

## Chapter 3

### Earth's Age and the Science of Genesis 1

#### **Mainstream Science and the Bible Actually Agree**

To unite science and spirituality, biblical history must be examined in great detail. But most archaeologists claim that the Bible is mythical. Consider some of the main stories used to reject the Bible: the creation of the universe in six 24-hour days, Adam and Eve being the first humans, the global flood, the confusion of tongues at the Tower of Babel, the Exodus and parting of the Red Sea, the Israelite conquest of Canaan, and Joshua's long day (Genesis 1, 2, 7, 11; Exodus 8-11, 14; Joshua 1-13; 10:12-14).

Are not these stories simply superstitious myths? Well, this chapter and the next four chapters prove that these stories actually happened. This is seen once they are properly translated and understood. The Bible does not teach what many Christians think it does. It is wrong traditions and incorrect translations that make these stories appear to be unscientific. The truth is that, in general, the Bible is supported quite well by science, archaeology, and history. And although many attacks have been made against the Bible, there is plenty of evidence to answer them with.<sup>1</sup>

#### **Science and Genesis 1: Old Earth or Young Earth?**

This chapter harmonizes mainstream science with Genesis 1 in ways that even most Christians are unaware of. It shows that Genesis 1 does not teach that the universe was created in six 24-hour days. It addresses the meaning of "day" (*yom* in Hebrew) in Genesis 1, as in "on the first day." This shows that the six days of creation were six periods of time, or eras. The arguments in this chapter will help scientists to accept that the Bible is true. This will thus help to unite mankind under the truth. It will also help more people know that we live in a spiritual universe.

Scientists have proven that the universe is about 13.7 billion years old. The science is quite conclusive. Those who want to can find this out by simply comparing old-earth vs. young-earth creationist arguments. The first claims that the universe is billions of years old, whereas the other claims that the universe is about six thousand years old. When these two conflicting views are compared in a thorough manner, it becomes clear that only the old-earth arguments fit the facts. There is even no evidence for a global flood, and it has been proven that the geologic column with its fossils was not laid down during a great flood. It was laid down instead over millions of years. The best sources to start with about these issues are probably *The Counter-Creationism Handbook* by Mark Isaak, and the TalkOrigins Archive online. They answer most young-earth creationist arguments in a detailed, thorough, and easy to read manner.<sup>2</sup>

#### **Science and Atheism**

Now, because most scientists are atheists or agnostics, many Christians doubt orthodox science in general. They need to understand though that many scientists believe in God and a 13.7 billion year old universe. It is also significant that atheist scientists claim that you cannot

prove that God does not exist. However, Hugh Ross and a few other scientists have discovered how to scientifically test whether or not He exists. This is because only testable theories can become reliable.<sup>3</sup> These tests and others could eventually prove to the skeptics that God exists.

## Genesis 1: The Meaning of “Day”

Most Evangelical Christians believe that Genesis 1 proves that the earth and the universe were created in six 24-hour days. This issue is addressed in *The Genesis Question*, by Hugh Ross. Although it goes into far greater detail about the science behind the six days of creation, here are some of the basics:

The Hebrew word *yom*—translated as “day” in Genesis 1—can also mean “a long period of time,” “eon,” or “era.” Yes, almost everywhere else in the Bible where *yom* is attached to an ordinal (1<sup>st</sup>, 2<sup>nd</sup>, 3<sup>rd</sup>, etc.), it indicates a 24-hour day. Isaiah 9:14 and Hosea 6:2 though show that even when it is attached to an ordinal it can still refer to much longer periods of time. It is true that many Bible scholars point to the expression “and there was evening and there was morning” (NIV) to indicate each creation day was a literal 24-hour period. Yet, according to them, the Bible states that the sun was not created until day four. So, how could there be evening and morning without it? Not only that, if you look at the Hebrew words involved, they do not necessarily mean “evening” and “morning.”

Look for instance at Psalm 90:6. It says about grass that, “In the morning it flourishes and sprouts anew; Toward evening it fades and withers away” (NASB). Yet, because the life cycle of grass is longer than 24-hours, an evening and morning here must be much longer than one literal day. The truth is that grass flourishes and sprouts anew in Israel in the fall and then withers away in the spring. Thus, because Jewish days begin in the evening, the evening or beginning of their year is in the spring and the morning of their year is in the fall.<sup>4</sup>

The phrase “and there was evening and there was morning” in Genesis 1 thus might refer to a non-literal morning and evening. And thus “and there was evening and there was morning” may refer to the “setting” of one age and the “dawning” of another.<sup>5</sup> Yet, another possibility is based on Daniel 8:26, which says, “The vision of the evenings and mornings . . .” (NIV). The same Hebrew phrase is found in Genesis 1. It reads singular like this, “evening and morning.” Thus this suggests that Genesis 1 when closing a creation day should read, “And there were evenings and there were mornings—the [e.g., first] day.”<sup>6</sup>

Thus Genesis 1 shows that God did not create the 13.7 billion year future on day one and then sit back and watch it all happen. He did though make a rough outline then without detailing completely the creation of certain things (e.g., fruit trees) until long after. The truth is that God may not have had perfect control of the universe at the beginning of day one. This is because, as explained in Chapter 1, God had to learn.

Still, there is another possibility. When Genesis 1 says that God created the universe and the earth in six days, it may have meant six 24-hour days not on a normal clock, but instead on a clock that flowed much, much slower. When matter was first created, about 0.00001 seconds after the start of the Big Bang, the universe was so dense that time flowed about 1 million million times slower than it does today. This proves that on a clock that flowed at that rate six 24-hour days have passed from when the material universe began until the time of Adam.<sup>7</sup>

God began to oversee the creation of the universe when matter was first created. This was at the beginning of the first creation day. No one was in charge of the creation process before then. Genesis 1 states that day one of God’s creation began with the “evening,” or “setting,” of an age.

This proves that there was an age before God began to be in charge of creation. During that first age, all the living creations created together, without only one person being in charge of creation.

Furthermore, the length of each creation day in cosmic time was different from the others because (to gain better and better control over the universe) God first began to slow cosmic time down in relation to time for Him in heaven and in relation to the Big Bang clock, and then, eventually He stopped cosmic time or increased it as needed. According to this concept, on day one about 9 billion years of cosmic time was only 24-hours on the Big Bang clock. Then, on day two, cosmic time went slower, so that about one billion years of cosmic time was 24-hours on the Big Bang clock, and so on.<sup>8</sup>

## The Creation Week and Science

Although Genesis 1 leaves many details out of the story, there is still enough detail to test the account against modern science. After having done so, it has become clear to some scientists that Genesis 1 passes the test perfectly. As you will see next, its sequence of events match the sequence of events that scientists state occurred over the last 13.7 billion years!<sup>9</sup> This is amazing because the Book of Genesis was written over three thousand years ago. (Note: unless otherwise noted, the following quotes are from the KJV.):

**Day One:** “In the beginning God created the heaven and the earth” (Genesis 1:1). Thus the Big Bang burst forth from a point via Mind, and then, electromagnetic radiation, subatomic particles, and atoms formed followed by suns, galaxies (13 bya), and planets. Our sun (5 bya) and its planets were formed from the remains of parent stars that had went supernova long before.<sup>10</sup> Earth then cooled from a molten state. At this point it had a thick atmosphere and was covered with boiling waters and volcanic islands. It was a wasteland and void of life. That is why Genesis 1:2 states, “And the earth was waste and void” (ASV).

Hugh Ross tells us that originally earth’s atmosphere was opaque, and thus, when God was “hovering over the face of the waters” on day one, only darkness could be seen from the surface of the earth. Thus the Bible says “darkness was upon the face of the deep” on day one (Genesis 1:2). But then something happened. Around 4.5 bya, due to the impact of an object about the size of Mars, most of this opaque atmosphere was blown into outer space, after which the debris from the impact became our moon. This caused earth’s atmosphere to become translucent, which allowed the first visible light to reach earth’s surface, thereby bringing on day and night.<sup>11</sup> This is why Genesis 1:3-4 says, “And God seeth the light that it is good, and God separateth between the light and the darkness” (YNG). So, because the Hebrew word *badal*, translated “separateth,” can also mean “distinguish,” this suggests that God distinguished between, or looked upon the difference between, the light and the darkness.<sup>12</sup>

**Day Two:** The earth became completely covered with clouds above and water covered the surface of the earth below. The atmosphere was still translucent. Genesis 1:6 says: “And God said, ‘Let there be space between the waters, to separate water from water.’ And so it was” (NLT). The water above was the clouds, and the water below was the ocean, which covered earth’s entire surface.<sup>13</sup> It was thus on this day that the water cycle began, with its high degree of fine-tuning testifying to the reality of a Creator.<sup>14</sup>

**Day Three:** “God said, ‘Let the water under the sky be gathered to one place, and let dry ground appear.’ And so it was. God called the dry ground ‘land,’ and the gathered waters he called ‘seas’” (Genesis 1:9-10 NIV). The first supercontinent appeared on this day (1.1 bya).<sup>15</sup> It divided the waters from the waters, which had begun to teem with blue-green algae and other

single celled life forms (2.7 bya). Also, towards the end of this day the first land plants appeared (650 mya), as described in Genesis 1:11-12.<sup>16</sup>

**Day Four:** At the very beginning of this day, God said, “Let there be lights in the sky.” Thus He caused the sun, moon, and stars to become visible from earth’s surface for the first time, as the atmosphere went from translucent to transparent.<sup>17</sup> Thus Genesis 1:14-19 does not say that the sun, moon, and stars were created on this day; instead, they were created on day one. Verses 16-18 simply state that God had created the sun for light during the day and the moon and the stars for light during the night.<sup>18</sup>

**Day Five:** On this day, the Cambrian Explosion occurred (543 mya).<sup>19</sup> Mollusks, crustaceans, fish, and amphibians were created, as mentioned in Genesis 1:20.<sup>20</sup> The first reptiles were also created on this day around 340 mya, whereas the first dinosaurs were created later around 250 mya. Furthermore, winged insects were created around 360 mya and then birds were created around 206 mya, as mentioned in verses 20-21.

**Day Six:** On this day, land mammals (for instance livestock, small animals, and wildlife), sea mammals (52 mya), hominids, and finally humans were created.<sup>21</sup>

Many of the early Church Fathers (Irenaeus, Origen, Aquinas, and others) taught that the days of creation were each longer than one day.<sup>22</sup> That God made the earth look billions of years old to test our faith makes no sense. God is a God of truth. He would not lie to us through His creation. Genesis 1 states that after the creation of Adam and Eve the sixth creation day ended. The next chapter documents that the first humans appeared around 200,000 years ago and that Adam was born in 4011 B.C.

You are probably aware that God rested on the seventh day. Because of this, early Christians and Jews rested on the seventh day of the week. Does this prove, then, that God’s creation week was six days because these faiths rest for one day every Sabbath? Absolutely not. The Old Testament mentions that there was a yearlong Sabbath every seven years. Does this mean the six periods of creation had to have taken six years? Of course not. The seven days of Genesis 1 could simply be seven eras, and this pattern of seven is then reflected in our workweek today.

## Conclusion

Most Evangelical Christians believe that the earth, the plants, and the animals were created in six days. Modern science though has proven that the universe is 13.7 billion years old. Although the Hebrew word *yom* in Genesis 1 may be translated as “day,” it can also be translated as “era.” Thus the earth was created in six periods of time. This was only six 24-hour days on the Big Bang clock, for compared to the rate time flows today time flowed much, much slower during the Big Bang due to the very extreme effects of gravity. Amazingly, the sequence of events and their descriptions in Genesis 1 fit what scientists have proven occurred from the Big Bang to the creation of Adam and Eve in 4011 B.C.

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<sup>1</sup> John Argubright, *Bible Believer’s Archaeology: Historical Evidence that Proves the Bible*, vol. 1 (Longwood: Xulon Press, 2002), vol. 2 (Longwood: Xulon Press, 2003), and vol. 3 (Longwood: Xulon Press, 2013).

<sup>2</sup> Mark Isaak, *The Counter-Creationism Handbook* (Los Angeles: University of California Press, 2007)

<sup>3</sup> Ross, *Creation as Science*, 1-284

<sup>4</sup> Fischer, *The Origins Solution*, 155

<sup>5</sup> Rich Deem, “Biblical Evidence for Long Creation Days,” God And Science.org, September 21, 2007, Retrieved from: <http://www.godandscience.org/youngearth/longdays.html> 28 January 2003

<sup>6</sup> Dr. Otto J. Helweg, P.E., “How Long an Evening and a Morning?” *Facts and Faith*, vol. 9, no. 5, 1995, pp. 8-9.

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<sup>7</sup> Schroeder, *The Science of God*, 50, 58, 67-69

<sup>8</sup> Cameron Slayden, "Creation Timeline Chart," Reasons to Believe (2008), Retrieved from: <http://www.reasons.org/articles/creation-timeline> 10 November 2014

<sup>9</sup> Greg Moore, "Does Old-Earth Creationism Contradict Genesis 1?" Reasons to Believe, March 1, 2007, Retrieved from: <http://www.reasons.org/articles/does-old-earth-creationism-contradict-genesis-1-2> 3 February 2013

<sup>10</sup> Richard H. Sanderson and Philip S. Harrington, *The Illustrated Timeline of the Universe: A Crash Course in Words and Pictures* (Sterling Publishing Company, Inc., 2006), 4-6, 8.

<sup>11</sup> Ross, *The Genesis Question*, 30-33

<sup>12</sup> James Strong, LL.D., S.T.D., *The New Strong's Complete Dictionary of Bible Words* (Nashville: Thomas Nelson Publishers, 1996), 322.

<sup>13</sup> Ross, *The Genesis Question*, 36, 38

<sup>14</sup> *Ibid.*, 23, 33-35

<sup>15</sup> Ron Redfern, *Origins: The Evolution of Continents, Oceans and Life* (Norman: University of Oklahoma Press, 2001), 5.

<sup>16</sup> Slayden, "Creation Timeline Chart"

<sup>17</sup> Hugh Ross, Ph.D., "New Discoveries Affirm Genesis Events and Timing," *Facts and Faith*, vol. 10, no. 3, 1996, Retrieved from: <http://www.reasons.org/resources/faf/96q3faf/newdisc.shtml> 3 December 2004

<sup>18</sup> *Ibid.*, 42-45

<sup>19</sup> Slayden, "Creation Timeline Chart,"

<sup>20</sup> Ross, *The Genesis Question*, 47

<sup>21</sup> Slayden, "Creation Timeline Chart"

<sup>22</sup> Deem, "Biblical Evidence for Long Creation Days"