



# Creation Matters

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## What Did Adrian van Maanen See? An Interesting Illustration of How Science Really Works by Danny R. Faulkner, Ph.D.

In a very dark sky one can see with the naked eye several faint patches of diffuse light. Astronomers have known of these since ancient times, and named them *nebulae*, which comes from the Latin word for clouds. The word “nebulae” is plural for nebula, though the alternate plural form, *nebulae*, is also acceptable. With the invention of the telescope, some of the nebulae were revealed to be star clusters, while others defied resolution into stars regardless how large a telescope was used.

Additionally, after the invention of the telescope, astronomers found many thousands of other fainter nebulae not visible to the naked eye. While some of the later-discovered nebulae turned out to be star clusters, many of them remained diffuse in appearance, suggesting that these nebulae truly were clouds of gas in space.

### Milky Way

By the eighteenth century, a picture of how stars are arranged in space began to emerge. Stars appear to be in a gigantic flat, round system called the Milky Way or the Galaxy. The word galaxy comes from a Greek word



*The Andromeda Galaxy (M31). Photograph courtesy of National Optical Astronomy Observatory / Association of Universities for Research in Astronomy / National Science Foundation.*

meaning “milky,” which gives the same sense as the name Milky Way. The Milky Way can be seen from a dark location at

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## Dear Theistic Evolutionist by Paul G. Humber

*Editor's note: A letter similar to this one was sent recently to a theistic evolutionist. The approach included herein may be useful in discussions with other theistic evolutionists.*

We have a number of things in common. We both agree that Jesus is God in human flesh. We also agree that the Bible is important. The main area of tension between us seems to relate to evolution and the age of the Earth. You believe that true science demands an old earth and the development of life though evolution, and you also think the Bible can accommodate both. In contrast, I believe that most scientific chronometers point to a much younger earth, that there is insufficient time for evolution to have happened, and that the Bible rejects billions (or even millions) of years of antiquity for the earth (or universe).

I will grant that two of your scientific

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## The Privileged Planet: Showdown at the Smithsonian by Jerry Bergman, Ph.D.

After a favorable initial internal review, the Smithsonian announced it would show a movie titled *The Privileged Planet* (Illustra Media, 2004) in Baird Auditorium at the Natural Museum of History in June of 2005 (Stokes, 2005). When the announcement was made, protests from the media, including *The New York Times* and *The Washington Post*, were strident and immediate.

The media, as usual, were often inaccurate when covering this story. For example, *The New York Times* incorrectly claimed that the film was “intended to un-

dercut evolution” (Schwartz, 2005). The next step was to alert the academic community to stay away from the film—for example, an archeology doctoral student reported that an email had been sent to the entire department of anthropology at George Washington University, “warning” everyone to not watch the movie (Steiner, 2005).

Nguyen (2005) noted that once the news was out about the Smithsonian’s plan to show the film, it spread across the internet to “especially those dedicated to the evolution debate.” Pro-evolution websites, athe-

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## What Did Adrian van Maanen See

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certain times of the year as a faint band of light stretching completely across our sky. The diffuse appearance of the Milky Way is due to the combined light of many faint stars congregated along the plane of the Galaxy. The sun is located near the Galactic plane.

For a long time astronomers thought that the sun was near the center of the Milky Way, but about the time of the First World War, observations showed that the sun is actually about halfway from the center to the edge. At that time, most astronomers thought that the Milky Way was the only large system of stars, so astronomers sometimes referred to the Galaxy as the universe as well.

In 1755, the Prussian scientist and philosopher Emmanuel Kant opined that many of the faint oval-shaped nebulae might be distant galaxies similar to the Milky Way. To appear so small, these galaxies must be so far away that the individual stars that made up the galaxies would not be visible. Instead, their light would blend together to make the galaxies appear diffuse. Given the huge separations between the galaxies, this idea was dubbed the island universe theory. Of course Kant had no evidence for his island universe theory, but it remained a viable option in the minds of many astronomers for more than a century.

By the middle part of the nineteenth century, Lord Rosse had built his giant Leviathan telescope at Burr Castle in Ireland. With what was then the largest telescope in the world, Lord Rosse could make out the spiral structure of a few of the nebulae, and he thought that he was looking at distant galaxies. However, by 1880 most astronomers had come to believe that all nebulae were clouds of gas within our own Milky Way, and this view prevailed for more than 40 years. Had there been a great discovery that prompted astronomers to reject the island universe theory? No, but there had been a theoretical development that colored the way that astronomers thought about the nebulae.

## Nebular hypothesis

In 1796, the French mathematician and astronomer Pierre Simon Laplace published his nebular hypothesis of how the solar system came to be (incidentally, Kant pre-

viously had briefly addressed this possibility). Though refined from Laplace's original hypothesis, the current evolutionary theory of solar system formation is the intellectual descendent of Laplace's idea. The solar system is supposed to have begun as a cold, roughly spherical, cloud of gas that contracted under its own gravity.

According to this theory, as the cloud shrank, its temperature gradually increased and the material flattened into a disk. Most of the material fell into the center to form the sun, while the remainder of the material was left in the disk. Eventually, the temperature of the sun increased so that it began to brightly glow. Meanwhile, the material in the disk began to coalesce into the planets and satellites. The solar system was completely formed once the sun or planets absorbed most of the excess material in the disk, or the excess material was removed from the system all together.

By 1880, most astronomers had become so convinced that the nebular hypothesis was true that there seemed little reason to doubt it. As today, most astronomers concluded that solar system formation must be a very common occurrence, so that it must be commencing at various locations and might be observable. The spiral nebulae certainly looked like what would be expected if the nebular hypothesis were true and responsible for forming new solar systems. A spiral nebula has a disk with a bright bulge at the center. Presumably, the central bulge was the forming star and the disk was the site of forming planets. In fact, drawings, and later, photographs of spiral nebulae were used as proof of the nebular hypothesis.

This is an example of the way science generally works. An hypothesis or theory is proposed. Predictions of the hypothesis or theory are made. If experiments or observations are consistent with the predictions, then we say that the hypothesis or theory is supported, giving us much confidence in our ideas. Unfortunately, this evidence is taken as ultimate proof, and once an idea becomes ingrained, it is very difficult to look at the data in any other way. Often, more data consistent with the theory are collected which places the idea further beyond dispute, even though the new data may be of very poor quality. No one questions the new data, because it fits the current paradigm so well. What happened next in the saga of the spiral nebulae is an excellent example of this trend in science.

## Enter van Maanen

In 1916, Adrian van Maanen, a Mt. Wilson Observatory astronomer, published the first in a series of ten papers investigating rotation in spiral nebulae (van Maanen, 1916). Most of the observations were made with the Mt. Wilson 60-inch reflector, which was, until about that time, the largest telescope in the world. High quality photography had become available just a few years before. van Maanen examined pairs of photographs of some of the larger appearing, and hence nearer, spiral nebulae made a few years apart.

He reasoned that the spiral nebulae, whatever they were, must rotate due to the gravity of the material involved. If the nebulae were distant galaxies, then those galaxies must be so huge that it would take many lifetimes for there to be measurable rotation. On the other hand, if the spiral nebulae were nearby solar systems in the making, then they ought to be about roughly the size of our solar system and thus undergo noticeable rotation in just a few years.

The seven spiral nebulae in which van Maanen measured rotation were M33, M51, M63, M81, M94, M101, and NGC 2403. In his tenth paper, van Maanen (1923) presented a discussion of the inferred distances and sizes of the seven spiral nebulae. All distances placed the nebulae within the Milky Way, and all diameters were consistent with the nebular hypothesis.

## Enter Hubble

It is ironic that in 1924, just a year after publication of van Maanen's tenth paper, his Mt. Wilson colleague, Edwin Hubble, stunned the astronomical world with his discovery that M31 was indeed an "island universe" (Hubble, 1927, 1929). Hubble did this by identifying many individual stars on photographic plates that he took of M31. Some of these stars were identified as Cepheid variables. Cepheids are intrinsically bright stars that astronomers think are standard candles, and hence can be used to measure distances. The calculated distances placed M31 well outside of the Milky Way.

Once the distance is established, the diameter of a galaxy may be determined as well. The diameter of this "nebula" turned out to be comparable to the size of the Milky Way itself. Hubble quickly followed this work with a similar conclusion for M31 (Hubble, 1926) and NGC 6822 (Hubble,

1925). It was reasonable to conclude that all other spiral nebulae that were much fainter and smaller appearing, but otherwise similar in appearance, were more distant than these three. Though stars in other spiral nebulae could not be resolved by Hubble, later astronomers using more powerful telescopes did this for a number of others.

Given that these systems were vast collections of stars similar to the Galaxy, astronomers soon applied the word “galaxy” to these objects (note that “galaxy” in this instance is not capitalized). The word “nebula” is now reserved to describe true clouds of gas within a galaxy. While in some older books one may see galaxies referred to as nebulae, that use has been incorrect for some time.

van Maanen’s work played a prominent role in the 1920 debate on the island universe theory sponsored by the American Academy of Science. The combatants in this exchange were Heber D. Curtis of Lick Observatory, who argued for the island universe theory, and Harlow Shapley of Harvard Observatory, who argued against it. Just a few years earlier, Shapley was the astronomer who had deduced that the sun was not at the center of the Milky Way. In the debate, Shapley used van Maanen’s work to show that the “nebulae” could not be external galaxies, because they were rotating too quickly. Curtis had difficulty refuting this and other evidence presented by Shapley, so by most accounts Shapley won the debate. Of course, Curtis was vindicated just four years later.

## What went wrong?

Today most people have never heard of van Maanen’s measurement of rotation in spiral galaxies. What went wrong? A decade after his great discovery, Hubble (1935) himself turned to this question. He concluded that the measurements suffered from large systematic errors that van Maanen misinterpreted as rotation. In a companion paper van Maanen (1935) conceded that there were large systematic errors, but insisted that there still were rotations present in the data. Apparently, neither Hubble nor van Maanen ever addressed this issue again, and van Maanen’s work was quickly forgotten.

There are some important lessons in this affair. We now have a century of photographs of the nearer galaxies. Consistent

with their vast distances, there is no measurable rotation. What did van Maanen see? Often, we see what we wish to see. A century ago Percival Lowell, another famous astronomer, saw many canals on the surface of Mars. E. E. Bernard, a contemporary of Lowell and a keen observer, never saw canals on Mars. Why the difference? It may be that from the first time that Lowell saw some linear feature on Mars, he expected to find canals, while Bernard never did expect to see them.

Evolutionists so readily accepted the Piltdown hoax because it was so much what evolutionists expected to find. The same is true for the now discredited stoop-shouldered concept of Neanderthals, Haeckel’s

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faked embryonic drawings illustrating phylogenetic recapitulation, and the now debunked story of peppered moths. In each case these ideas once were embraced, because they all fit the current paradigm.

One difference between the ultimate disposition of the aforementioned bad examples of biological evolution and van Maanen’s rotation work is that while van Maanen’s work was quickly shown to be blatantly wrong and would have been an impediment to progress had it been retained, some of the biological evolution examples were viewed as useful, if flawed, for some time. Many textbooks still contain and will continue to contain discussion of peppered moths and phylogenetic recapitulation.

## Looking at the world differently

Evolutionists and creationists really do look at the world very differently. Where creationists see design, evolutionists see evolution. The two sides tend to interpret data in different ways. It is an easy matter to interpret data in terms of one’s assumptions, but it is very difficult to entertain other ideas. For instance, everyone understands that bacteria develop antibiotic resistance, but evolutionists and creationists have very different explanations of what this means and how it comes about. Creationists gen-

erally have a good understanding of the evolutionary argument, but few evolutionists understand the creationary argument, as indicated by the confident way in which development of antibiotic resistance is so easily recited as evidence of evolution, as if it requires no elaboration.

However, creationists as well must be vigilant to constantly reassess our approach, to be certain that we do not fall into the same trap of seeing what we wish to see. For instance, creationists believe that humans have existed from the beginning, and that the Noachian flood laid down most sedimentary rock layers. Therefore, there exists the possibility that human remains, footprints, and artifacts may be found in all sedimentary layers. There are numerous reports of man-made things in coal deposits; however, many of these are poorly documented. The Paluxy River tracks once enjoyed wide acceptance, though for several years those tracks have been controversial. A few years ago I examined the Tuba City, Arizona human-like tracks. I am no expert in these things, so my opinion carries little weight. I did approach them with skepticism. Remembering the lesson of van Maanen, I fail to see that they are clearly human footprints.

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*Danny R. Faulkner has a doctorate in astronomy and is a member of the board of directors of the Creation Research Society. Since 1986 he has been on the faculty of the University of South Carolina - Lancaster. He frequently writes and speaks on creation and astronomy, and his 2004 book, Universe by Design, recently went into a second printing.*

ist websites, and others, including those of humanists, organized a campaign to send emails and letters and to make phone calls protesting the film's showing (for example, see Gilberti, 2005). Within only a week the Smithsonian "had yielded to liberal opinion" (Tucker, 2005).

This response to the film clearly implicates as having a religious agenda many of those involved in opposing intelligent design. It also illustrates their absolute intolerance of a worldview with which they disagree, a worldview which implies that purpose exists for the universe, and that the earth is indeed a "privileged planet." Such a view hardly seems threatening to the vast majority of the population. Only those who have philosophical objections to this conclusion, and who wish to advocate their own agenda, would object to the film.

The Darwinist community was alerted to the film's showing when some persons received invitations that included the Discovery Institute's name (a pro-intelligent design group, the film's original sponsor), and which indicated that the event was "co-sponsored" by the Museum's director. This "shocked" Darwinists because "it looked as though the Smithsonian was supporting Intelligent Design" (Brumfiel, 2005). The Museum immediately tried to reverse its decision to allow the film's showing. Laurence Krauss, who instead of doing science seems to spend much of his time fighting any attempt to support theism with scientific fact, stated that "the Smithsonian was duped." Jay Richards of the Discovery Institute responded by noting that they had "followed the invitation template that the Smithsonian provided" in preparing the invitations (Brumfiel, 2005; see also Richards, 2005).

The mainline media claimed that the Smithsonian was "caving in to" religious fundamentalists—even though the film was not produced by religious fundamentalists and is not specifically about religion. The film simply argues that the conditions on our planet (and in our solar system) are rare in the universe, and that the earth lies in one of the few inhabitable locations in the galaxy. As Gonzalez noted, the film does not try to prove the existence of God, but merely

shows "some purpose to the universe" (DuCharme, 2004).

Obviously, this goal is unacceptable to the Museum and its supporters. The film says nothing about religion, evolution, Darwin, or even intelligent design. Nonetheless, "[w]ithin a week, the Smithsonian had yielded to pressure from Darwinists to censor the film...It canceled its 'co-sponsorship' of the event and gave back Discovery's \$16,000 contribution" to the Museum (Tucker, 2005).

The film's showing was actually to be only a private screening, but the storm of protest caused the Museum's director, Christian Samper, to announce that "the content of the film is not consistent with the mission of the Smithsonian Institution's scientific research." Nonetheless, because they had signed an "iron clad contract" to

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show the film, in the end they elected to carry out their legal obligation; breaking the contract could have resulted in litigation (O'Leary, 2005).

### Why privileged?

The film is based on a book (Gonzalez and Richards, 2004) which is co-authored by Professor Guillermo Gonzalez, a highly-credentialed, well-published (over 60 professional journal publications) astronomer at Iowa State University. The book argues that there may be many billions of stars, and even possibly many millions of planets, but many conditions must be met before a planet is able to host life. For example, the planet must be in a temperate orbit (the temperature range must be approximately between 0°F and 100°F), and must also have a liquid ocean. These requirements are not met on any other known planet. In fact, most planets are infernos!

Another requirement is a moon that massages the oceans to circulate nutrients, helping to stabilize the planet. Another of the many requirements is that planet earth must be a certain distance from the sun, and from other stars—an ideal place in the galaxy known as a sweet spot. The film also

stresses that the earth is privileged because it exists in a position to provide the best overall conditions for scientific discovery. Interestingly, a few years earlier Professor Peter Ward had coauthored a book titled *Rare Earth* that advocates almost the same idea (Ward and Brownlee, 2000). This best seller received rave reviews and, as far as I am aware, virtually no criticism. Ward was a colleague of Gonzalez when he wrote this book.

### Why the controversy?

Why was the film so controversial? Tucker (2005) concluded that it was because the empirical evidence presented in the film leads to one conclusion—our planet is not only designed for life, but it is also designed with a "purpose," namely to produce a species like humans. The idea that there is purpose behind the universe is what causes

so many prominent scientists to go ballistic—and it is this idea that was unacceptable to the Smithsonian. Most leading scientists teach that life has no purpose or meaning, except that which we ourselves give to it. We are simply living on an ordinary planet, one of many that exist in our average galaxy, which is one of many galaxies in the known universe.

Orthodox science also teaches that life ultimately evolved here because of time, natural law, and chance, and will soon disappear. Tucker (2005), an opponent of *The Privileged Planet's* implication of purpose, maintained that "[i]nstead of arguing that everything on earth has been 'designed' for some mysterious 'purpose,' I think it's much more instructive to look at some of God's little errors." Tucker then tried to argue that one of God's "little errors" is the fact that ice floats—for which "[t]here doesn't seem to be any real explanation." In fact, it is well known why ice floats—a subject typically covered in introductory chemistry classes.

The film does not overtly make the case for intelligent design but, at best, only "makes a subtle argument for intelligent design," suggesting that, even if the film only *implies* intelligent design, this evidence cannot be presented in a public venue (Bhattacharjee, 2005). The Smithsonian claimed that presenting information supporting intelligent design—and they have never argued that the information is



incorrect—"violates the museum's scientific and educational missions" (Bhattacharjee, 2005). The Museum, "after heavy criticisms from its scientists and outsiders...promises it won't happen again." Museum spokesman Randall Kremer admitted that the "major problem with the film is the wrap-up" because it "takes a philosophical bent."

The objectionable "philosophical bent" is the view "that the suitability of Earth as a habitat for scientific observation is evidence that the universe was designed for human beings..." (Bhattacharjee, 2005). The Museum apparently has no qualms about presenting other films with clear philosophical overtures, such as the late Carl Sagan's film that concluded that the "Cosmos is all that is, or ever was, or ever will be" (Gonzalez, 2005); i.e., that only matter exists—nothing else. The Smithsonian, in 1997, even featured a "Cosmos Revisited" show in memory of Carl Sagan. Interestingly, while *The Privileged Planet* supports its view with empirical facts, Sagan did not support his faith statement with any evidence. In fact, his claim about the cosmos cannot even be tested scientifically.

Thus, the Smithsonian has not only presented Sagan's materialistic philosophy, but it has also blocked the presentation of any scientific arguments that suggest a contrary conclusion. For this reason, Sheppard (2005) called the Smithsonian "one of the greatest Evolutionary propaganda machines in the world". Jewish mathematician David Berlinski said he thought the "uproar was indecent," and that he was "appalled but not surprised by the willingness of academics to give up every principle of free speech and honest debate whenever they think they can do so without paying a price" (O'Leary, 2005). DuCharme (2004) noted that the controversial film (*The Privileged Planet*) is "a rebuttal of astronomer Carl Sagan's principle of mediocrity" which states that the earth's small size and its unimportant position proves that "our planet is insignificant in the universe."

## Why the Museum changed its mind

Following an initial screening by Hans Dieter Sues, the Museum's associate director for research and collections, the film was approved for showing. After the media storm,

the Museum did a second review which, according to anthropologist Richard Potts, determined that the "film fell within the Museum's guidelines for such events" (Bhattacharjee, 2005).

But "after dozens of calls and emails from researchers and the public," the Museum decided to "issue a statement disavowing the event" (Brumfiel, 2005). Even though it would require breaking an "iron clad contract...some Museum scientists wanted the event canceled" (Bhattacharjee, 2005). After the storm of protest, the Museum argued that the film was "trying to situate science within the wider realm of belief," concluding that the film is "metaphysical and religiously based." As we noted previously, Carl Sagan's conclusion was clearly metaphysical and religiously based—yet no storm of protest ensued (and if there had been, the protesters would have been roundly condemned by the

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media and the science establishment).

A *Washington Post* editorial (Anonymous, 2005) concluded that, although *The Privileged Planet* is an "extremely sophisticated religious film it is a religious film nonetheless. It uses scientific information—the apparently 'perfect' position of Earth in its orbit and in its galaxy, the uniqueness of its atmosphere—to answer, affirmatively, the philosophical question of whether life on Earth was part of a grand design, and not just a result of chance and chemistry" as taught by Darwinists.

The film also caused the Museum to reevaluate its policy and broaden its definition of religious content—now any evidence that supports theism will be banned in the future. Evidently only evidence that supports atheism can be presented. Of course, in a state institution such as the Smithsonian this approach clearly expresses unconstitutional hostility toward theism and support to the contrary religious position, atheism.

## The opposition

Consideration of the opposition to showing the film is especially informative about the nature of the objections to it. Jerry Coyne, who also spends much of his time ensuring that criticism of Darwinism, and especially criticism of Darwinism philosophy, is prevented from reaching the public, was also active in motivating his followers on the *evoldir* newsgroup to actively oppose the film's showing. He wrote to thank those who had emailed the Museum's director (who, in turn, emailed back to those persons the message that the Smithsonian was taking steps to make sure this never happens again) to protest the showing of the film. Coyne (2005), obviously not hiding either his political or religious motives, added that "it looks as if we have won a small skirmish in the continuing battle against ID."

James Randi, after posting an article about showing the film, stated that "the volume of mail I received on this matter has been staggering" (Randi, 2005). He actually offered \$20,000 to the Smithsonian to *not* show the film. His reason for wanting the film banned was because the Smithsonian is "dedicated to promoting science, and not supporting religious claims." He obviously would not object if the Smithsonian showed a film that supported *his* religious claims—it is only the claims of

*others* to which he objects. His "bribe," he admitted, "looked like an attempt to suppress free expression of an opinion." However, to defend himself, Randi stated that the Smithsonian should come up with an alternative presentation—one that would "demonstrate their dedication to the support of legitimate science," by which he meant support for Darwinism and the idea that the earth is not a special place in the universe.

It is clear that Randi and others want to censor ideas with which they disagree, that they want to control information presented to other people, and that they do not want to give others the privilege of viewing the film and making their own judgment. Randi argued that the public is not intellectually able to make their own judgments in this area—thus suggesting that Randi and his cohorts must make the judgment for them. Of note is the fact that the University of Toronto allowed people to make up their own minds showing the *Privileged Planet* without controversy (O'Leary, 2005a).

Randi repeatedly implied that the con-

clusion that life in the universe is the result of the outworking of natural law, chance, time, and other factors is “science,” but the idea that the universe is the result of purpose and design is “superstition.” He equated evidence for the role of intelligence in shaping the design of the physical universe with mythology, and equated Darwinism with science and rationality. Randi concluded that “we should be fighting back by using every means at hand short of making the ID people into martyrs, which suppressing this film just might have done” (Randi, 2005).

Especially telling were the comments on the various internet talk groups. For example Myers (2005) stated that Intelligent design supporters usually just try to “dazzle the rubes by pretending to put on a white lab coat; this time, they tried to don the whole National Museum of Natural History, and they look ridiculous in it. Keep laughing at these frauds, everyone.” A student at the University of Cambridge stated, “[t]he Smithsonian has gone absolutely insane...I have just sent the following e-mail to the dear people at the Smithsonian. I intend upon being a major pain until they give up this nonsense” (Gregory, 2005). In her letter, she wrote that the Smithsonian was shortsighted, and asked if they realized that they have “done a major disservice to the parents, educators and scientists who have fought tirelessly against this nonsense.” She concluded, “[d]o you not realize that if ID had anything scientific to say they would publish their ‘findings’ in peer-reviewed journals?” In fact, Gregory had not seen the film, had not read the book, and was not aware of the published literature in this area, including publications by those who teach at her institution, the University of Cambridge. Nor is she evidently aware that Gonzalez has published numerous major articles in the peer-reviewed literature supporting his views.

Nguyen (2005) called the film—which largely summarizes astronomical data, and, at best, only implies a conclusion based on these data—“creationism in disguise.” This is a common ploy to censor—i.e., any evidence against the naturalistic, Darwinist, evolutionary worldview is called “creationism in disguise” and is therefore off limits in public places such as museums. This name calling is not relevant to whether the facts in the film are true.

Hector Avalos, associate professor of religious studies at Iowa State University

and a self-described former fundamentalist, now an evangelical atheist, stated that the film should not be shown because “Intelligent Design is a religious concept cloaked in the language of science” (Oltman, 2005). In the same report, Avalos described intelligent design as “ ‘pseudo-science,’ ” but he did not provide any evidence for this conclusion (as was also true of all of the other critics that I reviewed). In a letter to the campus newspaper, he condemned the film because it is the “old teleological argument...Design implies a Designer” and Christians believe this designer is God (Avalos, 2004).

Gonzalez noted that intelligent design is simply a “ ‘systematic way of detecting design in nature’ ” (Grundmeier, 2004). Yet this very modest proposal generates an enormous amount of hostility. Professor emeritus at Iowa State University, John Patterson, said it has “no place in science because history has proven these explanations ‘pathetic’ ” (Grundmeier, 2004). Interestingly, even atheist John Patterson said that Gonzalez’s book *The Privileged Planet* is “ ‘rich with good science in it,’ ” but added that “ ‘[i]t is a religious apologetic disguised as science’ ” (Grundmeier, 2004).

This sampling of knee-jerk responses to a film they have not seen, and know little or nothing about, by uninformed persons “may have backfired” (Anonymous, 2005a). Fortunately, the irrational attack against *The Privileged Planet* has been noted by other scientists. Tom Ingebritsen, associate professor of genetics and cell biology at Iowa State, wrote that Patterson’s response reflected “a confounding bias against the supernatural,” and that Patterson’s “ ‘worldview is coloring his [view] of whether intelligent design could be legitimate in science’ ” (Grundmeier, 2004a).

As Rank (2004) noted, the reaction to the film’s showing has been anything but rational. In his words, “[p]rominent researchers are scrambling to write articles against it, universities are firing staff members who are publicly advocating it, and *Wired Magazine* even devoted a cover article to it, affectionately titled ‘The Crusade Against Evolution.’ ” He added that

[Professor] Avalos, Iowa State’s most beloved atheist, argued against ID science from the philosophical point of view, which was odd, since Avalos is neither a sci-

entist nor a philosopher. But most ISU students know that Avalos will throw mud at theism whenever possible (if the ISU dietetics program hosted a Christian cooking conference, Avalos would show up with a batch of homemade Atheist cookies).

So much for the goal of rationality and impartial objectivity among scientists.

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*Dr. Bergman teaches biology, molecular biology, chemistry, anthropology, and anatomy at Northwest State in Ohio, where he has been on the faculty for over 20 years. He may be reached at: [jbergman@northweststate.edu](mailto:jbergman@northweststate.edu).*

## Dear Theistic Evolutionist

...continued from page 1

arguments *seem* to carry weight. Both may be asked as questions: 1) How could light from distant regions have arrived on earth if the universe is merely 6-10 thousand years old? 2) Why does radiometric dating indicate that lower strata have experienced more radioactive decay, and are thus older, than higher layers? Whereas there are many scientific and biblical reasons supporting a much younger earth, I choose here to devote my attention to these two weighty reasons which seemingly support a theistic evolution (TE) point of view. I deal with the radiometric evidence first.

### Why do strata seem to point to great periods of successive antiquity?

One sensible answer is that radioactive decay happened very much more quickly during the global flood than occurs today. Now I realize that this claim sounds hollow and empty—unless it is backed up scientifically. It is my purpose here to do that very thing.

There are now two approaches to measuring radioactive decay. One is a more traditional method. It may measure the amount of uranium 238, for example, that has decayed into lead. The present rate of such decay is known. Therefore, by extrapolating backwards in time, we can say that a certain rock, for example, may be 1 or 2 billion years old based on the amount of lead present. This method, however, assumes that present rates of decay have been more or less constant throughout earth's history. Up until recently, such an assumption might have seemed reasonable, but it is no longer a reasonable assumption. There is another approach to measuring radioactive decay that contradicts the conclusion of billions of years.

### What is this other approach?

Physicist Russell Humphreys and six other scientists have developed a new method for

measuring rock antiquity by looking at the helium that results from radioactive decay (in addition to the lead). Both helium and lead develop from radioactive decay of uranium. Since helium is "slippery," it should not take billions of years for it to move far away from its original location, they conjectured. They did not know the "leak" rate for helium diffusion in zircons (crystalline minerals commonly found in rocks), however.

They therefore devised a scientific experiment. Based on a presumed billions-of-years model, they calculated the anticipated helium diffusion rate in zircons. They did the same for a thousands-of-years model. This was a blind experiment, using outside sources. Dr. Humphreys wrote: "Then in 2001, we commissioned (through an intermediary who kept us anonymous) one of the world's best experimenters in this field to measure the [helium] leak rates of our particular zircons, at various temperatures. Not being a creationist, he was not familiar with our prediction. Not being in touch with the experiment, we had no control over its outcome. This was an ideal way to get unbiased data." The results confirmed the young earth perspective and showed the old earth view to be extremely out-of-line.<sup>1</sup>

### Is it possible that something in earth's history greatly increased uranium decay into lead (a more traditional method for measuring the age of rock)?

The answer is yes—both scientifically and biblically! For one thing, there are a number of experiments that show change in the rate of nuclear decay.<sup>2</sup> Second, consider Deuteronomy 32:22—"For a fire is kindled by My anger, and it burns to the depths of Sheol, devours the earth and its increase, and sets on fire the foundations of the mountains."<sup>3</sup> This verse may point us in the direction that radioactive decay is a physical manifesta-

tion of God's anger against evil, affecting even biological life. Prior to the Noachian flood, mankind lived much longer. His lifespan has diminished substantially since the flood. Also, even though Noah might well have had some immature dinosaurs on the ark,<sup>4</sup> their nearly total extinction following the flood seems obvious. This also holds with respect to many other animals that have become extinct.

It is likely (based on several lines of data) that Noah's descendants were exposed to higher levels of nuclear activity than is present today, due to residual decay acceleration persisting for several centuries after the flood. Dr. John Sanford, a geneticist and author of *Genetic Entropy: The Mystery of the Genome*,<sup>5</sup> thinks that is why human longevity decreased dramatically during the first few centuries after the flood (Genesis 11:10-25).

### But what about different radiometric dates for different layers?

Assuming that accelerated nuclear decay did take place during the year of the flood, lower layers would contain larger amounts

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General Editor: Glen W. Wolfrom

For membership / subscription information, advertising rates, and information for authors:

Glen W. Wolfrom, Editor  
P.O. Box 8263  
St. Joseph, MO 64508-8263

Email: [CMeditor@creationresearch.org](mailto:CMeditor@creationresearch.org)  
Phone/fax: 816.279.2312

Creation Research Society Website:  
[www.creationresearch.org](http://www.creationresearch.org)

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of daughter elements (such as lead 206 from uranium 238 decay) than do higher layers that were deposited later during that year. Why? Because, after they formed, the lower layers were subject to longer periods of accelerated decay.

In short, a greater number of radioactive atoms decayed in lower layers than in upper layers. That is why the lower strata seem to be hundreds of millions of years older than the upper strata.<sup>6</sup>

### The second argument (light travel) to prove billions of years

Einstein's General Theory of Relativity may help us better understand just how light from distant stars could be seen on earth much sooner than long-age theorists proclaim. The theory says that gravity warps time so that distant clocks run faster than do those on earth. This line of argument may be hard to follow, but it is based on the prevailing scientific theory and is demonstrable. The theory, in other words, may actually support a young-earth view.<sup>7</sup>

### Final authority

To conclude my letter, I have a question for

you. Is your final authority more with the Bible or with the consensus of scientists?

## Endnotes

1. See *RATE I: Radioisotopes and the Age of The Earth*, L. Vardiman et al., eds. (San Diego, CA: Institute for Creation Research and the Creation Research Society, 2000). This book was published prior to the experiment. Five years later, another book was published: *RATE II: Radioisotopes and the Age of The Earth: Results of a Young-Earth Creationist Research Initiative*, (Volume II), L. Vardiman et al., eds. (San Diego, CA: Institute for Creation Research and the Creation Research Society, 2005). This second book gives the actual results of the experiment.
2. The *RATE I* book referred to above may be downloaded free online. Please consider p 333ff. See [www.icr.org/pdf/research/rate-all.pdf](http://www.icr.org/pdf/research/rate-all.pdf). I also encourage you to see [www.science-frontiers.com/sf092/sf092c14.htm](http://www.science-frontiers.com/sf092/sf092c14.htm): "Thirty years ago, Otto Reifenschweiler was searching for a compound which could protect Geiger-Mueller tubes from damage when they are first ionised. He found the compound, which became a money-spinner for Philips, in a mixture of titanium and radioactive tritium. He also discovered that as the mixture was heated, its radioactivity declined sharply. No process known to physics could account for such a baffling phenomenon: radioactivity should be unaffected by heat. Nevertheless, as the temperature increased from 115°C to 160°C, the emission of beta particles fell by 28%."
3. The objection that we should not look for helpful information relative to scientific matters from a poetic section of Scripture seems on the surface to challenge Paul's teaching in 2 Tim. 3:16-17. All Scripture is both profitable and equipping.
4. I am very aware that this comment would bring guffaws from some secularists who are convinced of their intellectual superiority over creationists, but evidence is building that dinosaurs died more recently than the supposed 65 million years ago. See chapter 19 of my book, *Evolution Exposed* (Enumclaw, WA: Pleasant Word Publishing, 2006).
5. Genetic Entropy & the Mystery of the Genome, J.C. Sanford (Lima, NY: Ivan Press, 2005).
6. Dr. Russell Humphreys himself helped me with this paragraph and the previous one.
7. Dr. Russell Humphreys has written a book, *Starlight and Time* (Green Forest, AR: Master Books, 1994), explaining this. I highly recommend it in responding to the question: "How could light from distant regions have arrived on earth if the universe is merely 6-10K years old?"

\*Paul G. Humber, AB, MS, BD, heads CR Ministries, 327 Green Lane, Philadelphia, PA 19128. CR Ministries promotes CRT (Christian Released Time), CREATION teaching, and the CROSS of Christ. He is the author of two books, entitled *Evolution Exposed* and *Jehovah Jesus*. Contact: 215-483-9846 or

## Geology Education for the Future

July 26-28, 2007, Cedarville University

**G**eology Education for the Future is the theme for a new conference designed to gather together the young earth creation geology community. All young earth creation geologists and earth science teachers are urged to attend. Technical and education sessions will be held on the first two days of the conference where professionals can present research, get feedback on new ideas, and develop collaborative relationships with one another.

Time is planned for a local geology field trip, group discussion, and interaction. General sessions, to be held on the last day of the conference, will be open to the broader public and will cover topics with which some professional participants may already be familiar.

### Call for Papers

Technical, geo-education, and general abstracts are being accepted for the conference.

**Technical and geo-education abstracts** should be no more than 1000 words (use Geology format for references) and should report on a current area of personal research related to geology, or on educational ideas and experiences related to the conference theme. These presentations will be 30 minutes in duration followed by 10 minutes of discussion. We are seeking experts to present general session abstracts in their fields of specialty. General session abstracts should be no more than 250 words.

**General abstracts** should broadly emphasize young earth creation geology and cover single topics, like dinosaurs, Flood geology, plate tectonics, radioactive dating, the ice age, or paleo-baraminology, for example. These sessions are designed to educate participants on current, and widely-accepted creationist models. General presentations will last 45 minutes, followed by 10 minutes of discussion. Presenters who have their abstract(s) accepted for the general session will receive an honorarium (split from conference profits and donations) and will have their conference fee (registration, lodging, meals) for the entire conference waived.

All abstracts will be published (format to be determined). Abstracts should be sent to Dr. John Whitmore via email ([johnwhitmore@cedarville.edu](mailto:johnwhitmore@cedarville.edu)) no later than May 1, 2007 (word.doc format). Abstracts will be reviewed by a committee and notice of acceptance will be made no later than June 1, 2007. If accepted, revised abstracts should be updated by July 1, 2007. Early submission is highly recommended.

### Sponsors

The conference is being jointly sponsored by Cedarville University and the Creation Research Science Education Foundation (CRSEF) of Columbus, Ohio. We are seeking other sponsors that can help underwrite the costs of the conference and can contribute toward honoraria for the general session speakers.

### Registration

Online registration will become available soon at:

[www.cedarville.edu/geologyconference](http://www.cedarville.edu/geologyconference)

Please contact Dr. John Whitmore ([johnwhitmore@cedarville.edu](mailto:johnwhitmore@cedarville.edu)) for further details about the conference.



# Norway's Newest Dinosaur and the Flood/post-Flood Boundary

by Carl R. Froede, Jr., P.G.

Norway is not known for dinosaurs. In fact, the country's first dinosaur was announced by the Research Council of Norway in April 2006 (Anonymous, 2006; Britt, 2006; Owen, 2006). The discovery occurred nine years earlier in the Norwegian Snorre oil field in the North Sea, located approximately 130 miles northwest of Bergen. A knucklebone of an unknown dinosaur was found in a well core retrieved from 1.4 miles beneath the seabed. Uniformitarian paleontologists identified the bone as belonging to a Plateosaurus (Figure 1), a large saur-  
 opod dinosaur that lived 200 million years ago during the late Triassic Period (Figure 2).

A common dinosaur in Europe, Plateosaurus is believed to have been one of the first of the vegetarian dinosaurs. It had beak-like jaws and leaf-shaped teeth which were well designed to cut through plant material. The large animal walked on four legs but could rear up on its hind legs and use its clawed forelimbs to reach high branches. Because the fossil was discovered in an "alluvial" sand between two layers of red shale, uniformitarian scientists believe that the paleoenvironment was an arid area with large rivers meandering through dry plains.

This discovery is also significant for young-Earth creationists in defining the Flood/post-Flood boundary. Some British creationists have proposed that the Flood/post-Flood boundary for animals should be located in the Mississippian Period of the Paleozoic Era (Tyler, 2003; 2006) or near the contact between the Paleozoic and Mesozoic Eras (Garner, 1996a; 1996b; Garton, 1996; Robinson, 1996). If either of these concepts were correct, this Norwegian dinosaur would have died and been buried in the North Sea basin *following* the Flood. (Figure 2). This does not seem reasonable. How could 1.4 miles of sediment accumulate in the North Sea basin *after* the Flood? These types of awkward situations are a good reason to reject the uniformitarian geologic timescale as the best guide for locating the Flood's boundaries in the rock record.

It might be better to consider the geo-



Figure 1. The Plateosaurids ranged in size from five to 26 feet in length. Their skeletons have been found in North and South America, Europe, Africa, and Asia (Lambert, 1990).

logic conditions expected during and after the Flood, and then interpret the burial and preservation of the entire dinosaur (or just the knucklebone) in that context. Given that this fossil was buried under 1.4 miles of sediment in the North Sea, it would appear more reasonable to suggest that the dinosaur was buried during the Flood.

Young-Earth creationists need to evaluate the data, throw out the uniformitarian perspective, and cast it within the constraints of our biblical framework. In doing this, we do not need to follow the uniformitarian geologic timescale. This Norwegian dinosaur discovery allows us to define its burial during the Flood—information that helps us reconstruct the actual rock record in a reasonable manner, consistent with scriptural history.

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Carl Froede, Jr., is a professional geologist and author who lives and works in Atlanta, GA. He has been active in creation science for over 14 years and has written numerous articles for various creationist organizations.

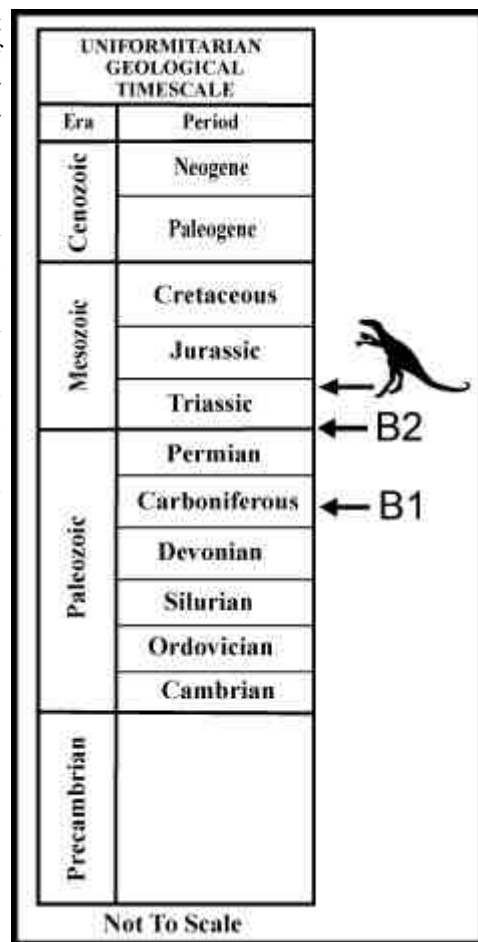


Figure 2. Uniformitarian geologic timescale showing the two proposed locations (B1 and B2) for the Flood/post-Flood boundary, along with the age of the Plateosaurus found under 1.4 miles of sediment in the Norwegian North Sea. Following the uniformitarian geologic timescale is unnecessary for creationists who wish to define the rock record within the biblical framework.

# Philadelphia Area Genesis Seminar

**A** Genesis Seminar will be held Sunday, March 25, 2007, near Philadelphia, PA.

Two speakers will be featured: Dr. Kevin Anderson, Ph.D., a former university professor of microbiology and current director of the Van Andel Creation Research Center (Creation Research Society), Chino Valley, AZ; and Rev. Paul G. Humber, educator for 30 years, author of *Evolution Exposed* (2006) and various *Days of Praise* devotionals, and current director of CR Ministries, Philadelphia.

The location is Worthington Mill Rd & 2nd Street Pike, Richboro, PA 18954 (Advent Lutheran Church building). The time is from 4 pm to 8 pm. Dr. Anderson will speak on the topic *Scientific Evidence for Creation*. Rev. Humber will speak on *The Impact of Evolution on Society*. Time will be allotted for questions and answers — and refreshments.

Contact: email Theodore.Siek@verizon.net; phone 215-322-9213 or 215-322-9480.

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## All by Design

by Jonathan C. O'Quinn, D.P.M., M.S.

## Powerful Mussels

**T**hroughout nature, there are countless examples of precision engineering in living systems that point to an intelligent, planned design for life on this planet. Take mussels, for instance.

Rather than seeking their own prey, these sedentary, marine mollusks rely on ocean water to bring them food, which they can then passively filter to extract food particles. Turbulent water better circulates the water to bring potential food items to the mussels, which is why they are commonly found in shallow water near breaking waves. In order to accommodate the powerful force of constant waves, mussels require a firm anchorage to prevent them from being washed away.

To accomplish this, mussels produce a sticky mass of protein threads that bonds with incredible strength to rocks and other



*Close-up of mussels, Bathymodiolus childressi. The expanded filaments on the mussel shells are byssal threads produced by the feet of the mussels and used to hold on to neighbors. Photo courtesy of NOAA Office of Ocean Exploration. <http://oceanexplorer.noaa.gov/>*

substrates. Specialized adhesive proteins within these threads contain an unusual amino acid, L-DOPA, which acts as the cement to attach the adhesive proteins to

underwater surfaces. In this marine environment, oxidation of the L-DOPA units occurs, which allows them to form strong covalent bonds with substrate surfaces. The cumulative effect of vast numbers of such interactions is a bond which is so tight that the protein threads will actually rip apart before the bond breaks.

The precise function and specificity of these molecular interactions suggest a purposeful design for these creatures that neither developed in stages, nor by chance.

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