

# Creation Matters

Volume 24 Number 1  
January / February 2019

A publication of the  
Creation Research Society

## A Natural Origin-of-Life: Every Hypothetical Step Appears Thwarted by Randomization

by Timothy R. Stout and George Matzko

*Editor's note: This synopsis is adapted from the introduction to the authors' in-depth analysis of abiogenesis at <https://doi.org/10.31219/osf.io/p5nw3>.*

In 1953 Stanley Miller and Harold Urey reported an experiment that successfully converted certain simple, naturally-occurring compounds — methane, ammonia, hydrogen, and water — into various amino acids (Miller and Urey, 1953). Because amino acids are the building blocks of life, it appeared that natural processes were sufficient in themselves to provide the chemicals needed for a natural, spontaneous origin of life.

The ensuing excitement was so great that it set off a new field of scientific study, initially called chemical evolution, and now generally called abiogenesis. A comment appeared in the British Royal Society's publication *Philosophical Transactions A*, on the responses to the experiment: "There was some optimism that, had the experiment been left running, living creatures would soon be crawling out of the laboratory" (Walker, Packard, and Cody, 2017).

However, the results have not even come close to living up to these early expectations. In the time since Miller and Urey reported their results, not a single experi-

ment representing a hypothetical step in abiogenesis has successfully yielded product which is suitable for use in its succeeding steps. Steve Benner, one of the world's leading authorities on abiogenesis, evaluated the situation thusly:

We are now 60 years into the modern era of prebiotic chemistry. That era has produced tens of thousands of papers attempting to define processes by which "molecules that look like biology" might arise from "molecules that do not look like biology." .... For the most part, these

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## Why Geology Matters, Part 4

by

Michael J. Oard, MS and  
John K. Reed, PhD

There is a multitude of opinions, theories, and narratives about origins. Social media have made everyone aware of them, and increasing communication only seems to increase division. This is not surprising to Christians for several reasons (Oard and Reed 2018).

### Interpretations of past based on worldviews

Science developed as specialized, directed observation. Repeatable experimentation represents its apex. It is not infallible; it is a method to minimize error and bias. This, of course, assumes that bias and error

## Worldviews and

## Poor Scholarship

are real, and thus, scientists are not infallible (Reed and Kleverberg, 2014a, b).

In addition, there is the moral dimension. The emerging "replication crisis" demonstrates that an ethical commitment to truth, rather than the pursuit of profit or propaganda, is a necessary element of a thriving scientific culture (Couronne, 2018; Hill, 2018; Yong, 2018). Without an objective, moral foundation, scientists are merely a societal priesthood.

Observations and experimental data themselves are not contrary to the Bible, though *interpretations* of those data can be. But interpretations include, by defi-

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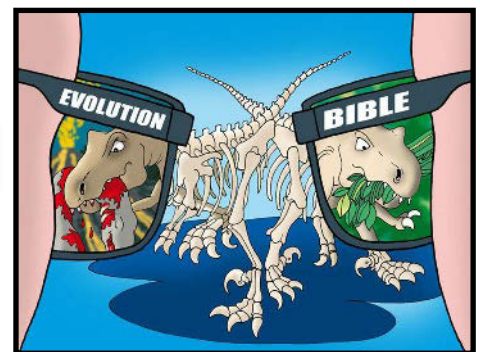


FIGURE 1. Two views on whether all dinosaurs once ate plants (courtesy of Creation Ministries International). The evolutionary worldview, left, sees everything over millions of years, and according to evolution, some dinosaurs ate meat. The biblical worldview, right, sees the history of the world over thousands of years. Creationism maintains that all animals, including dinosaurs, were created on Day 6, and were vegetarians before man sinned (according to Genesis 1:30).



## Benford's Law

Suppose you look at the first non-zero digits of a set of random numbers. For each digit there is an equal probability of the numbers 1–9, so the probability for the number 1, or any other number, is  $1/9 = 0.11$ . If a set of 100 random numbers is inspected, about 11 of them should begin with “1.”

However, this result for random numbers often does not occur for a wide range of number lists. These include stock prices, street addresses, Fibonacci numbers, lengths of rivers, Prime numbers, utility bills, mathematical constants, and more. If the particular list of numbers is large, one typically finds that the initial digit “1” occurs about  $1/3$  (0.3) of the time, the number “2” occurs nearly  $1/5$  (0.2) of the time, etc. In other words, the leading significant digit is likely to be small.

There are various mathematical efforts to explain this contra-intuitive result, often using a logarithmic argument, but questions remain. The reader is challenged to look, for example, at a directory page of phone numbers, and to tabulate for each the next digit which follows the area code and three-number prefix. You may well find that the

numbers “1” and “2” occur unusually often.

This uneven pattern of numbers is called *Benford's Law*, or the “first-digit law,” and was first studied by mathematicians Simon Newcomb (1835–1909) and Frank Benford (1883–1948). The implication of the law is that number lists with a social or physical origin are simply not random.

One interesting application of Benford's Law involves crime detection. Suppose a dishonest person “cooks the books” by making up financial figures in a ledger. The natural approach is to hide the dishonesty by writing nearly-random numbers for the first digits 1 through 9. However, financial auditors are familiar with Benford's Law, and accounting data which diverge from the law are flagged as suspect (Stalcup, 2010).

As another example, consider a list of dimensionless physics and math constants, of which there are many. These include the fine structure constant, the base of natural logarithms, pi, and Euler's constant. The first digits of this number list closely obey Benford's Law, with smaller numbers in the majority. Numerical lists in biology also obey this law (Friar, 2012).

One may conclude that these number lists from nature are not random, but instead bear the fingerprint of intelligence. Benford's Law is an implicit evidence for a non-random programming of the numerical data of our world, that is, Intelligent Design.

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## Creation Matters

ISSN 1094-6632  
Volume 24, Number 1  
January / February 2019

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## Thwarted by Randomization ...continued from page 1

papers report “success” in the sense that those papers define the term.... And yet, the problem remains unsolved (Benner, 2014).

As we study the various stages of abiogenesis and hear about all of the optimism, it is well to keep Benner’s comments in mind. There is still not a plausible scientific explanation for the origin of life.

### Our hypothesis

We suggest the hypothesis which we have outlined in Table 1, comprised of a set of several principles or assertions, to explain the root cause of most, if not all of the observed failures in abiogenesis over the entire 60-plus years of its modern research activity.

These assertions are not difficult to understand. Neither is their application. Yet, they lead to conclusions with far reaching implications. Their simplicity and their ease of application to a given scenario make the hypothesis a powerful tool.

Two generations of consistent failures, without a single success, should tell us that something is fundamentally wrong with current foundational premises. We suggest that our hypothesis explains the problem. The assertions represent fundamental properties of nature, and any and every hypothetical step appears to be affected by them. In the Analysis section to follow, we will look at a number of the major proposed steps to see if the hypothesis provides a qualitative prediction/explanation of the outcome of experiments associated with the steps.

There have been, reputedly, thousands of experiments performed, representing various postulated steps. None have been able to provide products which are usable as feedstock for their successors, which is the standard defining success within this analysis. The vast number of already-performed experiments provides a substantial basis for evaluating the validity of the hypothesis.

### Discussion

#### Product possibilities

Carbon, nitrogen, oxygen, hydrogen, sulfur, and phosphorous are the primary elements used in living cells. There are virtually an unlimited number of compounds that can be made using combinations of these ele-

**1. Product Possibilities.** At each hypothetical step of abiogenesis, prebiotic processes at work in that step will be capable of forming a significantly larger number of products than are suitable for advancement toward the appearance of living cells.

**2. Abiogenetic Disconnects.** There is no connection between the natural products of prebiotic processes at a given step, and the principles of biology and biochemistry that determine which products need to be provided for use spatially and temporally.

**3. Randomization.** Prebiotic processes are inherent randomizers. They tend to provide a random assortment of possible products, according to a natural statistical distribution. Products suitable for life may appear incidentally, but not systematically at higher yields than the natural distribution. Lengthy, extended spans of time for abiogenesis result in greater randomization of initial feedstock, not required biochemicals.

**4. Fatal Ratios.** Because of randomization, the ratio of wrong products, provided at each step, to those that are required for advancement toward life, will be large

enough to prevent any given step from successfully providing usable feedstock to its successor. This is the ultimate cause of the consistently failed steps and experiments in abiogenesis.

**5. Law of Large Numbers.** The statistical *law of large numbers* applies to prebiotic processes. A single mole of a given compound contains  $6 \times 10^{23}$  instances, or in this case, molecules of the compound. This is a large number. In abiogenesis, there will be a natural distribution of possible products for the outcome of a given set of conditions and processes. Fluctuations within the distribution are normal, but the larger the total number of instances worked on, the closer the average distribution yielded comes to the expected, or natural, distribution. This effectively neutralizes the significance of incidental deviations.

**6. Emergence.** The principle of emergence (i.e., that an entity has properties not possessed by its parts) can exponentially compound the difficulties of the above assertions, particularly in later hypothetical steps toward the appearance of living cells.

TABLE 1. *Our hypothesis.*

ments. The Beilstein Database<sup>1</sup> lists the structures of over 10 million organic compounds by their names and characteristics. Along the same lines, the Murchison meteorite contains over a million organic compounds (Schmitt-Kopplin et al., 2009).

The Murchison meteorite provides a true-life instance of prebiotic processes at work on initial compounds without any kind of interference or guidance. An initial feedstock, plausibly consisting of only a handful of simple compounds, was converted into over a million variants. By contrast, most of cellular chemistry is based on proteins and nucleic acids, which are built from a feedstock of 28 kinds of building-block molecules — 20 canonical amino acids (coded for in DNA), four kinds of RNA nucleotides, and four kinds of DNA nucleotides. Abiogenesis requires large, pure

quantities of these 28 molecules, to the exclusion of most others. Natural processes appear to provide random arrangements of the million-plus possibilities, not to focus provision on the handful of building blocks needed for life.

The pattern of prebiotic processes providing more unusable product than usable appears to repeat itself at each of the remaining steps of abiogenesis.

#### Abiogenetic disconnects

There appears to be no dependency, relationship, or connection of any kind between the products naturally produced by prebiotic process and those needed for life. Chemicals useful-to-life do appear, but only on an incidental basis. Potential utility toward life does not override the randomness of the normal statistical distribution. We have coined the term *abiogenetic disconnects* to represent this lack of connection (Stout, 2016). On the one hand, use of this term is merely stating the obvious. On the other, it defines a standard of reference and perspec-

<sup>1</sup> See for example, *CrossFire Beilstein Database Exceeds Ten Million Compounds*, Elsevier Information Systems GmbH. <https://www.elsevier.com/about/press-releases/science-and-technology/crossfire-beilstein-database-exceeds-ten-million-compounds>

tive for the ensuing discussion.

Chemical engineers regularly design processes and equipment to form complex products with controlled precision. Nature frequently provides processes which, under tightly controlled conditions, are capable of restricting their yield to specific targets from a broad range of possible outputs. The work of the chemical engineer is to sequence and control these processes so that the targeted products are provided with sufficient purity for use in a succeeding step or final product.

Accomplishing this in an industrial chemical plant typically requires suitable feedstock, suitable processing equipment, suitable mechanisms for environmental modification, suitable sensory equipment to supply feedback information, and a suitable mechanism for operational control.

Living cells also feature these mechanisms. However, they are not available to prebiotic processes. For instance, there is no feedback mechanism available to regulate the effect of an electric discharge on a mixture of methane, ammonia, water, and hydrogen, the beginning constituents of Miller's experiment. A reputed prebiotic process which is dependent on the pre-existence of specialized equipment, or on human intervention, to mimic it in order to accomplish these tasks is not prebiotic.

### Environmental disconnects

There are also environmental disconnects between the factors which determine the physical environmental conditions at a site, and the conditions required for abiogenesis. For example, just because too much rain could wash out a pond, with incipient abiogenesis underway, will not result in the appearance of a protective shield, diverting an approaching severe thunderstorm. The needs of abiogenesis have no restraining impact on normal physical and chemical behavior.

For another example, entrained mud flowing into a lake during spring run-off may potentially adsorb all of the organic molecules involved in abiogenesis and bury them during sedimentation, either at the lake or at some distant site downstream. This could prove fatal to incipient abiogenesis at the site. This would be similar to what happens to pollutants in Lake Michigan (Eadie, 1997). Yet, this possibility does not result in any restraint on the potential mud flow into a lake. There is a disconnect between the principles which determine environmental conditions at a site and those needed for successful abiogenesis.

This is important because most environmental conditions tend to fluctuate randomly over large values, over long periods of time. By contrast, chemical engineers exert precise control over a number of factors relevant to the processes used. Precise control is required in order to restrict output to a selected target or range of targets from an otherwise broad range of possibilities.

One serious disadvantage of abiogenesis is that feedback mechanisms are generally sufficiently complex that their implementation requires cellular capabilities of genome specification, translation, implementation, and replication. Our assumption is that once this level of sophistication has been reached, abiogenesis has met its goals, and living cells have become subject to Darwinian evolution. Thus, these tools are not available for use in abiogenesis.

Cellular products are far more complicated than are those of any chemical plant. This plausibly makes them more sensitive to environmental variation than are industrial chemical processes. If relatively simple industrial processes fail without feedback control and the ability to sustain a specified environment, it is even less plausible for abiogenesis to succeed without it. Perhaps current emphasis in abiogenesis does not include environmental constraints because potential processes are not well enough defined to establish constraint boundaries. Yet, we suggest that this is an extremely critical, often overlooked, factor.

In his book *A Skeptics Guide to Origins*, Robert Shapiro discusses the possibility of streamflow supply of feedstock (Shapiro, 1986). Sometimes a process may require provision of multiple chemicals having incompatible formation chemistries. Shapiro proposes a solution for this in having the different chemistries take place in different ponds, with local conditions providing the proper environment for each of the required chemicals. Streams would then transport the chemicals from the separate supply ponds into the main processing pond, wherein the various intermediate reactants are processed. This is obviously a scenario capable of many more wrong possibilities than correct ones.

The most significant problem with environmental variables is that they vary widely from day to day, month to month, year to year, century to century, etc. They have no stability. We suggest that it is implausible for a natural setting to provide adequate stability for any proposed situation which

depends on stream flow, from different locations, meeting at a common downstream location for additional processing. RNA decays in only a matter of days (Szostak, 2012). Therefore, interruption of nucleotide supply for more time than this could be catastrophic, potentially destroying all progress toward life. When nucleotide supply is dependent on environmental conditions, such as specific rates of stream flow from multiple supply ponds, simultaneously feeding into a mixing pond, the risk of an interruption in nucleotide supply becomes great.

### Prebiotic processes appear to yield random mixtures of the possible products.

Prebiotic processes inherently function as random product generators, using an external energy source to rearrange the chemical elements of substrate into a random set of new product molecules. The species and probabilities of the new molecules will be formed in accordance with the laws of physics and chemistry, on a molecule-by-molecule basis, in accordance with local environmental conditions. The total results will be the sum of individual, independent interactions.

As a general observation, energy utilization will typically take place in one of two settings: controlled or uncontrolled. Controlled energy usage requires a precisely defined physical mechanism to convert a specific form of energy into a new form suitable to accomplish a specific function. For instance, gasoline is a rigidly specified form of energy. It can be taken from a tank, metered into a cylinder, mixed with a suitable proportion of air, compressed, and then ignited by a spark to produce a controlled displacement of a piston which, in turn, can be converted into rotary motion to turn the wheels of a car.

A specific physical mechanism, matched to the energy source, must be provided to perform all of the tasks required to burn gasoline as a controlled source of motive energy. There must be a good match between the form of energy being supplied and the machinery which will utilize it.

By contrast, simply dumping a tank of gasoline onto a car and igniting it will typically result in an uncontrolled fire or explosion. There is an exceedingly great probability that this will not improve the car, but will instead damage it. The energy from a tank of gasoline, poured onto a car and then ignited, will most certainly not provide a means for the car to be driven through heavy stop-and-go traffic for hun-

dreds of miles. Uncontrolled energy does not provide controlled results.

Prebiotic processes are similar in character to dumping a tank of gasoline on a car and igniting it. By contrast, living cells have machinery which converts energy, appearing in a specified form, into ATP, the cellular energy currency which is useful for biotic processes. The form of energy to be converted into ATP varies among cellular types, such as UV light, visible light, methane, metallic ion flow, or digestible nutrients. Without machinery matched to the form of energy, energy tends either to have no effect or to act like a tank of gas dumped on a car.

Long periods of time do not make life inevitable; they only make randomization more complete. The large number of molecules in just a few kilograms of material overrides any temporarily useful fluctuations that might appear.

## Conclusion

Since prebiotic processes are natural randomizers, and abiogenesis requires specific products, it does not appear that prebiotic processes have the inherent capability to meet the requirements necessary for successful abiogenesis. This situation plausibly characterizes every hypothetical step of abiogenesis and explains why none have succeeded.

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GM

## Poor Scholarship

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...nition, elements other than data. Interpretations are data that are filtered through a worldview. In an increasingly postmodern world, the filter has become more important than the data.

Interpretations about the *past* are a distinct category, and one of the more persistent errors of the modern age is the belief in a “scientific history” that is the epistemological equivalent of “empirical science” (Cleland, 2013). However, that is false (Reed and Klevberg 2017, 2018). While forensic methods can be applied to historical studies, such history cannot attain the certainty of science. This confusion has allowed the biased contribution of naturalism, as a worldview filter, to fly under the radar, especially in the cases of uniformitarian geo-history and evolutionary bio-history.

Creationists freely admit that their worldview transcends science and history. Such transparency is not true of naturalistic views, which conflate science and atheistic narratives. This is ironic, since science is the “child” of Christianity (Reed and Klevberg, 2014c). Some evolutionists are honest enough to admit their limits; for example, Professor David Kitts (1974, p. 466) admitted: “Evolution, at least in

the sense that Darwin speaks of it, cannot be detected within the lifetime of a single observer.”

Thus, science is not self-contained, history is not science, and religious and philosophical assumptions lie at the foundation of all knowledge. That is why the real fight over origins should *explicitly* occupy the battleground of worldviews. Data and interpretation can be argued *ad nauseum*; real progress demands that the foundations be examined. Both sides can examine the same rocks and fossils,<sup>1</sup> but everything, from data selection to epistemological assumptions and ethical framework, will bias interpretations (Figure 1). A secularist would interpret Grand Canyon as being carved by the Colorado River because he assumes deep time, while a creationist would look for evidence of its catastrophic formation by a high volume of water eroding over a short time. This results in a better forensic case (Oard, 2014). For example, Oard explained why the canyon was cut at an intermediate elevation on the Kaibab Plateau (2,200–2,500 m, 7,200–8,200 ft),<sup>2</sup> and not at the

<sup>1</sup> Secular and creation scientists generally use the same data, but there are times when secular scientists have conflated their “interpretations” with actual data. Creation scientists must be careful to distinguish the two. Moreover, we have found errors of omission. When we go out into the field, we sometimes see things excluded or downplayed by selection bias. Sometimes these excluded observations can be crucial for a biblical interpretation.

low spots, such as the 1,740-m (5,700 ft) altitude on the low end of the north limb of the Kaibab Plateau.

## Culture dominated by atheist worldview

Creationist alternatives have been censored by those holding to the naturalistic worldview, which permeates culture and education. This censorship is reinforced by television, movies, and the print media. It is also reinforced by government (e.g., national parks and monuments) and by co-opted religious figures.

Unfortunately, the co-opted religious figures are sometimes the most vehemently opposed to creation. Davis Young and Ralph Stearley (2008, p. 218), former and current geology professors at Calvin College, stated:

This strong evidence of development of thick piles of layered sediments in ancient basins with identifiable contexts such as deserts, lakes, rivers, deltas, shores and open oceans indicates that long time spans must have elapsed during the formation of local stacks of sediment, inasmuch as the forma-

<sup>2</sup> Noting the different altitudes where Grand Canyon was carved is necessary because the Kaibab Plateau slopes southward into the Coconino Plateau. The north rim is 300 m (1,000 ft) higher than the south rim.

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*Editor's note: You may submit your question to Dr. Jean Lightner at [jean@creationresearch.org](mailto:jean@creationresearch.org). It will not be possible to provide an answer for each question, but she will choose those which have a broad appeal and lend themselves to relatively short answers.*

## Q What is the Law of Homologous Series?

A The Law of Homologous Series is a term coined by Russian agronomist N. I. Vavilov (1887–1943). It describes a pattern of parallel variation that is observed throughout the plant and animal kingdoms. Vavilov, an agronomist, clearly presented extensive evidence of this phenomenon in a *Journal of Genetics* article (Vavilov, 1922). It is considered by some to be one of the fundamental laws of genetics (Kupzow, 1975), though many in the United States have never heard of it.

### The pattern in plants

Vavilov studied innumerable varieties of cultivated and wild plants. He mentioned eight different species of wheat, most of which are cultivated. Each of these species is comprised of a number of varieties. Vavilov presented a list of characteristics [e.g., forms with no awns (bristles on flower); different colors of ears (flower structures) and seeds; forms with smooth (not hairy) flower structures; and winter and spring varieties] that are seen in different varieties in one species of wheat. He then pointed out that, in nearly every case, such variation is also seen among the varieties in each of the other species of wheat (Vavilov, 1922, pp. 53–54).

Vavilov was able to show, through his extensive collection of grains from excursions around the world, that many of the same varieties seen in wheat (genus *Triticum*) also appear in a similar grain, rye (*Secale cereal*). He also predicted some varieties which should exist, that he was able to find in his later expeditions.

Vavilov detailed this same parallel pattern in variation among numerous other plants. The same patterns of variation in shape and color of flower parts, shape of leaves, presence or absence of wax or hair on different parts of the plant, and early and late varieties, show up again and again in different species in a genus, and in different genera within the same family, illustrating that variation is regular and not accidental.

### The pattern in animals

A pattern of variation parallel to that of domestic dogs was uncovered in foxes by breeding them for tameness. This research was begun in the 1950s by Dmitry Belyayev (1917–1985), and within several generations of breeding the tamest foxes, he not only had friendly foxes, but phenotypic traits such as white spotting, floppy ears, changes in the skull shape, and short curly tails, showing up with surprising frequency. These and other traits are part of what is known as the “domestication phenotype.” It involves homologous variations, not just within the canid family, but across domesticated animals from other families as well (Lightner, 2011a; 2011b).

A dramatic example in wild animals is troglomorphism, or morphological adaptation to cave-dwelling. As discussed previously in this column (Lightner, 2018), there are hundreds of species of obligate cave-dwelling fish, most of which are believed to have arisen independently. Phenotypes may differ slightly, but commonly include loss of eyes and pigmentation, augmentation of other sensory organs, changes in skull shape, and alteration of metabolism. In addition to fish, amphibians, reptiles, mollusks, insects, and other animals have troglomorphic forms.

### A challenge for taxonomists

Unsurprisingly, as taxonomists study groups of organisms, it can sometimes be hard to tell if the same trait is found in two different species because they inherited it from a common ancestor, or if it is homologous variation.

For example, early taxonomic work in pygmy kingfishers (Alcedininae) grouped them according to ecology. The piscivorous (fish eating) forms usually had dark-colored bills that were laterally compressed, whereas insectivorous (insect eating) forms had orange or brightly colored bills that were dorso-ventrally flattened. As it turns out, molecular evidence has shown that these groupings do not represent genetic relationships; rather, they fit into what we are referring to here as a pattern of parallel of variation (Ahlquist and Lightner, 2018).

### The significance to creationists

While Darwin did recognize that variation wasn’t always random, he argued that it generally is. If this is so, then the variation we see in creatures today is from natural selection’s weeding out most variation and leaving behind what is useful. Yet many biologists

hotly contested the idea that variation is random. If variation is not random, it undermines the “natural selection explains adaptation” mindset of neo-Darwinism. Instead, the underlying or fundamental design of the organism is the most critical aspect of adaptation, which points to a designer.

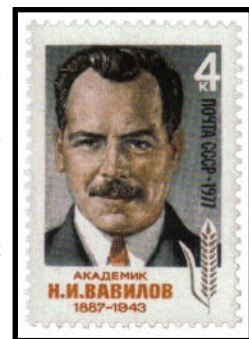
If we base our understanding of biology on the Bible, the Law of Homologous Series makes a lot of sense. God created life to reproduce and fill the earth (Genesis 1). God provided the ability to do so. In the process, variations arise that are beneficial agriculturally, pleasing aesthetically, and/or beneficial in adapting to new environments. The fact that similar variations repeatedly appear across species/kinds makes it clear that such changes are a result of the design of the Wise Creator who cares for His creatures.

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[https://en.wikipedia.org/wiki/Nikolai\\_Vavilov#/media/File:USSR-Stamp-1977-NIVavilov.jpg](https://en.wikipedia.org/wiki/Nikolai_Vavilov#/media/File:USSR-Stamp-1977-NIVavilov.jpg)



*Although persecuted under Stalin’s regime, Nikolai Vavilov was later recognized for his valuable contributions to agriculture, as indicated on this 1977 USSR postage stamp.*

public domain

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## Poor Scholarship ...continued from page 5

tion of deltas, glaciers, lakes and so on involves measurable processes that take considerable time.

They are blind to their own conflicting assumptions. The sources of their delusion include: naturalism equated to science, science defending itself by an appeal to technology, and a profound ignorance of the content and history of theology and philosophy. For these reasons, many Christians<sup>3</sup> have accepted narratives from the atheistic worldview, and then have struggled to “square the circle,” trying to reconcile their worldview with the Bible. Given the current direction of the post-modern world, a more traditional Christianity seems in order, both for culture and origins.

It is worth paralleling the theological and “scientific” progress of recent centuries. What is advertised as a time of unbridled advancement reveals an underlying, sinister, stepwise rejection of key elements of Christian theology. First, the denial of God’s sovereignty was blunted by theological and philosophical trends of the 16<sup>th</sup> and early 17<sup>th</sup> centuries.

Second, God’s providential involvement in the world was denied by uniformitarian deep time in the 18<sup>th</sup> and early 19<sup>th</sup> centuries. Then spokesmen for evolution denied God’s creative role in Earth’s origin in the 19<sup>th</sup> and early twentieth centuries. From there, it was an easy step to atheism.

This purposeful progression toward

<sup>3</sup> A true Christian, as summarized from the New Testament, is one who has made Jesus both Savior and Lord of his life.

atheism demonstrates more than random scientific development. It shows the work of evil in the world. C.S. Lewis opened a window on evil in *The Screwtape Letters*, and this progression shows it at work over much longer periods of time.

Why should any Christian rely on naturalism, especially when the biblical worldview (Creation, the Fall, the Flood, and the Babel Dispersion) has become more sophisticated (Oard and Reed, 2017; Snelling, 2009), and many challenges have been answered (Oard and Reed, 2009)?

### Poor scholarship

Thanks to worldview bias, we have noticed in thousands of geological articles, and in numerous books by secular scientists, old-earth creationists, and theistic evolutionists, considerable poor scholarship. In any controversial subject, one would expect a careful examination of all sides; yet critics

**The sources of their delusion include: naturalism equated to science, science defending itself by an appeal to technology, and a profound ignorance of the content and history of theology and philosophy.**

of creationism seem to avoid this to a shocking extent.

Worse, emotive dismissals of creationism exacerbate the problem. Why should good atheists read creationist research when they already “know” it is foolishness? This attitude keeps a person from looking in a scholarly manner at the merits of Creation biology, Flood geology, and other issues of the biblical worldview. However, there is a proverb in the Bible

that says: “The one who states his case first seems right, until the other comes and examines him” (Proverbs 18:17).

On the other hand, creation scientists are forced to examine all sides regularly, thanks to the secular control of publication and propagation. This suggests, at a minimum, that the secularists’ naturalistic explanations of the past are not as powerful as advertised. We will give several examples in geology.

### Poor scholarship by a secular author

David Montgomery (2012), in the book *The Rocks Don’t Lie: A Geologist Investigates Noah’s Flood*, stated that the biblical worldview is easy to refute. He claimed to have investigated the issue of Noah’s flood. But, the book is loaded with poor scholarship and strawman arguments.

We want to point out that he referred to only three young-earth creationist books: Price’s *The New Geology*, Vail’s *The Grand Canyon: A Different View*, and Whitcomb and Morris’s *The Genesis Flood*. There is no evidence that he had read the voluminous technical literature which is readily available.

### Fairly good scholarship by a secular author

A secular example of fairly good scholarship is Arthur Strahler’s (1987) challenging book: *Science and Earth History: The Evolution/Creation Controversy*. He used a good number of creation science resources which were available at the time. Even though Strahler was an atheist, he rightly represented the creation position for a number of issues.

However, because of his strong bias,

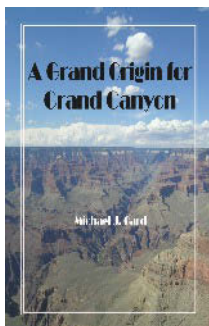
Available in the CRS Bookstore

## A Grand Origin for Grand Canyon Carved Rapidly by Late Flood Channelized Erosion

by Michael J. Oard

2016, Creation Research Society Books  
(270 pages, 134 full-color figures)

Regular price \$18.00 Member price \$15.00



he also misunderstood the creation position on many other issues. Although some of Strahler's challenges have been answered since 1987, a lot of research has been done over the past thirty years that Strahler obviously could not have included in his work. The book remains a good source for future research projects.

## Poor scholarship by old-earth creationists and theistic evolutionists

Daniel Wonderly (1987) was an early geological critic of young-earth creationism. Although he claimed to be comparing young-earth creationists' beliefs with the facts of geology, he listed only four books and one article in his cited references! There was much more creationist material available in 1987 than what he cited. Obviously, much more is available today.

Davis Young, former geology professor at Calvin College, has been challenging creation scientists on the subject of geology for several decades. In one of his latest books, co-authored with Ralph Stearley (Young and Stearley, 2008), they list many creation science publications, but left out key references (Oard, 2009). For instance, the writings of Terry Mortenson and Jonathan Sarfati were not mentioned.

The authors seem to also have many misconceptions about the Flood, such as that the sedimentary rocks and fossils should be mixed up into a chaotic mess. But the work of creation scientist Guy Berthault (1998), showing the opposite, was ignored.

Davidson's (2009) *When Faith and Science Collide* is filled with strawman arguments and many faulty scientific and biblical arguments (Oard, 2011). It does have about 40 references to young-earth creation science books or articles, but that is still an anemic attempt at reviewing the creationist literature.

The most recent geological challenge is Hill and Davidson's (2016) edited book: *The Grand Canyon: Monument to an Ancient Earth — Can Noah's Flood Explain the Grand Canyon?* This book supplies numerous young-earth creation science references and appears, at first glance, to be a powerful support for old-earth geology.

But appearances can be deceptive. Arriving at conclusions similar to ours, reviewer John Woodmorappe (2016, p. 17) summed up this book succinctly:

I began this well-illustrated and much-hyped book expecting to be stimulated and challenged. Instead, I must confess a certain annoyance with its extraordinary superficiality. ... Most, if not all, of the arguments dusted off in this book have long been answered...

For example, though they cite Whitmore et al.'s (2014) case that the Coconino Sandstone was water laid, they do not engage the evidence but rather continue to believe the formation was laid down by the wind.

## True scholars look at both sides of the origins issue.

Everyone should guard against poor scholarship. Secular scientists, old-earth creationists, and theistic evolutionists raise many good points when critiquing creation, but they never challenge their own assumptions, and have an inadequate view of the higher standards and scholarly nature of recent creation science research and writing.

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# Speaking of Science

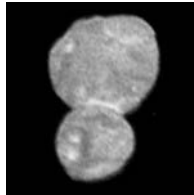
## from the Creation-Evolution Headlines

by David F. Coppedge

*Editor's note: These S.O.S. (Speaking of Science) items have been selected from "Creation-Evolution Headlines" by David F. Coppedge at <http://crev.info> and are used by permission. Unless otherwise noted, emphasis is added in all quotes. Content may be edited for style and length.*

### Initial Views of Ultima Thule Show Young Object

Ultima Thule, the farthest object ever visited up close by a spacecraft, looks like a snowman. New Horizons, the spacecraft that already made history with its stunning photos of Pluto in 2015, has just made history again. On New Year's Day 2019, it flew just 2,200 miles above the surface of a Kuiper-Belt Object (KBO) named Ultima Thule (technically, 2014 MU69). New Horizons not only survived the encounter, controlled by engineers 4 billion miles away on earth, but captured images and data that will take 20 months to fully download from that vast distance.



Credit: NASA/Johns Hopkins University

NASA released the first low-resolution color images today.<sup>1</sup> Mission scientists remarked that it looks like a snowman more than a peanut or bowling pin, as earlier faint images suggested. Its two lobes are either lightly touching or welded together. Scientists decided to refer to the bigger lobe as Ultima, and the smaller lobe as Thule.

As with the Pluto encounter, high-resolution images will take days or weeks to download. Principal investigator Alan Stern said, "It's just going to get better and better." Already, though, some hints of color and large features are visible. The object has a definite reddish cast, probably from space weathering of surface material. Leah Crane at *New Scientist*<sup>2</sup> says the following about the curious shape of the object:

New Horizons co-investigator Jeff Moore said that because the two lobes show **no obvious signs of damage from a collision**, they probably hit one another slowly, at about a walking pace. "If you had a collision with another car at those speeds, you might not even bother to fill out the insurance forms," he said.

Yet surely it must strike scientists as surprising that two objects would approach each other with such low energy as to stick together rather than blast each other into smithereens. Could such an arrangement survive billions of years of rotation and perturbations by other passing objects?

MU69 **appears to be a pristine planetary building block, or planetesimal**, left over from the early solar system, so researchers **hope** that it will **tell us about the formation of the planets**. "What we're looking at is essentially one of the first planetesimals," said Moore. "These are the **only remaining basic building blocks** in the backyard of the solar system."

And yet the planetesimal hypothesis has been coming under fire in recent years (see Coppedge, 2018).<sup>3</sup> Leah Crane says the object is "rock covered with weird ice," possibly composed of methane and nitrogen.

*Update 1/03/19:* "The team says that the two spheres likely joined as early as 99 percent of the way back to the formation of the solar

system."<sup>4</sup> Nowhere does anyone question how two fragile objects could avoid divorce for 4.5 billion years.

### Juno Io is young, too?

A different spacecraft that is at Jupiter, named Juno (see Coppedge, 2017<sup>5</sup>), imaged a volcanic plume on the little moon Io that stands out prominently on the speck of image taken 186,000 miles away, reports *Space.com*.<sup>6</sup> This must have been a major eruption to be visible from that far. Meghan Bartels says, "The activity is spurred by Jupiter's massive gravity tugging at the moon," but she fails to mention whether that kind of dynamic activity could continue for 4.5 billion years.

Secular reporters usually fail to connect the dots. This may be on purpose. They will make contradictory statements in isolation so that the public doesn't see the trick. The quote above about Io is a prime example: on the one hand, Jupiter causes Io to erupt (but no mention of age). On the other hand, the Jupiter system is alleged to be 4.5 billion years old (but no mention of the activity). Critical thinkers have to connect those two statements to see the age problem, because the media that is committed to millions/billions-of-years thinking will never do it for you.

**Prediction time:** The high-resolution images and data from New Horizons will surprise planetary scientists with evidence of youth on Ultima Thule. The mission scientists will express great surprise and bafflement over surface features, a possible atmosphere, or activity that contradicts the alleged age of the object. Based on previous discoveries, it's a pretty safe bet, but we shall see.

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### And the Fastest Animal Is...

In the animal world championships, a new winner has been named in the speed category. There are strong contenders in that arena: cheetahs in the mammal tribe, falcons in the bird taxon, and mantis shrimp in the marine team. Now, a contender beats them all: a little bitty insect with a fearsome name: the Dracula ant.

**Dracula ant's powerful pincers** Even if you don't blink you will miss it in the video clip that starts the *Nature* article:<sup>1</sup>

Fangs are feeble next to the **fastest appendages in the animal world**,...An insect dubbed the **Dracula ant is a speed champion** among animals: it snaps its front pincers shut in **less than 1/5,000 of the time it takes to blink.**"

It took high-speed cameras to show this ant winning against the trap-jaw ant and the mantis shrimp. How does it work?

Fredrick Larabee at the National Museum of Natural History in Washington, DC, and colleagues investigated this mechanism using computer models and high-speed videos. The researchers found that **the ant's front appendages, unlike those of most other ants, can bow inwards when the pincer tips press against each other, generating a spring-like tension.** When one pincer slips under the other, this tension releases, **propelling the pincers shut at 90 metres per second — faster than a bullet train, and the fastest-known speed for an animal appendage.**

This ant's mandibles (jaws) reach speeds of 200 mph in 0.000015 seconds.<sup>2</sup>

"These ants are fascinating as their mandibles are **very unusual**," said University of Illinois animal biology and entomology professor Andrew Suarez, who led the research...**"Even among ants that power-amplify their jaws, the Dracula ants are unique: Instead of using three different parts for the spring, latch and lever arm, all three are combined in the mandible.**

The high-speed action appears to be within the reach of variation, since **"it only took small changes in shape** for the jaws to **evolve** a new function: acting as a spring."

This is not evolution or speciation, but slight modifications to existing genetic information and parts. Even creationists accept that kind of variability (beak size, coloration, etc.). Still, this is a pretty spectacular example for a small animal. Dr Randy Guliuzza presents a design-theoretic model that explains these kinds of adaptations. Animals come pre-programmed to handle environmental changes, he says. See one of his articles at *Acts and Facts*.<sup>3</sup>

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## Slimy Evolution Reporting Continues

**D**arwin gets credit for more things than his theory deserves, which is very little to begin with. The name "Darwin" and the phrase "natural selection" appear frequently in the science news, even when the observations reported either have nothing to do with them, or even contradict them. The media seem utterly incapable of thinking critically about the mismatch. It points to a strong bias to maintain the reputation of a man who kicked intelligent design out of biology.

**New light on the diversity of natural selection** This article

begins with evidence seemingly contrary to natural selection, only to wind up rescuing it.<sup>1</sup>

**For nearly 100 years, biologists have argued about how exactly natural selection can possibly work. If nature selects the individuals with the best genes, then why aren't all organisms the same?** What maintains the **genetic variation that natural selection acts upon**, the genetic variation that has ultimately led to the spectacular diversity of life on Earth today? Recent findings made at Uppsala University suggest that **the answer could be sex.**

It "could" be sex, which implies it might *not* be. Frequently we have criticized the notion of natural selection for this very reason: if it were a law of nature, everyone would end up the same. Do these Uppsala scientists have a theory rescue device? They do; readers can get into the weeds of "sex-specific dominance reversal for fitness" in the article, but they should note that the idea "met with early skepticism" from other evolutionists, and is being promoted by two Darwinians claiming to have "the first evidence" for it — this, mind you, 159 years after Darwin wrote his book.

Even if their idea has merit, it doesn't account for variability in asexual species. And it doesn't account for why some the sexes in some species display strong dimorphism (e.g., peacocks), and others have very little (e.g., "all ravens are black").

**The plant whose sex life fascinated Charles Darwin** Lots of people like primulas (primrose), so why does Darwin get trucked into this story? The press release from the John Innes Centre brings up a fancy word for a characteristic of some flowering plants:<sup>2</sup>

Heteromorphy (or heterostyly) is a phenomenon in which plants exhibit two or three distinct forms of flowers based on the position of the male and female sex organs.

The phenomenon "**enthralled Darwin**," we are told, but it worried him, too, because it left secrets that eluded him. It also worried famous evolutionists William Bateson and JBS Haldane. To the rescue! Now, with the gene-editing tool CRISPR/Cas9, his current priesthood can hold up a divination tool, in order to look authoritative.

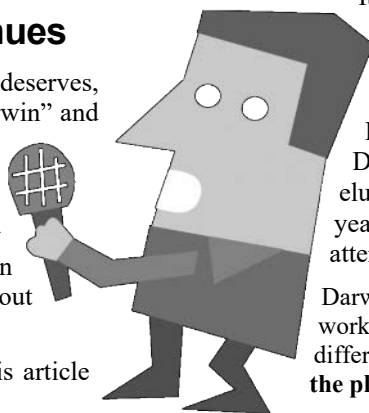
Now, some of the **secrets that eluded Darwin** could be revealed following the biotechnological success announced by researchers from the John Innes Centre, the University of East Anglia (UEA) and the Earlham Institute...

Co-author Mark Smedley, of the John Innes Centre says: **"It is not every day you get to work on a paper that references Darwin.** This is a fundamental story that scientists have been trying to unravel for 200 years."...

It's a piece of research that **would have excited Darwin...**

Let's try to understand this. Heteromorphy has nothing to do with Darwinism. It's an observation, not an explanation. If Darwinism explained it, it would not have eluded Darwin, nor would it have taken 200 years for his disciples to figure it out. The article attempts this explanation:

Darwin, in a **landmark paper** of 1862, worked out the **functional significance** of the different anatomical formations: **they made the plants self-incompatible.** This is Nature's



## way of promoting cross-pollination to maintain genetic variation in the population, driving natural selection.

Heteromorphy is thus an intelligent design. It has functional significance. It promotes cross-pollination (which would cause extinction, not innovation). Saying that Darwinism has something to do with it is false: it's basically saying, "It exists; therefore it evolved." There is no origin of species here. There is no random mutation leading to the functional design.

Capitalizing "Nature" makes the embedded wisdom in the flower seem like a kind of god or intelligently-directing agent. And there is no connection between said "Nature" and natural selection, Darwin's baby: if this were a law of nature, there would not be so many exceptions to it. Many plants do not have heteromorphy; are they "fit" in the battle for survival? The only thing these scientists have explained is their own inebriation with 'Darwinism.'

**'Useless' quirks of evolution are actually evidence for the theory** Here's another Darwin-only disciple, Ben Garrod,<sup>3</sup> who is out to do a magic show topping David Copperfield's. He sets up the impossibility that should kill Darwinism, before standing up to do a miracle and raise it from the dead:

**Evolution is a fascinating field but can be rife with misunderstanding. One misconception is that evolution has some innate sense of direction or purpose. In reality, evolution is a mindless, plan-free phenomenon, driven into endless possibilities by random mutations, the most successful of which win out.**

**People also often think that every aspect of every living creature has a function, that it helps the organism survive in some small way. But there are some areas of evolutionary biology where benefits are murkier and, in some instances, where traits seem to make no sense at all. This is the realm of sexual selection, vestigial traits and evolutionary spandrels.**

As important as the concept of **survival of the fittest** is to evolution, **there are many examples that seem to undermine this idea. In fact, various aspects of evolutionary biology may seem counterintuitive and could even be seen as a reason to reject evolution as a whole. In fact, they strengthen our understanding rather than diminish it.**

With this opening flourish, admitting as he does that evolution amounts to chance, and is mindless and plan-free, he's going to pre-empt anyone in the audience from becoming a creationist. But his answers are all tired, worn-out Darwin-only talking points, which are never subjected to critical analysis: Sexual selection supports Darwinism (except when it doesn't). Vestigial organs are leftovers of evolution (except when we discover they had a function after all).

Only humans have chins,<sup>4</sup> but many consider them to be "useless." Your chin is thus a spandrel,<sup>5</sup> a byproduct of evolutionary forces for diet that had nothing to do with evolving a chin (except for every other animal that had to eat).

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- Editor's note:* In architecture, spandrel can refer to the almost triangular areas between adjoining arches, or the spaces between a circle and the square within which it is inscribed. In evolutionary biology, it refers to a phenotypic characteristic that arises as a byproduct of the evolution of other structures. See Wikipedia entry for "spandrel" (<https://en.wikipedia.org/wiki/Spandrel>).



## Finches Choose Parent Look-alikes

Here we go with Darwin's finches again. Spurgin and Chapman say,<sup>1</sup>

**A preference for mating with similar individuals can have a key role in speciation.** Research on Darwin's finches suggests that **individuals might use the likeness of their parents as a guide for choosing mates.**

But if that is true, then the behavior of mate choice is opposite the mythical forces of natural or sexual selection. Birds mating with birds that look like their parents are not going to evolve; they are going to stay the same. There's no speciation or innovation here. "Sexual imprinting" would bring evolution to a standstill.

The authors revert to their anticipation of future, not-yet-available explanations to keep their dream alive:

Disentangling the roles of **inherited** and **learned** mate **preferences**, and their consequences for speciation, is a **key challenge for the future.**"

This report is based on recent work by the Grants, who have spent virtually their entire careers looking for evidence to support Darwin's theory in finch beaks. All that work for nothing? Peter and Rosemary Grant could still rescue their careers by explaining birds' using intelligent design. That's a lot more useful and interesting than tiny millimeter changes in beak size *within* subspecies that can still interbreed or hybridize.

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## Creation Matters

January / February 2019  
Vol. 24 No. 1

## All by Design

by Glen W. Wolfrom, PhD

In the warm environs of most continents, various species of trapdoor spiders lie in wait for their prey. Of particular interest is *Gaius villosus* (formerly *Anidiops villosus*), which is limited in distribution to the dryer areas of southern Western Australia. Individuals of this species are known for their longevity. A female *G. villosus*, dubbed “Number 16,” died last year at the age of 43 years — the oldest spider ever recorded. The reader is encouraged to view a short *YouTube* video of a trapdoor spider closing the lid of its burrow (see link below).

These fascinating arachnids construct permanent, vertical, silk-lined burrows which are deep enough (12–16 inches) to provide relatively constant temperature and humidity. Once females construct their homes, they rarely leave, while males, upon reaching maturity at about 5 years of age, are prone to wander above ground in search of females. The spiders enlarge their holes as they grow, to diameters exceeding 1.8 inches. For protection, the nests are sealed with a hinged lid or “door” comprised of dirt and silk.

Feeding behavior involves the attachment

# Trapdoor Spiders



Colorized scan of Fig. 3 in Main, 1978 (used by permission), showing twigs arranged in a “fan” around the burrow opening of a nest of the Australian trapdoor spider,

*Gaius villosus*. Coin diameter is 2.85 mm.

of a fan of twigs to the burrow opening (see figure), with invisible silk threads radiating outward. This allows the carnivorous spider, hiding in its burrow, to more efficiently detect the movement of prey that are close enough to capture. Other trapdoor species have no fans. How did *G. villosus* acquire the knowledge that attaching a ring of twigs would have such an effect?

## Bibliography

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