



Type: Magazine Article

---

## Revelation Ante-dating Scientific Discovery—An Instance

Author(s): Frederick J. Pack

Source: *Improvement Era*, Vol. 10, No. 4 (February 1907)

Published by: The Church of Jesus Christ of Latter-day Saints

Page(s): 241-247

---

**Abstract:** This article investigates geological evidence that horses were present on the American Continent during the Book of Mormon period. The first part is a straightforward presentation of Pack's evidence.

# IMPROVEMENT ERA.

---

VOL. X.

FEBRUARY, 1907.

No. 4

---

## REVELATION ANTE-DATING SCIENTIFIC DISCOVERY—AN INSTANCÉ.

BY FRED J. PACK, A. M., PH. D., PROFESSOR OF MINERALOGY AND  
GEOLOGY, BRIGHAM YOUNG COLLEGE.

---

[The following article is interesting as showing that the many statements in the Book of Mormon, that horses were abundant on the American continent during Nephite and Jaredite times, were translated by inspiration and published to the world prior to the discovery by Darwin, and other scientists, of fossil remains of the horse on the American continents. It also shows that these statements were made and published in the Book of Mormon at a time when it was generally believed by all that no horses had ever existed on these lands. The article also gives a clear account of the discovery of the fossil remains of the horse in America. The author might have added, further, that more recent investigations have led to the conclusion that America is the original home of the horse. The embarrassing difficulty, however, that the fossil remains are held to be of very much greater antiquity than either Jaredite or Nephite times, still confronts us. But it must be remembered that a too great antiquity may be claimed for most of the evidence relating to the existence of the horse in the western world; and there is also evidence found by Charnay, as quoted by Nadaillac, and referred to in the Y. M. M. I. A. Manual for 1905-6, pages 554-5, that points to a more recent existence of the horse on the American continents. More evidence in this line may yet be looked for, as more perfect and more extensive explorations are instituted.—EDITORS.]

A short time ago it was announced through the papers of New York City that a certain divine would deliver a lecture on the *Relation of Science to Catholicism*. The meeting was to be held in the greatest of American churches—Saint Patrick's Cathedral. The house was filled to overflowing. Most of the people were regular attendants, but a few, like the writer, were transients, having been attracted solely by the topic to be discussed.

The speaker summarized his remarks by comparing religion and science to water and heated fat; the two do not and cannot agree. When placed together turmoil and strife inevitably result. The individual who attempts to carry religion in one hand and science in the other is sure to fall; God and Mammon cannot be served simultaneously. He warned believers to shun science and scientific literature, and concluded by stating that the clergy alone should investigate such matters.

"We believe all things," coupled with "if there is anything virtuous, lovely, or of good report, or praiseworthy, we seek after these things" plainly announces the position of the Church of Jesus Christ of Latter-day Saints. One of its fundamental tenets is that its doctrines include all truth, no matter from what source that truth may come. Facts cannot be at variance one with another; they cannot be created or destroyed; they are all factors in the great plan of human redemption and exaltation.

It is true that religion and so-called science occasionally clash, but this is always due to an incomplete knowledge of the scientific facts, which condition frequently results in erroneous deductions. When, however, the full glare of research and investigation are turned upon any scientific problem that problem is found in full accord with the revealed word of God.

Revelation not infrequently ante-dates scientific discovery. Scores of illustrations could be cited in connection with the Book of Mormon, but the writer will confine his attention in the present article to a single instance.

The Book of Mormon, published in the fall and winter of 1829-1830, contains several statements relating to the existence of horses upon the American continent for many centuries before its discovery by Columbus in 1492. The profane histories published at the same time were a unit in the thought that no horses existed

here previous to their introduction by the Spanish. Science was silent in the matter, no fossil remains of horses had been found, and it was not expected that any would be. But here, as in every other case where facts are fully known, science has come to the support of revelation, which it has vindicated beyond the doubts of even the most skeptical. It is now fully established that immense herds of horses roamed the plains and forests of America centuries before its discovery by the Europeans, and also that these horses had completely disappeared at the time of the landing of Columbus. Thus the historians were correct in the statement that the horses brought by the Spanish were the only ones on the continent, but they were wrong in thinking that they were the first.

In enumerating some of the animals used by the Jaredites in America for centuries before Christ the prophet Ether has this to say:

And they also had *horses*,\* and asses, and there were elephants and cureloms, and cumoms; all of which were useful unto man, and more especially the elephants, and cureloms, and cumoms. (Ether 9: 19.)

When the American continent was discovered by Lehi's colony, about 590 B. C., many varieties of animal life flourished abundantly. Concerning this Nephi writes:

And it came to pass that we did find upon the land of promise, as we journeyed in the wilderness, that there were beasts in the forests of every kind, both the cow and the ox, and the ass and the *horse*, and the goat and the wild goat, and all manner of wild animals, which were for the use of men. (I Nephi 18: 25.)

That horses were used among the Nephites as domestic animals the prophet Enos leaves little doubt. He says:

And it came to pass that the people of Nephi did till the land, and raise all manner of grain, and of fruit, and of flocks and herds, and flocks of all manner of cattle of every kind, and goats, and wild goats, and also *many horses*. (Enos 1: 21.)

About one century before the Christian era, Ammon, son of King Mosiah II, undertook the converting of his brethren the Lamanites. He was captured by them, and later became servant

---

\* All the Italics in this article are the author's.

to their king Lamoni. At one time he protected his master's flocks against the attacks of thieves. This act greatly pleased the king who desired that Ammon should be brought before him. Concerning Ammon he inquired:

Where is this man that has such great power? And they said unto him, Behold, he is feeding the *horses*. Now the king had commanded his servants, previous to the time of the watering of their flocks, that they should prepare his *horses* and chariots, and conduct him forth to the land of Nephi; for there had been a great feast appointed at the land of Nephi, by the father of Lamoni, who was king over the land. Now when king Lamoni heard that Ammon was preparing his *horses* and his chariots, he was more astonished, because of the faithfulness of Ammon, saying, Surely there has not been any servant among all my servants, that has been so faithful as this man; for even he doth remember all my commandments to execute them. (Alma 18: 8-10.)

One of the Book of Mormon writers incidentally mentions the existence of horses as late as the third decade of the Christian era:

And now it came to pass that the people of the Nephites did all return to their own lands, in the twenty and sixth year, every man, with his family, his flocks and his herds, his *horses* and his cattle, and all things whatsoever did belong unto them. (III Nephi 6: 1. See also III Nephi 3: 22; 4: 4.)

From the foregoing quotations it is evident that the Book of Mormon emphatically declares that horses were abundant among the early inhabitants of the American continent. It should be remembered that this book was published at a time when even the most profound thinkers were positive that no horses had existed here previous to the Spanish conquest. The statements in the Book of Mormon relating to the horse were at that time used by its opponents as proof that the book was untrue, and written by some one who was not acquainted with even the crudest facts of history.

Science, however, soon asserted herself. About the time of the publication of the Book of Mormon the English vessel, *Beagle*, under the command of Captain Fitz Roy, started for a trip around the world. The object was scientific investigation and discovery. Charles Darwin, who later became one of the world's foremost thinkers, accompanied the expedition. Several parts of South America were within the itinerary. Darwin studied the Pampaeian deserts with considerable care, and there, on *October 5, 1833*,

scarcely four years after the appearance of the *Book of Mormon*, he discovered the first evidence of the existence of ancient horses. Writing of that date he says:

In the Pampaeen deserts at the Bajada, I found the osseous armor of a gigantic armadillo-like animal, the inside of which, when the earth was removed, was like a great caldron; I found also teeth of the *Toxodon* and *Mastodon*, and one tooth of a *horse*, in the same stained and decayed state. This latter tooth greatly interested me, (I need hardly state here that there is good evidence against any horse living in America at the time of Columbus) and I took scrupulous care in ascertaining that it had been imbedded contemporaneously with the other remains; for I was not then aware that amongst the fossils from Bahia Blanca there was a horse's tooth hidden in the matrix, nor was it then known with certainty that the remains of horses are common in North America. Mr. Lyell had lately brought from the United States a tooth of a *horse*; and it is an interesting fact, that Professor Owen could find in no species, either fossil or recent, a slight but peculiar curvature characterizing it, until he thought of comparing it with my specimen found here. He has named this American horse *Equus curvidens*. Certainly it is a marvelous fact in the history of the Mammalia, that in South America a native *horse* should have lived and disappeared, to be succeeded in after ages by the countless herds descended from the few introduced with the Spanish colonists. (*Natural History and Geology of the Countries Visited During the Voyage of H. M. S. Beagle Round the World*, Vol. I pp. 165-166. Published by Harper & Brothers, New York, 1846.)

In 1866, Andrew Murray, the scientist, published his work on *The Geographical Distribution of Animals*, from which I extract the following:

We know that the *horse* existed in the Old and New world both previous and subsequent to the glacial epoch.....Extinct species are known belonging to three genera of *horses* (*Hipparion*, *Hippotherium* and *Equus*). Two of these are confined to the tertiary strata; and the third, containing species which approach most to the living horse, is found in the drift or post-glacial deposits of a recent period.....The occurrence of a distinct species in America is very interesting, considering their subsequent extinction, and the rehabilitation of the common species by man in both South and North America. The first trace of it was discovered by Darwin. In his "Journal of a Naturalist," he mentions having discovered in the Pampaeen deserts at Bajada, one tooth of a *horse* in the same stained and decayed state as the remains of a *Mastodon* and *Toxodon*, as well as a gigantic armadillo-like animal. This tooth greatly interested him, for it was well established that no horse was living in America at the time of Columbus, and *no remains of any had previously been found*; and he was not then aware that amongst some other fossils which he himself had procured at Bahia Blanca, there was a *horse's tooth* in the matrix; *nor was it then known that the remains of horses are common in North America* .....Certainly, as Mr. Darwin says, *it is a marvel-*

ous fact in the history of the Mammalia, that in South America a native horse should have lived and disappeared, to be succeeded in after ages by countless herds, descended from the few introduced by the Spanish colonists. (*Geographical Distribution of Mammals*, Andrew Murray, pp. 134, 135. Published by Day & Son, London, 1866.)

Flower and Lydekker's work on *Mammals*, published in 1891, contains the following:

Fossil remains of *horses* are found abundantly in the deposits of the most recent geological age in almost every part in America, from Eschscholtz Bay in the north to Patagonia in the south. In that continent, however, they became quite extinct, and *no horses, either wild or domesticated, existed there at the time of the Spanish conquest*, which is the more remarkable as, when introduced from Europe, the horses that ran wild proved by their rapid multiplication in the plains of the South and Texas that the climate, food, and other circumstances were highly favorable for their existence. The former great abundance of *Equidae* (horses) in America, their complete extinction, and their perfect acclimatization when re-introduced by man, form curious, but as yet unsolved problems in geographical distribution. (*Mammals*, Flower and Lydekker, pp. 381, 382. Published by Adams and Charles Black, London, 1891.)

During the last decade the American Museum of Natural History, situated in New York City, has spared neither time nor money in collecting the remains of ancient American horses. Geological parties have been sent into the field season after season in search of these fossils, with the result that this institution now maintains the most complete collection of any museum in the world. Professor Henry Fairfield Osborn, curator of the department of vertebrate palæontology, very kindly presented the writer with a photograph of the skeletal remains of two of these ancient horses; it is reproduced in the accompanying figure. It will be observed that these animals ranged greatly in size, in fact even more than the diminutive Shetland, and the gigantic Clyde. In 1903, the museum issued a pamphlet on the *Evolution of the Horse*; from a topic headed, *Fossil Remains of the Age of Man*, I quote the following:

The Age of Man or Quarternary Period is the last and by far the shortest of the great divisions of geological time. It includes the Great Ice Age or Glacial Epoch (Pleistocene), when heavy continental glaciers covered the northern parts of Europe and North America, and the Recent Epoch, of more modern climate during which civilization has arisen.

In the early part of the Quarternary Period, wild species of *horse* were to be found on every continent except Australia. Remains of these true native horses have been found buried in strata of this age in all parts of the United States, in

Alaska, in Mexico, in Ecuador, Brazil and Argentina, as well as in Europe, Asia and Africa. All these horses were much like the living species and most of them are included in the genus *Equus*. A complete skeleton of one of them (*Equus scotti*) found by the American Museum expedition of 1899 in Northern Texas, is mounted in the large wall case." [The accompanying reproduction is from this skeleton.]

Remains of these fossil *horses* from various parts of the United States are shown in the counter-case. One very rich locality is on the Niobrara River in Nebraska, another in central Oregon. Many separate teeth and bones have been found in the phosphate mines near Charleston, S. C.; other specimens have come from central Florida, from southern Texas, Arizona, Kansas, Louisiana and even from Alaska. They are, in fact, so often found in deposits of rivers and lakes of the latest geological epoch (the Pleistocene) that the formation in the western United States has received the name of Equus Beds.

In South America, in the strata of the Pleistocene Epoch, there occurs, besides several extinct species of the genus *Equus*, the Hippidium, a peculiar kind of *horse* characterized by very short legs and feet, and some peculiarities about the muzzle and grinding teeth. The legs were hardly as long as those of a cow, while the head was as large as that of a racehorse, or other small breed of the domestic horse.

*All these horses became extinct*, both in North and South America. Why, we do not know. It may have been that they were unable to stand the cold of the winters, probably longer continued and much more severe during the Ice Age than now. It is very probable that man—the early tribes of prehistoric hunters—played a large part in extinguishing the race. The competition with the bison and the antelope, which recently migrated to America—may have made it more difficult than formerly for the American horse to get a living. Or, finally, some unknown disease or prolonged season of drought may have exterminated the race. (Supplement to *American Museum Journal*, W. D. Matthew, Ph. D., January, 1903.)

Logan, Utah.

---

### ACCURACY.

A pebble in a tiny stream will turn the course of a river, so the seemingly unimportant habit of inaccuracy has kept many a man from success by changing the current of his life.

Accuracy, doing things to a finish, is one of the most important lessons that can be taught a child, because there is a moral quality at stake. The whole character is often undermined by the unfortunate habit of inaccuracy. Men whose ability would have made them peers in their communities have become nonentities, and their careers mediocre or total failures, simply because they were allowed in childhood to form the habit of half doing things, and of making half or exaggerated statements.—*Success*.