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## Geological Upheaval and Darkness in 3 Nephi 8-10

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Alvin K. Benson

Prophets repeatedly warned the Nephites and Lamanites of judgments that would come at the time of Christ's crucifixion. Hundreds of years earlier, Zenos and Nephi had foreseen the great calamities that befell the Nephite nation in AD 34 (1 Nephi 12:4–6, 19:10–14; 2 Nephi 26:3–4). Some of Zenos' writings—which were preserved on the brass plates of Laban—prophecy of the destructions that would attend the Lord's death:

The Lord God surely shall visit all the house of Israel at that day, some with his voice, because of their righteousness, unto their great joy and salvation, and others with the thunderings and the lightnings of his power, by tempest, by fire, and by smoke, and vapor of darkness, and by the opening of the earth, and by mountains which shall be carried up. . . . And the rocks of the earth must rend. (1 Nephi 19:11–12)

Furthermore, Zenos “spake concerning the three days of darkness, which would be a sign given of his [Christ's] death unto those who should inhabit the isles of the sea, more especially given unto those who are of the house of Israel” (1 Nephi 19:10). Apparently, portions of the house of Israel far removed from Jerusalem were destined to receive special signs as a witness of the Savior's death.

Nephi also foresaw in a vision the events which would occur among the Nephites when the Messiah died:

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And it came to pass that I saw a mist of darkness on the face of the land of promise; and I saw lightnings, and I heard thunderings, and earthquakes, and all manner of tumultuous noises; and I saw the earth and the rocks, that they rent; and I saw mountains tumbling into pieces; and I saw the plains of the earth, that they were broken up; and I saw many cities that they were sunk; and and I saw many that they were burned with fire; and I saw many that did tumble to the earth, because of the quaking thereof. And it came to pass after I saw these things, I saw the vapor of darkness, that it passed from off the face of the earth; and behold, I saw multitudes who had fallen because of the great and terrible judgments of the Lord. (1 Nephi 12:4–5)

Just forty years prior to the crucifixion of the Savior, another prophet of God, Samuel the Lamanite, also enumerated in glorious prophecy the calamities and destructions that would occur on the American continent at the time Christ would voluntarily give up his life:

But behold, as I said unto you concerning another sign, a sign of his death, behold, in that day that he shall suffer death the sun shall be darkened and refuse to give his light unto you; and also the moon and the stars; and there shall be no light upon the face of this land, even from the time that he shall suffer death, for the space of three days, to the time that he shall rise again from the dead.

Yea, at the time that he shall yield up the ghost there shall be thunderings and lightnings for the space of many hours, and the earth shall shake and tremble; and the rocks which are upon the face of this earth, which are both above the earth and beneath, which ye know at this time are solid, or the more part of it is one solid mass, shall be broken up;

Yea, they shall be rent in twain, and shall ever after be found in seams and in cracks, and in broken fragments upon the face of the whole earth, yea, both above the earth and beneath.

And behold, there shall be great tempests, and there shall be many mountains laid low, like unto a valley, and there shall be many places which are now called valleys which shall become mountains, whose height is great.

And many highways shall be broken up, and many cities shall become desolate. (Hel 14:20–24)

As the time of the Savior's death grew near and these prophecies began to be fulfilled, an underlying current of wickedness produced great instability in the Nephite society. The



prevailing conditions included political unrest, terrorist activities, separation of society into classes, destruction of life and property, riots and wars, and political movements to overthrow righteous institutions (3 Nephi 6–7). Under these conditions, the more righteous Nephites were looking forward to seeing the signs associated with Christ’s crucifixion (Hel 14:20–28). But it had been thirty-three years since the birth of the Savior, and doubtings and disputations began to arise among the wicked despite the many signs that had been previously given (3 Nephi 8:1–4).

### Geological Changes and Foreboding Darkness

As with all prophecies of the Lord, fulfillment of the Nephite prophecies came with total and unerring certainty. When the Master—hanging on the cross just outside Jerusalem—gave up his life, the American continent experienced great calamities. Speaking about the events recorded in 3 Nephi 8–10, Elder Bruce R. McConkie stated: “No single historical event in the whole Book of Mormon account is recorded in so great detail or such extended length as the fulfillment of the signs signifying that Jesus had been lifted up upon the cross and had voluntarily laid down his life for the world” (542).

For the Nephites, the subsequent disaster was ushered in by “a great storm, such an one as never had been known in all the land” (3 Nephi 8:5). That storm was so ferocious that thunder shook the ground, earthquakes rumbled, and lightning set cities on fire (8:6–8; 9:3). Other cities sank into the depths of the sea, and still others were buried in the earth (8:9–15; 9:4–10). The surface of the ground was generally broken up as open fissures developed and new hills and valleys were formed (8:12–13, 17). And people were carried away by the whirlwinds and never heard of again (v 16). Intense cataclysmic events raged throughout the land.

Nephi summarizes the tremendous geological changes that occurred: “And thus the face of the whole earth became

deformed, because of the tempests, and the thunderings, and the lightnings, and the quaking of the earth. And behold, the rocks were rent in twain; they were broken up upon the face of the whole earth, insomuch that they were found in broken fragments, and in seams and in cracks, upon all the face of the land” (3 Nephi 8:17–18). *Whole earth* is an interesting phrase. What does it mean? Does it mean that the catastrophic events experienced by the Nephites were global, or were they a more localized phenomena? That phrase is used numerous times in describing the calamities (see vv 6, 12, 17, and 18). If these tremendous geological changes and the ensuing three days of darkness had been global, we would expect to find accounts of them in the literature of other contemporary societies, such as the Romans, Greeks, Chinese, Persians. But since it is found only in Nephite writings, the phrase *whole earth* must mean the *whole land* of the Nephites. For example, this phrase is used there in a localized rather than global setting: “And they began to know that the Son of God must shortly appear; yea, in fine, all the people upon the face of the whole earth from the west to the east, both in the land north and in the land south, were so exceedingly astonished that they fell to the earth” (1:17). This illustrates the point that the context and the audience for which a scripture is directed are very important in the interpretation of it.

The devastating events described in 3 Nephi lasted for about three hours and were followed by a foreboding darkness that the people could “feel”:

And it came to pass that when the thunderings, and the lightnings, and the storm, and the tempest, and the quakings of the earth did cease—for behold, they did last for about the space of three hours; and it was said by some that the time was greater; nevertheless, all these great and terrible things were done in about the space of three hours—and then behold, there was darkness upon the face of the land. And it came to pass that there was thick darkness upon all the face of the land, insomuch that the inhabitants thereof who had not fallen could feel the vapor of darkness. (3 Nephi 8:19–20)



The Americas were engulfed in darkness while the Lord's body lay in the tomb and his eternal spirit taught the righteous dead (1 Peter 3:18–20; D&C 138; see also McConkie 540). Not a glimmer of light could be seen for three days, and attempts to kindle fires with their “fine and exceedingly dry wood” were futile:

And there could be no light, because of the darkness, neither candles, neither torches; neither could there be fire kindled with their fine and exceedingly dry wood, so that there could not be any light at all; And there was not any light seen, neither fire, nor glimmer, neither the sun, nor the moon, nor the stars, for so great were the mists of darkness which were upon the face of the land. And it came to pass that it did last for the space of three days that there was no light seen. (3 Nephi 8:21–23)

How appropriate it is that at the Savior's birth *light* shown for a day and a night and a day (3 Nephi 1:19); whereas at his death, *darkness* prevailed among the Nephites for three days. It appears that the earth was symbolically manifesting its gloom over the death of its creator (9:15). As Professor Sidney B. Sperry pointed out, the darkness “may possibly be accounted for on the basis that the Spirit of Christ was withdrawn in part from the land (cf D&C 84:45–46; 88:7–13)” (400).

### Geological Phenomena: A Possible Analysis of the Events in 3 Nephi 8–10

Both Zenos and Nephi prophesied that the events described in 3 Nephi 8–10 would be accompanied by fire (1 Nephi 12:4; 19:11; 2 Nephi 26:6); and indeed 3 Nephi 9:11 states that the Lord “did send down fire.” It is quite probable that this may refer to lightning accompanying volcanic activity triggered by the quaking earth (3 Nephi 8:17). Photos of erupting volcanoes, such as Mount Vesuvius in 1944 (Fodor 15) and Sakura-jima in 1987 (Kemp 40–41), show hundreds of lightning bolts in the ash clouds above those volcanoes. The friction between fine volcanic ash particles in the atmosphere is very effective in



generating severe lightning without any attending rain, leaving the ground and wood very dry. It is interesting that after hours of thunderstorm activity of unprecedented fury and violent earthquakes, the Nephites' wood was still referred to as being "exceedingly dry" (3 Nephi 8:21).

Furthermore, if volcanic eruptions lasted for several hours, as indicated in 3 Nephi 8, an enormous amount of ash would have been discharged into the atmosphere. The ash from a volcano can rise to great heights (many thousands of feet) and then spread out in the stratosphere to cover a large region with an impenetrable cloud of dust (Goldner and Vogel 37–43; Warren and Ferguson 42). Volcanic ash, smoke, and gases, along with dust and debris rising into the air from a large earthquake, could have produced the "vapor of darkness" spoken of in 3 Nephi 8:20 and 10:13. Professor Hugh Nibley also suggests that the vapor of darkness may have resulted from volcanic activity (267). Furthermore, volcanic ash and lava can be carried *up* to bury cities (Berger 57–61), and Nephi records that the earth was carried *up* on the city Moronihah (3 Nephi 8:10) and not down, as one would expect in a landslide.

Also, in 3 Nephi 10:13, inference can be drawn that people died from suffocation from "the vapor of smoke and of darkness." Warren and Ferguson record that when the ash from a volcanic eruption "begins to fall back toward the earth, it is accompanied by many gases, including hydrochloric acid, hydrofluoric acid, carbonic acid, carbon dioxide, and ammonia. If the ash fall is heavy, people will naturally suffocate, not only from the ash content itself but from these gases, which are lethal in large quantities" (42). In several modern cases, volcanic gases have collected in low spots after an eruption, killing people, animals, and vegetation (Montgomery 105–106; Macdonald 251–52, 257). The fate of a particular city would depend on its location relative to fault lines and volcanoes, and upon the direction of the wind carrying volcanic ash and gases. In the regions of the surviving Nephites, the concentration of volcanic gases may have been sufficient to prevent the ignition



of fires but not high enough to suffocate people. Because most volcanic gases are heavier than air, they tend to hug the ground; hence, at ground level, concentrations could have been high enough to prevent ignition of the Nephites' dry tinder. However, in the more righteous cities, lethal concentrations may not have been present a few feet above the ground allowing the more righteous to survive.

As the period of darkness ended, Nephi records:

And it came to pass that thus did the three days pass away. And it was in the morning, and the darkness dispersed from off the face of the land, and the earth did cease to tremble, and the rocks did cease to rend, and the dreadful groanings did cease, and all the tumultuous noises did pass away. (3 Nephi 10:9)

Since the verb *disperse* implies breaking up and scattering, the terminology in verse 9 could refer to the eventual dispersion of a volcanic ash cloud. That verse also indicates that the trembling of the earth continued throughout the three-day period of the Savior's entombment, suggesting continued volcanic activity and many aftershocks. Also, volcanic ash may have been coming forth all that time to sustain the thick darkness.

If volcanic eruptions were the source of the tremendous darkness, what initiated that activity? Modern models, examples, and descriptions of earthquake and volcanic activity provide many helpful insights. As an example, let us consider some of the recorded events associated with the Mount St. Helen's volcanic eruption on 18 May 1980, which contain many descriptions similar to those in 3 Nephi 8–10.

Investigations suggest that an earthquake measuring 5.1 on the Richter scale may have triggered the eruption, and as the side of the mountain slid down and the top was blown away, the resulting shock wave blew down all the timber and vegetation within 15 miles. Some survivors referred to the noise and shaking as like being next to ground zero in an atomic bomb blast (Aylesworth 15–17; Berger 57–59). Visibility dropped to zero; and as the thick volcanic dust hid the sun, day became



night as far away as 500 miles. Spokane, Washington, located just 250 miles east of the blast site, was in complete darkness at 3:00 pm. Bolts of lightning flashed from Mount St. Helens, sparking numerous forest fires, and the air was so full of smoke and pumice that people could not survive outside. Volcanic ash and gases irritated skin, eyes, and lungs, making breathing extremely difficult and fires impossible to ignite. Many earthquakes and/or aftershocks accompanied the eruption, and mud and debris flows changed the surrounding landscape for miles around (Goldner and Vogel 10–13, 27–29, 37–43; Aylesworth 15–17, 25–35; Berger 57–63; Fodor 11–15; Montgomery 99–102; Palmer 82–88; Rosenfeld 494–509). The similarities in these descriptions to the events in 3 Nephi 8–10 are striking: earthquake(s) (3 Nephi 8:6, 17–18), fire (9:11; 10:14), tumultuous noises (10:9), sharp lightning (8:7), darkness (8:19), suffocating vapors of smoke (10:13), aftershocks (10:9), and geological upheaval over large areas (8:17–18).

As with the Mount St. Helens catastrophe, the volcanic activity reported in the Nephite disaster most probably was initiated by earthquake activity. The main earthquake must have been gigantic since the “face of the whole earth became deformed. . . . And behold, the rocks were rent in twain; they were broken up upon the face of the whole earth” (3 Nephi 8:17–18), and “tumultuous noises” accompanied the quaking for three days (10:9). At appropriate locations on the earth, this quaking can trigger erupting volcanoes, showing that the ordering of events in 3 Nephi 8:6–7 would be correct: “There was terrible thunder, insomuch that it did shake the whole earth as if it was about to divide asunder. And there were exceedingly sharp lightnings.” The first arrival of energy from an earthquake is the compressional wave that produces “noise,” which could sound like “thunder.” This energy is then followed by the arrival of shear and surface waves, which typically produce most of the shaking and damage along with more deafening noises. The “tumultuous noises” could be generated by the breaking of rock strata, the opening of cracks in the earth, the collapse of



buildings, etc., followed by the noise of volcanic eruptions and associated lightning and thunder (Fodor 11–15).

Generally, earthquakes occur in well-defined belts or zones in the earth located at the junctions of lithospheric plates, which are large pieces of the earth's brittle crust. According to the theory of plate tectonics, as these plates move slowly over the surface of the earth, they either (a) collide with each other, (b) pull away from one another, or (c) slide over and beneath each other creating subduction zones. These zones are characterized by (a) large-scale fault movement; (b) periodic, severe earthquakes; (c) volcanic activity; and (d) typically, a deep ocean trench (Montgomery 46–59).

One of the more active subduction zones of the world is located along the western coasts of Central and South America. The mountainous areas there extend oceanward to a long, linear ocean trench. This trench exceeds 20,000 feet in depth and is bordered along the shore by mountains over 22,000 feet high. This large elevation difference of over 40,000 feet is a likely site for large-scale fault development, allowing blocks of earth to slip oceanward (Montgomery 55–59; Baer 130). Such movement could occur during a large earthquake, which could explain the loss of the city of Moroni into the depths of the sea (3 Nephi 8:9).

It is common for areas that have frequent, severe earthquakes to have a high incidence of volcanic activity. Two devastating Guatemalan earthquakes (23 December 1586 and 29–30 September 1717) were accompanied by severe and violent eruptions of the volcano Fuego (Espinosa 87–90). Earthquake activity and active volcanoes are common along the west coast of South America and, particularly, Central America (Warren and Ferguson 40–45).

The earthquake activity described in 3 Nephi 8–10, including the main quake and the aftershocks, could well have occurred in three hours (3 Nephi 8:19) or lasted for three days (10:9–10). Many earthquakes in Guatemala, for example, have had a main shock followed by several aftershocks for as long



as five weeks afterward (Espinosa 87–90). Similarly, the emission of volcanic dust and gas to sustain the darkness could easily have lasted for three days (3 Nephi 10:9).

Consequently, it is very feasible that a large earthquake and attendant volcanic activity could account for the geological catastrophies recorded in 3 Nephi 8–10, and it is also very feasible that this occurred along the west coast of Central and/or South America. Interestingly, as pointed out by Baer (131–32), the theory of plate tectonics describing subduction zones, etc. was not developed for well over a hundred years after Joseph Smith translated the Book of Mormon, and it is significant that this modern geophysical model of how the earth works supports the feasibility of the events described in 3 Nephi 8–10.

### Why the Disaster?

In the Book of Mormon the thick darkness lasted for “the space of three days,” and there was “great mourning and howling and weeping among all the people continually; yea, great were the groanings of the people, because of the darkness and the great destruction which had come upon them” (3 Nephi 8:23). The Lord told the Nephites that all of these physical changes—geological upheaval and associated destruction—came as a just judgment upon the wicked: “It is because of their iniquity and abominations that they are fallen! . . . to hide their iniquities and their abominations from before my face, that the blood of the prophets and the saints shall not come any more unto me against them. . . . And many great destructions have I caused to come upon this land, and upon this people, because of their wickedness and their abominations” (3 Nephi 9:2, 5, 12). As the Lord describes why particular cities and their inhabitants were destroyed in 3 Nephi 9:2–12, he repeats the word *wickedness* eight times, *abominations* seven times, *iniquity* two times, and the phrase “that the blood of the prophets and the saints shall not come up any more unto me against them” five times. He leaves no suggestion as to the reason for the

destruction: it was their own wickedness. The Lord also states that all these things were done “unto the fulfilling of the prophecies of many of the holy prophets” (3 Nephi 10:14).

In addition to destroying the wicked, the geological upheaval and associated devastation also served as a sign and a witness to the remaining righteous people that the atonement, death, and resurrection of the Savior had taken place on the opposite side of the world. The Lord explained this to the surviving Nephites, as he declared his messiahship (3 Nephi 9:15) and extended an invitation for all to come unto him: “Behold, I have come unto the world to bring redemption unto the world, to save the world from sin. Therefore, whoso repenteth and cometh unto me as a little child, him will I receive, for of such is the kingdom of God. Behold, for such I have laid down my life and have taken it up again; therefore repent, and come unto me ye ends of the earth, and be saved” (vv 21–22). Although the remaining Nephites are referred to as “the more righteous” in a comparative sense to those who had been destroyed, they still needed to repent:

O all ye that are spared because ye were more righteous than they, will ye not now return unto me, and repent of your sins, and be converted, that I may heal you? Yea, verily I say unto you, if ye will come unto me ye shall have eternal life. Behold, mine arm of mercy is extended towards you, and whosoever will come, him will I receive; and blessed are those who come unto me. . . . And as many as have received me, to them have I given to become the sons of God; and even so will I to as many as shall believe on my name, for behold, by me redemption cometh, and in me is the law of Moses fulfilled. (3 Nephi 9:13–14, 17)

Thus, God uses his power to fulfill all of his purposes and promises; and even in times of great destruction, upheaval, darkness, and sorrow, the Savior will bring peace, joy, and great blessings into the lives of the “more righteous” through the gospel plan (10:10, 12, 18).



## Conclusions

Both the scriptural prophecies concerning the birth of Christ and those which foretold the events associated with his death were fulfilled in unerring detail:

And thus far were the scriptures fulfilled which had been spoken by the prophets. . . . And now, whoso readeth, let him understand; he that hath the scriptures, let him search them, and see and behold if all these deaths and destructions by fire, and by smoke, and by tempests, and by whirlwinds, and by the opening of the earth to receive them, and all these things are not unto the fulfilling of the prophecies of many of the holy prophets. (3 Nephi 10:11, 14)

The Lord “created the heavens and the earth, and all things that in them are” (9:15), and “though the heavens and the earth pass away” (D&C 1:38), all the prophecies and promises of the Lord will be fulfilled (Mormon 8:22). Chapters 8–10 of 3 Nephi clearly demonstrate that a nation cannot wilfully sin and rebel against the Lord’s commandments without upsetting the balance of nature and incurring the wrath of God through natural catastrophes which discipline his children and destroy the wicked (3 Nephi 9:5, 7–12). As pointed out by Elder Bruce R. McConkie, “It is perfectly clear that these destructions came as a just judgment upon the wicked, and that they are in similitude of the outpourings of wrath that shall come upon the whole world at the Second Coming” (McConkie 541).

The geological upheaval and physical changes described in 3 Nephi 8–10, which destroyed much of the Nephite nation, could easily have been caused by a gigantic earthquake with attendant storms, volcanic activity, and aftershocks of incredible proportions. The similarities in the descriptions of other documented catastrophies, such as the Mount St. Helen’s disaster in 1980, to the geological upheaval and darkness recorded in 3 Nephi 8–10 are striking. Most aspects of the geological changes in 3 Nephi can be accomodated by modern earthquake models through the theory of plate tectonics, and the very nature of earthquake and volcanic activity typical of the South and

Central America is consistent with the whole set of phenomena recorded in 3 Nephi 8–10. Modern geophysical and geological theories support the 3 Nephi events as realities and not—as some critics report—fabricated myths.

Although the geological changes in the earth were very spectacular and of such magnitude that “the face of the whole earth became deformed . . . [and] the rocks were rent in twain” (3 Nephi 8:17–18), they pointed to events of much greater importance. They were signs to signify that the greatest events in the history of this earth were now in place—the atonement, death, and resurrection of our Savior, Jesus Christ. Because of their vast importance, “no single historical event in the whole Book of Mormon account is recorded in so great detail or at such extended length as the fulfillment of the signs signifying that Jesus had been lifted up upon the cross and had voluntarily laid down his life for the world” (McConkie 542).

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