

Introduction

Many evangelicals in America believe that young-earth creationism is the only authentically biblical position for Christians to hold on origins and that all Christians believed this until they started compromising with Darwin's theory of evolution. This is simply not true. Young-earth creationism is relatively new and as recently as a century ago even fundamentalist Christians saw little reason to reject evolution.

The fundamentalist movement takes its name from an ambitious project called *The Fundamentals* published between 1910 and 1915 by the Bible Institute of Los Angeles (now Biola) that defined the *fundamentals* of Christianity. In response to modernist preachers and theologians who rejected many traditional Christian ideas, including miracles, the resurrection and the reality of heaven, the authors of the 90 tracts that became *The Fundamentals* affirmed traditional biblical beliefs. The project was so successful that it produced an entire wing of Christianity, known as fundamentalism, which persists to this day.

The contributors to *The Fundamentals* were the leading conservative Christian leaders at the time, men like R. A. Torrey and A. C. Dixon, united in their belief in traditional doctrines like the virgin birth and resurrection of Jesus, the reality of miracles and heaven, and God as the creator of everything. But they were not united in rejecting evolution as a mechanism of creation. And there was no rejection of the scientific research that indicated that the earth was far older than 10,000 years.

The "Advent" of Scientific Creationism

The most consistent creationist voice at the beginning of the 20th century belonged to the new Seventh-day Adventist movement, which looked to the mid-nineteenth century prophetic writings of Ellen White for guidance. What we call young-earth creationism today—as promoted by *Answers in Genesis*, *Creation Ministries International*, the *Institute for Creation Research* and other groups—can be traced back to one of White's visions.

Ellen White (1827-1915) was a prophetess whose writings have been widely translated. She experienced the "Great Disappointment" on October 22, 1844 when Jesus failed to appear as predicted by William Miller, the leader of her sect. Shortly after, she began receiving visions and was soon at the heart of a new branch of Christianity that now boasts more than 14 million followers in 200 countries. Her literary output exceeded 5,000 articles and 40 books.

Among White's influential writings is *Patriarchs and Prophets* in her series "Conflict of the Ages," first published in 1890. In this text White offers an expanded vision of Bible stories such as the Genesis creation accounts, the fall, and Noah's great flood. In a curious twist of history, modern young-earth creationism can be traced to her visionary expansion of the Genesis flood narrative.

The Origin of Flood Geology

By mid-19th century, when White's visions began, geologists, almost all of them bible-believing Christians, had concluded that Noah's flood was confined to the mid-east. Its effects had been largely erased over time. This interpretation of the story, which Hebrew scholars have determined is a faithful interpretation of Genesis, was uncontroversial and accepted by most educated Christians.

White rejected what she thought were geologically motivated "compromises" as inconsistent with the plain account given in the Bible, though she read this in English without consideration of the context in which it was written. She insisted Noah's flood was global and that it had produced all of the geological layers, a claim that even the most conservative Christian geologists had rejected as impossible, based on the evidence. The flood, argued White, reshaped the surface of the earth and the fossils testified to the cataclysmic nature of the flood, even though the fossils are stacked in such an orderly way that it is impossible to imagine how a chaotic flood could have deposited them like that.

Earth history prior to the flood was obliterated, but the flood itself left the clearest evidence imaginable. Here is White's vision:

The entire surface of the earth was changed at the Flood...As the waters began to subside, the hills and mountains were surrounded by a vast turbid sea. Everywhere were strewn the dead bodies of men and beasts. The Lord would not permit these to remain to decompose and pollute the air, therefore He made of the earth a vast burial ground. A violent wind which was caused to blow for the purpose of drying up the waters, moved them with great force, in some instances even carrying away the tops of the mountains and heaping up trees, rocks, and earth above the bodies of the dead...

*At this time immense forests were buried. These have since been changed to coal, forming the extensive coal beds that now exist and yielding large quantities of oil."*ⁱ

White's interpretation of the biblical narratives attracted little interest outside Adventist circles, but within the Adventist tradition her writings acquired a stature comparable to scripture. Her interpretation of the Flood became widely known outside Adventist circles through the writings of George McCready Price (1870-1963). A self-taught geologist with limited education beyond high school, Price was a gifted writer, amateur scientist, and tireless crusader in the cause of anti-evolution. His 723-page *The New Geology*ⁱⁱ, published in 1923, was catapulted into relevance by William Jennings Bryan, who prosecuted John Scopes at the famous trial in Dayton, Tennessee, in 1925. But even Bryan, the most important anti-evolutionist of the first half of the 20th century was not a young-earth creationist, seeing no reason to interpret the Genesis creation account as taking place over a literal seven-day week.

Because these creationist ideas were basically limited to Seventh-day Adventist biblical interpretation, most Christians outside that group paid no attention to them, and were fine with the idea that evolution was simply God's method of creation. A few decades later, however, all this would change when respected fundamentalist scholars John Whitcomb and Henry Morris joined forces to move Price's ideas from Adventism to mainstream evangelicalism. They co-authored *The Genesis Flood*, the book that launched the modern creationist movement and convinced millions of Christians to accept White's vision of earth history. But what is not widely known, because the authors of *The Genesis Flood* left it out of their book, is that the arguments in the book are really just Price's arguments, updated to provide a more scientific presentation.

The “New” Geology

Price defended a recent six-day creation, relying on Noah’s flood to provide an alternative explanation for the data that served as the primary evidence for an old earth on which life had been evolving for millennia. Evolution is supported by the observation that the fossil record shows increasing complexity over time. If Price could undermine this foundational evidence, the so-called “geological column,” the evolutionary theory resting on it would collapse.

The New Geology assaulted the concept of the geological column, the sequence of past epochs inferred from the stacking patterns found when layers of rock are exposed. This was the very column that had been developed in the decades well before Darwin by bible-believing Christian geologists.

The geological column is straightforward. Guides inform tourists traveling into the Grand Canyon, for example, that they can read geological history as they descend. The surface layer records the present and contains indicators such as existing plants, animals and Coke cans, along with Snickers wrappers and tabloids with stories about the travails of current celebrities. Lower rock layers provide information about increasingly older geological eras. At one level we find a fossil that is two million years old; further down we have fossils that are 20 million years old. The pattern is clear. Traveling down is like going backwards in time. Price disagreed and, over the course of 700 pages in *The New Geology* masterfully gathered every exception and counterexample to the arguments of the geologists:

“This alleged historical order of the fossils is clearly a scientific blunder; for there are many unequivocal evidences to prove that this supposedly historical order must be a mistake. There is no possible way to prove that the Cretaceous dinosaurs were not contemporary with the late Tertiary mammals; no evidence whatever that the trilobites were not living in one part of the ocean at the very same time that the ammonites and the nummulites were living in other parts of the ocean; and no proof whatever that all these marine forms were not contemporary alike with the dinosaurs and the mammals. In short, the only scientific way to look at this matter is to say that we have in the fossils merely an older state of our world; and the man who wishes to arrange the various burials of these animals off in some sort of chronological order will have to invent some other scheme than any hitherto considered, for all such schemes of an alleged historical order which have been hitherto proposed are now seen to be wholly unscientific.”ⁱⁱⁱ

Though Price no doubt believed he was defending the truth of Scripture, we can appreciate the misguided character of this claim by considering how fossils are distributed and why Price disputed the conventional understanding. The geological column he wanted to dismantle doesn’t actually exist *anywhere*. There is no place on the planet where the full geological and fossil history of the earth is neatly displayed in all its glory from primordial beginnings to the present. We would not, however, expect to find such a convenient distribution, as it would require that some local area remained undisturbed for billions of years while one layer of sediment piled atop another. Such an area would have experienced no ice age, no earthquake, no volcano, no flood, no continental drift, no meteorite, no bulldozer, and no major or even minor geological activity of any sort. Such a column would be exposed only to the steady entombment of successive generations of fossils buried in place by one unusual event after the other. The geological column is, instead, assembled piecemeal by combining local distributions. For this reason we have an undisturbed record of one epoch at the Grand Canyon, but we have to look a few miles away

to see clear evidence of another era. And then we must look in some third place to find a sequence that overlaps both of them. By comparing thousands of partial records around the planet a complete history can be, and has been, created.

Each partial geological record chronicles a bit of natural history, a “chapter” in the life of the earth. Lower layers typically contain fossils of animals very different from what exist at present. Upper layers contain fossils similar to those that exist at present. And middle layers contain fossils in between. By lining up these partial histories with each other a more complete record can be developed. Often the newest part of an old formation overlaps the oldest part of a newer formation, connecting them. There are many strategies for making these connections, one of which uses “index fossils.”

Certain fossils are found often enough in the same geological layer that they can be used as an “index” to date the layer simply by their presence. By analogy, when my mother was young, Newfoundland had not yet joined Canada and was issuing its own postage stamps, some of which I have in the collection she passed on to me. A letter with a Newfoundland stamp on it belongs to that brief era *after* the establishment of the Canadian post office but *before* Newfoundland became a part of Canada. Because this history is well understood, historians can use these stamps as historical dividers, like a bookmark slid into the pages of time. In the same way, index fossils point to particular geological periods and, because such fossils have been correlated with other indicators of age, it is possible to infer from the fossil alone the age of the rock in which it appears. All this is basic geology, well-known to freshmen after a couple of introductory courses.

Price rejected all this, highlighting exceptions called “thrust faults.” Thrust faults occur when geological material gets knocked out of its normal spot. Sometimes upheavals and earthquakes invert the layers, making it look like the fossils and other age indicators are in the wrong order. Other times material is pushed or “thrust” into the middle of an otherwise organized stack, like the book reviews I sometimes insert into the middle of my books. Identifying thrust faults is pivotal to making sense of data that appears out of order. Price, however, suggests that the “theory of “thrusts” is a rather pitiful example of the hypnotizing power of a false theory in the presence of the very plainest facts.”^{iv} The reason that faults are invoked at all, he says, is “solely because the fossils are found occurring in the wrong order.”^v

Lay readers, unfamiliar with geology, often find Price’s argument convincing. William Jennings Bryan certainly did. But informed readers are puzzled. Why would Price make such a big deal about fossils in the wrong order? Only a tiny fraction of the rock formations have this problem. And why would Price say that “fossils...in the wrong order” is the only reason to claim that a section of rock has been overturned? This is as peculiar as claiming that “tires on top” is the only way to tell that a car has rolled over. When a geological formation has been inverted there are many indicators. Fossilized animals will be found on their backs, with their feet pointing up, not likely the orientation in which they were buried. Strata with rain and wind marks will have those marks on the underside. An eroded trench might face down rather than up. An inverted formation may contain large objects with their centers of gravity high rather than low. A pyramid shaped boulder, for example, might be found with its point down. Radioactive dating of the rock layers, which generally correlates almost perfectly with the age of the fossils, will be backward. There are many ways to identify an inverted formation, but you have to be scientifically informed to know these ways.

Price's book presented many photographs of such formations. He was widely traveled and, for an amateur, well read in geology. How could he make such dramatic errors in an ambitious textbook he hoped would overturn the entire science of geology? Whom, exactly, was he writing for? He certainly was not writing for anyone with geological training; experts would, and did, immediately recognize the incorrectness of these claims.

In addition to challenging the central concepts of geology, Price offered his own replacement geology, including a curious idea that continues to circulate in young-earth creationist literature. Prior to the great flood of Noah, he stated with assurance, the earth was a delightful planet-wide greenhouse. He claimed that everywhere the terrestrial "climate was a mantle of springlike loveliness." While he offered no evidence or explanation for how this climate originated, he assured the reader that this floral era was, quite simply, "a matter of fact," a claim he hung on the most speculative of threads.^{vi} Furthermore, this global paradise was the "only" climate that existed anywhere on the earth prior to the flood. During this epoch the plants and animals were "larger and more thrifty-looking than their corresponding modern representatives."^{vii} Our modern counterparts are "degenerate dwarfs."^{viii} Unfortunately, we have not discovered a single human fossil from before the flood because God "buried their remains so completely."^{ix}

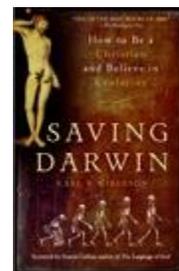
The New Geology Evolves

The reader may object that I have dug up a dead creationist and flogged him unfairly. Any 1923 geology book is bound to contain problems. The difference is that the successors to these other geology books corrected and updated their content. Errors discovered in earlier texts disappeared from later texts and the content steadily improved. This didn't happen with Price's "Flood Geology." It was simply recycled without advancing much beyond where it was when Bryan invoked it in Dayton, Tennessee.

Today we find the young-earth creationist literature full of claims that fossils were laid down by Noah's flood; that a "vapor canopy" made the pre-Flood earth more habitable; and that modern geology is a rationalization of evolution. Despite what many believers might think, these claims are not based on the Bible, but can be traced to the visions of a 19th-century prophetess, and her disciple, a remarkable amateur geologist. These ideas passed from the visions of White, into the texts of Price, into the young-earth classic by Whitcomb and Morris, *The Genesis Flood*. And from there they have spread throughout the modern young-earth movement where they can be found on the websites of *Answers in Genesis*, the *Institute for Creation Research* and even *Dr. Dino*.

This paper was adapted from Saving Darwin: How to be a Christian and Believe in Evolution, which was recognized by the Washington Post as one of the "Best Books of 2008."

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Notes

- i. Ellen Gould White, *Patriarchs and Prophets* (Hagerstown, MD: Review and Herald Publishing Association, 1958), pp. 107-108.
- ii. George McCready Price, *The New Geology* (Mountain View, CA: Pacific Press Publishing Association, 1923).
- iii. George McCready Price, *The New Geology* (Mountain View, CA: Pacific Press Publishing Association, 1923), pp. 676-677.
- iv. George McCready Price, *The New Geology* (Mountain View, CA: Pacific Press Publishing Association, 1923), pp. 627-629.
- v. Martin Gardner, *In the Name of Science* (New York: G. P. Putnam's Sons, 1952), p. 129.
- vi. George McCready Price, *The New Geology* (Mountain View, CA: Pacific Press Publishing Association, 1923), p. 652. A pre-flood paradise climate, which he called the "eternal spring," was a staple in Price's writings, inferred from fossils of some non-Arctic organisms found at the poles. Geological evidence for prehistoric ice at the poles is dismissed as ambiguous. See Price, *Evolutionary Geology and the New Catastrophism* (Mountain View, CA: Pacific Press publishing, 1926) pp. 258-261. The same argument also appears in Price, *The Fundamentals of Geology* (Mountain View, CA: Pacific Press Publishing 1913) pp. 195-198
- vii. George McCready Price, *The New Geology* (Mountain View, CA: Pacific Press Publishing Association, 1923),