

## Critique of the March 2014 *Awake!* Article "The Untold Story of Creation"

This essay is a critique of the Watchtower Society's article and cover subject "The Untold Story of Creation" which appeared in the March, 2014 *Awake!* magazine (<http://www.jw.org/en/publications/magazines/g201403/untold-story-of-creation/>). The article describes the view of Jehovah's Witnesses on what the Genesis account of the "creation of the universe" really means.

First, let us note that the title itself is pretentious, as if no one else up to this point has tried to tell "the story of creation". But virtually all fundamentalists have their notions of the Genesis story, which can be seen by the thousands of books they've written on the subject, and by today's creationist movements as epitomized by the websites of Answers in Genesis, the Institute for Creation Research and the Discovery Institute.

Also let us note that, while the *Awake!* article purports to be written for the general public -- after all, it appears in a magazine supposedly written for the general public -- it is really written for the Jehovah's Witness community. This is shown by the non-standard use of various terms that are understood rather differently by the general public than by Jehovah's Witnesses. In other words, uniquely JW jargon is freely used without explanation.

In this essay the term "creationist" is generally used in its basic meaning of "one who believes that a supernatural creator constructed the universe". There are many sub-beliefs in creationism, such as young-earth, old-earth, deistic, and so forth.

The article's opening statement:

BILLIONS of people have read or heard what the Bible says about the beginning of the universe. The 3,500-year-old account starts with the well-known statement: "In the beginning God created the heavens and the earth."

The exact meaning of this passage has been disputed for at least two thousand years. Exactly what is included in "the beginning"? The beginning of "the heavens and the earth"? What is included in that? What is observable from the earth by the naked eye? What is observable with modern telescopes?

Many people, however, are unaware of the fact that Christendom's leaders,

A bit of JW jargon: "Christendom" to a JW is a pejorative term that means "all non-JW religions that merely claim to be Christian", whereas to the general public it means "the part of the world in which Christianity prevails" or "Christianity as a whole". Use of this pejorative term automatically biases the JW audience against what *Awake!* claims these "leaders" have said.

including so-called creationists and fundamentalists,

Another bit of JW jargon by use of "creationists" and "fundamentalists". The general meaning of "creationist" was mentioned above. However, when Watchtower publications use the term, they generally mean "young-earth creationist", but usually give the impression that "young-earth creationist" is the only meaning of the term. The general meaning of "fundamentalist" is "someone who believes in strict and literal adherence to a set of basic religious principles". As such, Jehovah's Witnesses are certainly religious fundamentalists. There are, of course, many varieties of fundamentalists: Christian,

Jewish, Islamic, Hindu and so forth.

In many contexts in Western literature the capitalized term "Fundamentalist" has come to mean "someone who adheres to the Christian principles outlined in *The Fundamentals*". That collection of books, published in 1910, has come to be the standard of modern Evangelical Christianity. So in this sense, a "Fundamentalist" is an "Evangelical Christian". Of course, many writers are sloppy and fail to distinguish between the capitalized and uncapitalized meanings of the word as well as in its various shades of meaning. This sloppiness certainly describes some the writers of Watchtower publications, except that in some cases the lack of precision is clearly deliberate.

That Watchtower writers really do know the difference between "fundamentalist" and "Fundamentalist" is shown by their own writings. Here is an example of the term used with its general meaning:

A fundamentalist is one who holds rigidly to traditional, conservative religious values. (w97 3/1 p. 3)

Here is an example of the term used with its specific meaning of "Evangelical Christian":

Fundamentalism, while claiming to defend the Bible, has also actually undermined its authority. One way it has done so is by a literal interpretation of texts that are clearly not meant to be taken literally. An example of this is the claim that, according to the Genesis account, the earth was created in 6 literal 24-hour days. Obviously, these were symbolic days of much longer duration. (Compare Genesis 2:3, 4; 2 Peter 3:8.) Other ways Fundamentalism undermines the Bible is by teaching unscriptural doctrines, such as eternal torment in hellfire, and at times by promoting standards of conduct other than those required by Scripture, such as forbidding the consumption of alcoholic beverages or the use of makeup by women. In these ways Fundamentalism has caused people to reject the Bible's message as naive, unreasonable, and unscientific. (G89 10/22 pp. 19-20)

Here is an example where the Watchtower writer distinguishes Jehovah's Witnesses from "Fundamentalists" -- as if this had to be explained to anyone who knows anything about Jehovah's Witnesses:

Jehovah's Witnesses are Christians, but they are not Protestants for the same reason that they are not Catholics—they recognize certain teachings of those religions as unscriptural. For example, the Bible does not teach that God—the very personification of love—tortures people forever in a fiery hell. Nor does it teach that humans have an immortal soul or that Christians should meddle in politics.—Ezekiel 18:4; John 15:19; 17:14; Romans 6:23.

“Fundamentalism is a broad movement within Protestantism in the United States,” says The World Book Encyclopedia. Some Fundamentalist organizations “have adopted social and political positions based on a literal use of Biblical texts.” That definition does not fit Jehovah's Witnesses. As mentioned, they abstain from politics and do not impose their views on others by political or any other means. Rather, they converse with people, usually one-on-one, using reason and convincing evidence, in imitation of the early Christians.—Acts 19:8. (g 8/10 p. 6)

The reader may consult the March 1, 1997 *Watchtower* magazine, pages 3-6, to see how the writer sloppily fails to distinguish between "fundamentalist" and "Fundamentalist", even though he explicitly discusses the differences in meanings in actual usage.

Back to the article:

have spun the Bible account of creation into numerous tales that deviate from what the Bible really says. These interpretations fly in the face of scientific fact.

These statements are breathtaking in their hypocrisy.

First, there are very good arguments that indicate that when Genesis speaks of "six creative days" it really does mean six literal 24-hour days. The reader may consult the voluminous young-earth creationist literature to see this.

Second, from its inception in the 1880s until the mid-1980s the Watchtower Society taught that the creative days were 7,000 years long, and it teaches that today, in 2014, we are about 6,000 years into the 7th creative day (God's day of rest). So when Genesis describes the first creation of plant life on land on the 3rd day, that began about 34,000 years ago. And when Genesis describes the first creation of animal life in the oceans and flying life on land on the 5th day, that began some 20,000 years ago. And when Genesis describes the first creation of animal life on land on the 6th day, that began a mere 13,000 years ago. Yet modern science indicates that microscopic plant life has existed for at least 3.5 billion years, and macroscopic plant and animal life for at least 1 billion years. So until the mid-1980s the Watchtower Society taught its own version of young-earth creationism. Not the same version as Christian Fundamentalists teach, but young-earth creationism nonetheless. The fact that Watchtower publications for decades have allowed that the earth itself -- but not life upon it -- might be billions of years old does not mitigate the Society's belief in its unique version of young-earth creationism.

Today it is not clear that the Watchtower itself knows what it believes about the time of appearance of life. The last mention of 7,000-year creative days in Watchtower literature was in 1987. Beginning in the mid-1980s some Watchtower publications substituted "millennia" or "long periods of time" for "7,000 years" and that is what they do today. But that is entirely unhelpful for a reader who wants to know if the Watchtower Society accepts modern scientific dating methods -- which one would think is a goal of this *Awake!* article.

Even though those tales are not found in the Bible, they have caused some people to dismiss the Bible account as mythical allegory.

One would think, then, that readers of Watchtower literature up through the mid-1980s would have had equal cause to dismiss the Bible account as myth.

The real Bible story of creation has gone largely unnoticed. This is a shame, for the Bible actually presents a very logical and credible explanation of the beginning of the universe. What is more, that explanation harmonizes with scientific discovery. Yes, you might be pleasantly surprised by the Bible's untold story of creation!

Actually, a careful comparison of the Genesis account with modern scientific dating of the various events that happened in the earth's history show that they do not match at all, as described below.

We will skip the section "THE UNCREATED CREATOR".

HOW LONG DID GOD TAKE TO CREATE THE UNIVERSE?

The Bible states that God created “the heavens and the earth.” This broad statement, however, makes no reference to the length of time involved in creating the universe or to the methods he used to shape it. What about the widespread creationist belief that God created the universe in six literal 24-hour days? This concept, widely rejected by scientists, is based on a gross misunderstanding of the Bible account.

Actually it is based on a literal interpretation of the Bible account. The only reason that the Watchtower Society rejects that literal interpretation is that -- giving credit where credit is due -- the scientific evidence for an earth billions of years old is so strong that anyone without an unreasoning commitment to literal Biblical interpretation can see it. The founder of the modern young-earth creationist movement, Henry Morris, once wrote that if it were not for his commitment to a literal interpretation of Genesis, he would have no problem accepting the scientific evidence for an old earth. So the Watchtower's rejection of a literal interpretation of the creative days of Genesis is based on scientific evidence, not on the Bible itself.

Consider what the Bible really says.

The Bible does not support fundamentalists and creationists who claim that the creative days were literal 24-hour days.

No evidence, or even argumentation, is given. By the same lack of evidence, the Bible does not support JW-style young-earth creationism that pegs the creative days as 7,000 years long.

The Bible frequently uses the term “day” to designate various periods of time. In some cases these periods are of an unspecified length. The account of creation found in the Bible book of Genesis is one example of this.

Again no evidence or argumentation is given. This claim is based on rationalization due to the scientific evidence for an earth 4.5 billion years old.

In the Bible account, each of the six creative days could have lasted for thousands of years.

Note the waffling on the actual length of the creative days. According to the science, these "days" must have lasted hundreds of millions of years. After all, the latest evidence is that multi-celled animals and plants began proliferating at least 630 million years ago and have existed for at least a billion years. And there is evidence that one-celled life was in existence not later than 3.5 billion years ago. Eventually, about 540 million years ago, the period in earth's history called the Cambrian came along, during which, in a period of some 30 million years, many new and relatively large plants and animals arose in the oceans, especially ones with hard parts.

To refer to hundreds of millions of years as "thousands of years" or "millennia" is like referring to a human life span as "thousands of microseconds long". Someone who deliberately does that is either abysmally ignorant or is hiding something.

Why does the Watchtower Society carefully avoid allowing that the "creative days" were hundreds of millions of years long? Obviously because of its history of teaching that they were only 7,000 years long. Today there are millions of JWs who were taught for decades that this was so, and many of them still believe that. On the other hand, because the Watchtower Society has not mentioned these 7,000-

year periods since 1987, hardly any JW's who are "younger in the Truth" than 1987 are aware of the older teaching. So by using the unspecific term "millennia" the Society kills two birds with one stone: it avoids creating cognitive dissonance in the younger JW's who know very well that life has been on the earth for hundreds of millions of years, and in the older JW's who still, in some recess of their minds, still believe that life is no more than 34,000 years old.

God had already created the universe, including a lifeless planet Earth, by the time the first creative day began.

This claim is refuted by the Bible itself. While an argument can be made that Genesis 1:1 ("In the beginning God created the heavens and the earth."), in isolation, might allow for the earth to have been created long before the creative days began, there is no textual reason why that must be so. Genesis 1:2-5 follows immediately with "Now the earth proved to be formless and waste . . . there came to be light . . . a first day." So the text might allow that "in the beginning" took place long before "there came to be light", but it also allows that the one followed immediately after the other. How can one resolve the ambiguity? The Bible itself proves conclusive.

Exodus 20:11 clearly states: "For in six days Jehovah made the heavens and the earth, the sea and everything that is in them." (cf. Exodus 31:17) Are the sun, moon and stars part of the "everything that is in" the heavens? Obviously, yes. Therefore, "in the beginning" comprises the beginning of the first creative day, and *Awake!*'s claim is spurious.

Furthermore, *Awake!* provides no scientific evidence whatsoever that there was a gap between "in the beginning" and Day One.

*Awake!* continues with a non-sequitur:

Evidently the six creative days were long periods during which Jehovah God prepared the earth for human habitation.

This is followed by a demonstrably false and misleading claim:

The Bible account of creation does not conflict with scientific conclusions about the age of the universe.

The claim is false because, in view of the above demonstration that the Watchtower Society has given no actual evidence that the Bible allows for an earth billions of years old, and that its claims contradict the Bible, the Bible's account has not been demonstrated to be compatible with scientific conclusions about the age of the universe. After all, if Day One began some 48,000 years ago, and as Exodus 20:11 explicitly states, "the beginning" occurred in that time frame, there is a huge conflict between the Bible and science. The claim is misleading because most of Genesis 1 concerns the creation of life and things having to do with the earth itself -- not the age of the universe. Indeed, Genesis itself gives no evidence of its writers' awareness of a universe outside the earth. And it is misleading because a careful consideration of the order of creation events listed in Genesis shows that it is completely at odds with science.

For example, Genesis states that grass and fruit trees were created on the 3rd creative day, before any animal life. That is at odds with the scientific fact that both plant and animal life appeared in the seas, long before *ANY* kind of life appeared on the land. Naturally, the Jews reading Genesis long ago would

have understood "fruit trees" to include the kind they were familiar with, such as olives, dates and pomegranates. But flowering plants do not show up in the fossil record until about 120 million years ago, whereas the first animal life on land appeared about 400 million years ago in the form of insects, and the first multi-celled animal life in the sea appeared at least 630 million years ago.

*Awake!* next tackles the question, "DID GOD USE EVOLUTION?" This is a hot topic of conversation among many Christians today.

Many who do not believe in the Bible embrace the theory that living things emerged from lifeless chemicals through unknown and mindless processes. Supposedly, at some point a bacteria-like, self-replicating organism arose, gradually branching out into all the species that exist today. This would imply that ultimately the mind-bogglingly complex human actually evolved from bacteria.

While the above statements are true in isolation, they are quite misleading because they implicitly lump the question of the origin of life (abiogenesis) with the theory of evolution, which does not include abiogenesis. This is shown by *Awake!*'s next statement:

The theory of evolution is also embraced by many who claim to accept the Bible as the word of God. They believe that God produced the first burst of life on earth but then simply monitored, and perhaps steered, the process of evolution. That, however, is not what the Bible says.

That last statement is true, but again entirely misleading because the Bible says nothing at all about the exact means by which God created the various forms of life. After all, if, as some Christians argue, God steered the process of evolution, then he is still the Creator. And if God built the universe such that the evolution of life was inevitable, then he is still the Creator. These things are believed by many prominent scientists who are also Christians. This includes one Michael Behe, a member of the Discovery Institute, who *Awake!* is fond of quoting to "refute" evolution but who accepts a God-driven version of it.

The reader will note that *Awake!* provides no evidence or argumentation for its claim.

According to the Bible, Jehovah God created all the basic kinds of plant and animal life, as well as a perfect man and woman who were capable of self-awareness, love, wisdom, and justice.

If God used evolution to create all the basic kinds, how does this conflict with the Bible? *Awake!* does not say.

The kinds of animals and plants created by God have obviously undergone changes and have produced variations within the kinds. In many cases, the resulting life-forms are remarkably different from one another.

That, of course, is evolution. Although Watchtower writers never acknowledge this fact, and are probably only dimly aware of it, their argumentation over the years in defense of the reality of Noah's Flood depends entirely on massive and extremely rapid evolution after the Flood. Even assuming that the Genesis account of the Flood is true, if thousands of "kinds" of animals survived on Noah's ark, they could hardly comprise the tens of millions of species that exist today. If, as Watchtower writers have argued, only a few thousand "kinds" were needed to propagate all of today's species, then those "kinds" must have radiated into today's tens of millions of species in only a few thousand years --

which is thousands of times more rapid than anything observed in the fossil record or that scientists propose.

An example of this is the frog "kind", which includes what are commonly called frogs and toads. There are some 4,800 species of these today. They are at least as different from one another as mammals are from one another, not only morphologically but genetically. To imagine that 4,800 species evolved from one or a few "frog kinds" in under 4,000 years is beyond the pale. Yet that is what the Watchtower Society implicitly teaches, even though its writers are apparently too ignorant of science to know it.

The Bible account of creation does not conflict with the scientific observation that variations occur within a kind.

That depends on what one means by "the Bible account of creation". If one means the fairy tale version espoused by *Awake!*'s writer, then perhaps so. If one goes by what the Bible actually says, then there is a huge conflict.

### A CREATOR PERCEIVED IN CREATION

In the mid-1800's, British biologist Alfred Russel Wallace agreed with Charles Darwin on the theory of evolution by natural selection. But even this renowned evolutionist is said to have stated: "For those who have eyes to see and minds accustomed to reflect, in the minutest cells, in the blood, in the whole earth, and throughout the stellar universe . . . , there is intelligent and conscious direction; in a word, there is Mind."

So Wallace believed that God directed evolution. It's astonishing that *Awake!*'s writer fails to see how self-defeating this quotation is to his overall claims.

Almost two thousand years before Wallace, the Bible had already observed: "For [God's] invisible qualities are clearly seen from the world's creation onward, because they are perceived by the things made, even his eternal power and Godship." (Romans 1:20) From time to time, you might want to take a moment to reflect on the marvelous complexities found in nature—from a single blade of grass to the countless heavenly bodies. By examining creation you can perceive the Creator.

This is the old "divine watchmaker" idea, also called the "design requires a designer" argument. This has been variously described as "the argument from personal incredulity", "the argument from ignorance", "the argument from lack of imagination" -- all of which are informal logical fallacies called "the appeal to ignorance".

Next, *Awake!* treads on ground extremely dangerous for Christians who dare to think too closely on the matter. This ground is often called "theodicy" or "the problem of evil or suffering":

‘But if there is a loving God who created all things,’ you may ask, ‘why would he permit suffering? Has he abandoned his earthly creation? What does the future hold?’ The Bible contains many other untold stories—truths that have been buried under human ideas and religious agendas and, therefore, hidden from most people. The publishers of this magazine, Jehovah’s Witnesses, would be happy to help you examine unadulterated Bible truth and learn more about the Creator and the future of his human creation.

Watchtower writers have not fared well when, on rare occasions, they have tackled theodicy. The problem can be seen by considering the fossil record of animal life. Today we see predators and prey, and most people instinctively understand that from the prey's point of view, predation is an evil because it causes suffering. Predation is clearly observed in the fossil record at least as far back as the Cambrian period of 540 to 485 million years ago. Why would a loving God create a world in which the suffering caused by predation is fundamental to its structure? Young-earth creationists are acutely aware of this problem and use it to justify their teaching that "sin and death entered the world" only after Adam and Eve sinned in the Garden of Eden, and so the universe must have been created in only six literal days.

The Watchtower Society tried to tackle this question in the October 8, 1982 and January 8, 1983 *Awake!* magazines. Suffice to say that the problem was not solved, and the discussion actually raised more questions than it answered, in view of the ridiculously bad rationalizations given. For example, on page 11 the Oct. 8 issue tried to explain what happened after Adam and Eve sinned:

. . . as man turned toward lawlessness, the earthly creation, too, became chaotic. Man lost his loving dominion over the animals. Since humans could not control themselves peacefully, it is no surprise that the animals are in the same condition. . . The animals . . . began to live off one another.

But this contradicts what we find in the fossil record -- that animals have lived off one another for hundreds of millions of years. And how does *Awake!'s* rationalization explain behaviors and structures clearly designed for predation -- the poison and teeth/fangs of snakes, spiders and lizards; the webs of spiders; the instinctive, not learned, predatory behavior of snakes, spiders, scorpions, etc.; the teeth of cats, dogs and many other animals, extant and in the fossil record, that are clearly designed for cutting flesh; the fact that the digestive systems of cats are clearly designed to eat meat and not vegetables, and that cats are physically unable to synthesize the essential amino acid taurine but must obtain it from the flesh of the animals they consume; the defensive abilities of various prey animals; the fact that almost all frogs are exclusively carnivorous and most have tongues designed specifically to catch prey; the fact that many animals have lures designed to attract prey (like the frogfish); that mantis shrimp have claws that act as unbelievably powerful battering rams specifically designed to kill or stun prey; the existence of all manner of parasites, from viruses and bacteria to tapeworms, which cannot live outside of their host animals; the fact that the fossil record displays "arms races" between many varieties of predators and prey, time after time after time?

Readers who know something about science and the history of life will be amused at the way certain readers handed the Watchtower writers their heads in the January 8, 1983 *Awake!* article. The Society's response -- it's amazing that it actually published that material, but it learned its lesson, as it never tackled the problem again -- included this gem:

We did not claim that certain features evolved by adaptation, but that existing features were put to a different use from what was originally purposed. We do not believe it is possible to establish for a certainty how things were in the distant past by observing the present. Conditions have changed. . . As for the many predators being suited for the chase and the kill, what about humans? They have shown an extremely efficient talent for attacking and killing their fellowman. Does that argue for humans' being designed that way from the beginning? Admittedly, we cannot answer all questions that arise in this matter from what we can observe today, and the account in the Bible is quite brief. Yet, we believe that humankind and animal kind were originally designed to live at peace with one another and to get their nourishment from vegetation. That original purpose will be restored during the Messianic Kingdom. We will



have to wait and see how those prophecies are fulfilled.

Clearly, the writer of this March, 2014 *Awake!* knows to steer clear of the problem that the claim that "design requires a designer" leads directly to the "problem of evil".

Finally *Awake!* gets down to the nitty gritty and presents "THE TIME LINE OF CREATION". Unfortunately for his argument, the writer fails to give any evidence whatsoever that this timeline corresponds with scientific findings. Why? Because he obviously knows that it does not. All that the writer presents is the Watchtower's current understanding of Genesis.

## THE BEGINNING

The material heavens and earth are created.—Genesis 1:1.

Again, this separation of "the beginning" from Day One is contradicted by Exodus 20:11 and 31:17. As for placing the creation of the physical matter of the universe before all other events, well, it is trivially obvious that that must be so.

## DARKNESS

The earth is formless, desolate, and dark.—Genesis 1:2.

Exactly when in the scientific timeline is this condition realized? The latest scientific timeline is that the earth and the rest of the solar system formed some 4.56 billion years ago from a cloud of gas and dust, probably triggered by a nearby supernova. Within about 50 million years the earth had coalesced into a molten ball of rock and iron, had been struck by a Mars-sized planet and spun off a lot of material that soon coalesced into the Moon, and had accumulated a lot of water from bombardment by comets. Eventually the surface cooled sufficiently to allow liquid water to accumulate. The composition of the atmosphere was quite different from today's. Whether the surface was dark is unknown because the composition of the atmosphere is unknown, except that it contained no appreciable amount of oxygen. Exactly what "desolate" and "formless" means is unclear.

## FIRST DAY

Diffused light evidently penetrates the earth's atmosphere. If there had been any observer on the surface of the earth, the sources of light would have been imperceptible to him. Yet, the difference between night and day became discernible.—Genesis 1:3-5.

How does the writer know these things? By Watchtower tradition. That tradition, going back some 130 years, is not based on science but on after-the-fact rationalization that these things must be so for the Genesis account to make any sense at all. Again, no evidence is presented. But the fact is that the earth coalesced from the parent gas/dust cloud *after* the sun coalesced and began emitting light, so there was never a time when the earth did not receive sunlight.

## SECOND DAY

The earth is covered with water and a dense mantle of vapor. These two elements are separated, creating a gap between the watery surface and the canopy of vapor. The Bible describes this space as "an expanse between the waters," and calls it "Heaven."—Genesis 1:6-8.

More Watchtower tradition. There is no evidence for a massive "vapor canopy" containing sufficient water to flood the entire planet during Noah's Flood. Indeed, young-earth creationists have tackled this claim many times to defend it, but have been forced by the facts of physics to conclude that any "vapor canopy" that might conceivably be physically possible could only contain enough water to flood the earth with a few inches of water. Think "atmospheric pressure" to understand why.

Furthermore, the word translated "expanse" does not mean what the Watchtower Society claims. The Hebrew word "raqia" can certainly be translated as "expanse", but then the question is: in what way is the thing described expanded or spread out? Bible dictionaries indicate that the word and related words refer to something "beaten out" like a shield of metal. In other words, the expansiveness is two-dimensional, like a giant metallic shield or pizza pie spread out over the earth from horizon to horizon. This is shown by the Bible itself, because Genesis 1:20 speaks of flying creatures flying "over the earth **upon the face** of the expanse of the heavens". So there is no indication in the Bible that "raqia" means the atmosphere. And of course, no evidence is given by *Awake!*'s author, because the claim is nothing more than more Watchtower tradition.

### THIRD DAY

Surface water subsides and dry ground appears. The atmosphere clears up to allow more sunlight to reach the ground. Some vegetation appears, with new species sprouting through the third and subsequent creative days.—Genesis 1:9-13.

Again, after-the-fact rationalization of the text based on Watchtower tradition. However, the order of appearance of land vegetation with respect to other forms of life is extremely problematic because it contradicts the fossil record. According to that record, multi-cellular plant and animal life appeared in the oceans in Precambrian times by at least 630 million years ago. It was another 200 million years, in the mid-Silurian period, when land plants first appeared. And it was not until the mid-Cretaceous period, some 120 million years ago, that flowering plants such as grasses and fruit trees appeared. Yet Genesis 1:11-13 has grass, fruit trees and all manner of land vegetation appearing before any animal life in the ocean. The order of "creation" presented by Genesis is simply scrambled.

### FOURTH DAY

The sun and moon become discernible from the earth's surface.—Genesis 1:14-19.

Again no evidence is presented.

### FIFTH DAY

God creates underwater creatures and flying creatures in great numbers with the ability to procreate within their kinds.—Genesis 1:20-23.

Again Genesis is out of sync with the fossil record. Underwater creatures appeared at least 630 million years ago -- not 20,000 years -- and they appeared long before land vegetation. The first flying creatures were insects. They first appear in the Carboniferous fossil record of about 350 million years ago, and probably originated much earlier in the Devonian period some 400 million years ago. Birds as such appear in the fossil record somewhere between 200 and 130 million years ago, depending on how one defines "bird". Yet Genesis 1:21 explicitly states that God then created "every winged flying

creature", which obviously included all those known to the Jews who wrote Genesis.

## SIXTH DAY

Land animals are created, both large and small. The sixth day culminates with a masterpiece of God's physical creation: the first human couple.—Genesis 1:24-31.

Yet again Genesis does not comport with the fossil record. The first land animals, amphibians, appear in the fossil record some 365 million years ago, long before the birds that Genesis claims were created first. As for humans, the Watchtower Society's chronology puts their creation about 6,000 years ago, but records of history, archeology and paleontology show that humans in recognizable form have existed for about 2 million years, their human-like ancestors existed at least 4 million years ago, humans with relatively modern culture have existed for at least 200,000 years, the archeological record goes back at least 50,000 years depending on the measuring stick, and historical records go back at least 5,000 years -- long before the Watchtower's date for Noah's Flood of 2370 BCE. Indeed, well documented historical records put the construction of the Pyramids at Gizeh between about 2670 and 2460 BCE. Obviously, Egyptian civilization must go back many hundreds, if not thousands, of years before that.

In conclusion, the *Awake!* article by no means accomplishes what the writer would like. It misses the mark by a wide margin. What the article really does is confirm what one author wrote 45 years ago:

A long acquaintance with the literature of the Witnesses leads one to the conclusion that they live in the intellectual 'twilight zone.' That is, most of their members, even their leaders, are not well educated and not very intelligent. Whenever their literature strays onto the fields of philosophy, academic theology, science or any severe mental discipline their ideas at best mirror popular misconceptions, at worst they are completely nonsensical. (Alan Rogerson, *Millions Now Living Will Never Die: A Study of Jehovah's Witnesses*, p. 116, Constable, London, 1969)