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Geology of the Book of Mormon

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Jordan: Geology of the Book of Mormon

Jerry D. Grover Jr. *Geology of the Book of Mormon*. Provo, Utah: By the author, 2014.

Reviewed by Benjamin R. Jordan

S ince the earliest days of the publication of the Book of Mormon, there have been several studies, scholarly and otherwise, on the geography of the regions and events described within that book. Until now, most of those discussions and arguments over the possible locations and arrangement of its cities and regions have been based on geographical relationships described in the Book of Mormon itself and modern archaeological research within the Americas. Most current models favor Mesoamerica as the geographic region of Nephite and Lamanite lands. The recent publication of Jerry D. Grover Jr.'s *Geology of the Book of Mormon*¹ adds significant strength to these models.

Today, while some individuals still argue for a Book of Mormon setting in the Great Lakes region of the United States and Canada,² most Latter-day Saint scholars acknowledge Mesoamerica as the most likely region that matches descriptions found within the book. The likelihood of such a setting was greatly strengthened by John L. Sorenson's groundbreaking book, *An Ancient American Setting for the Book of Mormon*, published in 1985.³ Jerry Grover's book, which uses geological principles to explain the occurrence of natural events in the Book of Mormon,

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^{1.} Jerry D. Grover Jr., *Geology of the Book of Mormon* (Vineyard, Utah: By the author, 2014). A free digital copy of the book can be found online at https://archive.bookofmormoncentral.org/content/geology-book-mormon.

^{2.} See, for example, Delburt W. Curtis, *Christ in North America* (Tigard, Oregon: Resource Communications, 1993). My edition, which lists Delburt W. Curtis as the publisher, does not credit Resource Communication, but they are the original printer and binder of the book.

^{3.} John L. Sorenson, *An Ancient American Setting for the Book of Mormon* (Salt Lake City: Deseret Book, 1985).

is not as widely known. This is most likely because it is new and selfpublished. However, the self-published nature of the book should not dissuade readers from using it as a valuable contribution to Book of Mormon studies. Grover has done an admirable job of setting forth his sound scientific analysis and interpretations, providing a new perspective on the settings and locations of Book of Mormon lands.

The focus of the book is mostly on the destructive events associated with Christ's death, as described in 3 Nephi (see 3 Ne. 8-10). Grover applies his training as a geologist and an engineer to fit the descriptions of destruction into the paradigm of modern geologic understanding. As he lays out in his introduction, "I have long waited for an in-depth inquiry into the implications of geology as applied to the Book of Mormon setting, but . . . it has not received much scientific scrutiny, nor has there been much of an attempt to actually look at the potential geologic locations in Mesoamerica" (x). Since no such studies have been done, he decided to do one himself. Using the geology of Mesoamerica, he tests some of the more popular geographic models, such as Sorenson's, to see if the geography matches the geologic settings that would have been necessary to cause the events described within the Book of Mormon. Grover focuses mostly on the events of 3 Nephi, but he expands the discussion to include all of the events within the Book of Mormon that may have had a geological connection, such as the earthquake that freed Alma and Amulek from prison (Alma 14:25–29).

In the first part of the book, Grover summarizes the "Sorenson Model" and then gives a basic introduction to applicable geologic principles that might apply, such as plate tectonics, volcanic processes, and earthquake generation. I found his use of modern disaster scales to classify various geologic events especially useful (such as eruptions, earthquakes, or storms). He uses these in order to create the standards that he applies later in his discussion of whether certain model locations have the proper proximity to hazard sources to match Book of Mormon descriptions. For example, was the sunken city of Moroni close enough to water and earthquake hazards to support its method of destruction? This makes his book more analytical and applicable than general descriptions or comparisons. The overall summaries of processes, with the exception of a few jargon terms ("blocks" and "bombs" for instance), are enough to help the nongeologist reader understand his arguments and interpretations in the latter part of the book.

The rest of the chapters, covering the majority of the book, use the principles presented earlier to test some of the geographic models suggested for the Book of Mormon. Grover shows, clearly, that the geology of the Great Lakes region does meet the requirements of certain events, such as the mist of darkness (3 Ne. 8:19–22). Using Sorenson's Mesoamerican model, however, he is able to argue that there are geographic and geologic model locations for the city of Bountiful that would have made it possible for the city to have survived most of the destruction while its inhabitants, gathered at the temple, would still be close enough to see and discuss other areas of catastrophic change. I found this proposal especially thought-provoking.

Various geologic scenarios are presented and evaluated in a stepby-step progression, beginning with a volcano-only event and then progressing to the possibility of multiple events, such as a volcanic eruption and a major earthquake acting concurrently. His application of the causes and effects of these processes, based on their potential magnitudes, within the context of multiple geographic models (not just Sorenson's) is the real strength and value of the book. I went into the book with a rather critical eye, which, I think, made me sensitive to some of the imperfections, but by the time I reached chapter 12, "Best Fits for Locations and Events," I found myself intrigued by Grover's interpretations.

In my opinion, the book does have some weaknesses. The most significant one is in its layout and editing. Likely because it was self-published, the book has a significant number of typos, and the figures (and their placement within the text) lack a uniformity and consistency in appearance. The other weakness is that, although Grover references some earlier work on the relationship between geology and the Book of Mormon, such as Bart J. Kowallis's popular article on the destruction in 3 Nephi,⁴ his bibliography is not as extensive as I would have liked and expected.⁵ These are minor criticisms, however, when considering the work as a whole.

^{4.} Bart J. Kowallis, "In the Thirty and Fourth Year: A Geologist's View of the Great Destruction in 3 Nephi," *BYU Studies* 37, no. 3 (1997): 136–90.

^{5.} Full disclosure: two suggested articles not referenced are mine (Benjamin R. Jordan, "'Many Great and Notable Cities Were Sunk': Liquefaction in the Book of Mormon," *BYU Studies* 38, no. 3 [1999]: 119–22; and Benjamin R. Jordan, "Volcanic Destruction in the Book of Mormon: Possible Evidence from Ice Cores," *Journal of Book of Mormon Studies* 12, no. 1 [2003]: 78–87).

Jerry Grover has laid an important foundation for understanding some of the critical events in the Book of Mormon within the context of the geography and geology of potential Book of Mormon lands in Mesoamerica. The great strength of the book is that it provides a wellargued perspective based on the geology of natural disasters that is new to the analysis of the Book of Mormon—one that adds to the reality of Book of Mormon events and opens new doors for potential research and understanding of the geography of the Book of Mormon.

Benjamin R. Jordan received his PhD in geological oceanography from the University of Rhode Island's Graduate School of Oceanography after earning his BS in geology, with university honors, from Brigham Young University. His graduate work focused on the correlation and geochemical evolution of volcanic deposits in Central America. He is a first or contributing author of more than a dozen peer-reviewed articles and is the author of three books. He has also served as a reviewer for multiple academic journals. He is currently an associate professor at Brigham Young University–Hawaii and is an active member of the American Geophysical Union, the Geological Society of America, the Tsunami Society, and the International Association of Volcanology and Chemistry of the Earth's Interior.