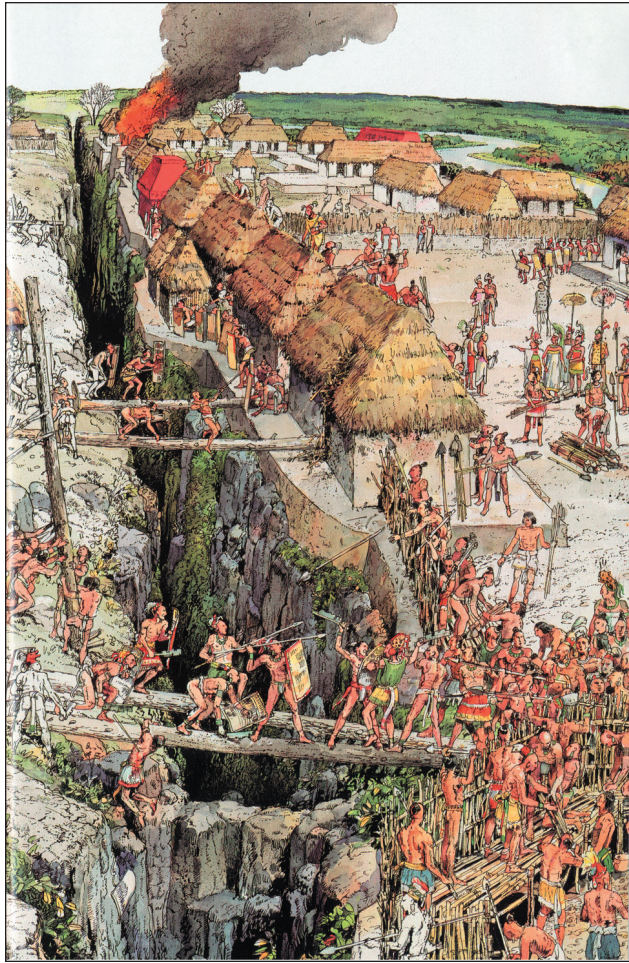
Archaeological Facts vs. Fashions in Archaeological Interpretation

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-



DRAWN BY L. F. LUJAN, COURTESY WANDERBLIT UNIVERSITY PRESS

An artist's conception of the breaching of Aquateca'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

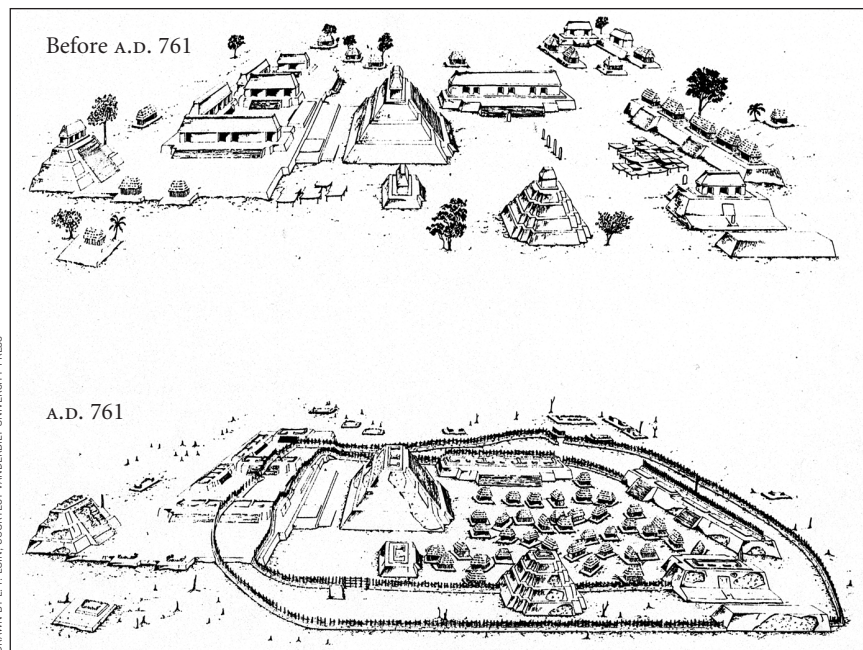
sites could be provided,²² certain researchers have been considering the evidence for this newly recognized period of troubles on a scale that encompasses all of southern Mesoamerica. The archaeological record now indicates that the transition from the end of the Late or Terminal Pre-Classic period into 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



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-



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

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

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.

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. ■■

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 Heskell 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 Heskell 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 Heskell 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 arqueológica 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 *Atlas 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 Pre-Columbian 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 V. 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 Manfred Dietrich and Oswald Loretz, *Analytic Ugaritic Bibliography*, Alter Orient und Altes Testament 6 (Neukirchen-Vluyn: Verlag Butzon & Bercker Kevelaer, 1996), 777, s.v. “*np̄*.”

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 *np̄y* 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. “*np̄*.” 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 pueblos 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 (1976): 202–45.

16. See Rubén Lisker, “El origen de los grupos humanos en América: serología y hematología en general de los Amerindios y sus posibles relaciones trans-pacíficas,” *Thirty-Sixth International Congress of Americanists* (Barcelona and Seville, 1964), *Proceedings* 1 (Barcelona and Seville: 1966), 43–51.