

## Does Organic Mean Living?

by John D. Morris\*

Often today we hear of the search for "organic" compounds in decidedly "inorganic" places inhospitable to life, such as meteorites or on desolate moons throughout the solar system. What is going on? Doesn't "organic" mean living? Does this mean there is life elsewhere? What does "organic" really mean?

In high school we were all taught that the word organic applies to living things. The primary dictionary meaning has to do with "pertaining to or derived from living organisms." At the end of a list of appropriate usages lies, "that of pertaining to carbon compounds."

Historically, it was thought that certain chemical compounds could only be synthesized in living organisms by a "life force," but later it was shown that some compounds associated in nature only with living things could be made in a laboratory merely by combining appropriate chemicals. Since all living things are composed of compounds made of carbon and hydrogen, this led to a technical definition of "organic compound" as any member of a large class of chemical compounds whose molecules contain carbon and hydrogen. Many of these hydro-carbons are extraordinarily complex and found only in association with life, but some are rather simple, like methane, which is not necessarily from a living source.

Use of the term often leads to miscommunication of the facts. To a non-specialist the term "organic compound," connotes life and living, yet the discoverer might merely be meaning a carbon based molecule. Confusion most often arises in evolutionary contexts, where evolution enthusiasts speak of the spontaneous origin of life from non-living "organic" chemicals. Seldom does the evolutionary scientist explain his use of "organic" implies non-living. Perhaps he assumes everyone can understand the term in a technical sense, but few have this training. Thus he allows his listeners to conclude error.

Unfortunately, it is not just a harmless error, for it implies that "living or once-living" compounds can arise from non-living sources. As often admitted even by evolutionists, the original transmutation of non-living chemicals into living things is easily the most difficult problem in all of evolution theory. Thus, a casual episode of mis-information can cause many to assume this insurmountable problem is routinely overcome.

I wonder if the blurring of terms is sometimes purposeful. Evolution cannot stand up to rigorous examination; its problems are too great. But it can convince many if certain vital information is withheld. Thus, the evolution lives on. ☚

\*Dr. John D. Morris is the President of the Institute for Creation Research.

## Stalling over Transitional Forms

by Frank Sherwin, M.A.\*

Skeptics of Mr. Darwin's strange theory have for years used a truly remarkable book by evolutionist Barbara J. Stahl of Saint Anselm College in New Hampshire. It is titled, *Vertebrate History: Problems in Evolution*, (1974).<sup>1</sup> Sadly, this is now out of print. Dr. Stahl, anatomy professor and paleoichthyologist, is clearly no friend of the creationist. She was, however, intellectually honest enough to write this 604-page book documenting the many problems associated with alleged evolution of the vertebrates.

Darwinists were understandably quick to downplay Dr. Stahl's research. In recent years their only "valid" criticism is that the book is dated and anything found in its pages are now (thankfully) passé.

I beg to disagree. In 2001 Edwin H. Colbert and his coauthors published their fifth edition of *Colbert's Evolution of the Vertebrates*.<sup>2</sup> Dr. Stahl's detailed research has held up all these years when compared with Colbert's more recent text.

Bird origin: "In the absence of fossil evidence, paleontologists can say little about the date at which these [sixty-nine living families of Passeriformes] . . . appeared" (Stahl, 386). "Of all the classes of vertebrates, the birds are least known from their fossil record" (Colbert, 236).

Whale origin: "As with most tetrapods secondarily modified for aquatic living, ascertaining the terrestrial stock from which the whales came is exceedingly difficult" (Stahl, 486). "Like the bats, the whales (using this term in a general and inclusive sense) appear suddenly in early Tertiary times, fully adapted by profound modifications" (Colbert, 392).

Amphibian origin: "Since the fossil material provides no evidence of other aspects of the transformation from fish to tetrapod, paleontologists have had to speculate how legs and aerial breathing evolved" (Stahl, 195).

"This is certainly a logical explanation of the first stages in the change from an aquatic to a terrestrial mode of life. We can only speculate about this" (Colbert, 84-85).

Snake origin: "The origin of the snakes is still an unsolved problem" (Stahl, 318). "Unfortunately, the fossil history of the snakes is very fragmentary, so that it is necessary to infer much of their evolution" (Colbert, 154).

Fish origin: "The higher fishes, when they appear in the Devonian period, have already acquired the characteristics that identify them as belonging to one or another of the major assemblages of bony or cartilaginous forms" (Stahl, 126). "Both these groups [bony and cartilaginous] appeared in the late Silurian period, and it is possible that they may have originated at some earlier time, although there is no fossil evidence to prove this" (Colbert, 53).

Contrast this lack of fossil evidence for evolution with the clear evidence for creation: the sudden appearance of fully formed vertebrates (and invertebrates) in the fossil record.

1. Stahl, Barbara. 1974. *Vertebrate history: Problems in evolution*, New York: Dover Publications, Inc.
2. Colbert, E. H., M. Morales, and E. C. Minkoff. 2001. *Evolution of the vertebrates: A history of the back-boned animals through time*, 5th ed., New York: Wiley-Liss, Inc. 

\*Frank Sherwin is a zoologist and seminar speaker for ICR.

# Vulgar Notions of a Universal Flood

by William A. Hoesch, M.S.\*

Scientists of the early sixteenth century faced a dilemma: how did fossils originate? Tradition had held for centuries that the existence of marine shells on hilltops was due to the Genesis Flood. On the other hand, pagan philosophies like Aristotelianism and Neoplatonism, which were undergoing a renaissance in Europe (at the time), led to very popular interpretations that they had mysteriously formed in place within the rocks (akin to “spontaneous generation”). Which was true? The similarities between living marine organisms and those funny shapes called “fossils” were becoming too glaring to deny, yet the Flood model was resisted. Why?

According to science historian Martin Rudwick in his excellent book, *The Meaning of Fossils: Episodes in the History of Paleontology* (Univ. of Chicago Press, 2nd ed., 1985), the Flood had failed as an explanation for fossils. The intractable problem was this: a literal reading of the Genesis Flood revealed an event of insufficient violence to sweep marine fossils onto continents. Furthermore, (1) the growing biological awareness of the number of animal species and the inadequacy of the Ark to hold them all, and (2) the production and subsequent disappearance of such huge volumes of water are fatal problems to a Flood model. And so, according to Rudwick, “vulgar notions of a universal Flood,” were really tried and found wanting. The only rational alternative, said Rudwick, was to reconcile the Flood narrative of Scripture with the natural philosophy of Aristotle. In other words, the Flood was merely one of many local inundations, and “the continuous, gradual changes in physical geography” was the only means to explain such vast changes in geography. The seas advanced slowly and gradually

over a vast timescale, in other words. Rudwick, to his credit, saw what most modern theologians could not—that diminishing the role of the Flood in this way is tantamount to denying God’s sovereignty in all of Earth history. But absent an answer to the above apologetics questions, he saw this as the only rational recourse. In short, the consensus became that Aristotle had it wrong about the origin of fossils, but was right on the vast antiquity of the earth and on geologic gradualism.

How insurmountable were Rudwick’s “problems”? I would not want to argue with God that a Flood which began with a rupturing of all the deep ocean basins and covered “all the high hills under all the heavens” in a matter of weeks is logically insufficient to explain marine fossils on continents. Any serious appraisal of the room needed in the Ark for representatives of every kind (or, *baramin*, not species) of known land-dwelling and air-breathing creature, is enough to make one wonder what Noah did with all the spare deck-space (shuffleboard, maybe?). As for the production and disappearance of the huge volumes of water for the Flood, one need only be reminded that here on the “water planet” the ocean basins are far deeper than the mountains are high. A mere flexing of the Pacific Ocean floor could easily inundate the earth, and there are indications from Scripture of Flood-associated tectonics that were far more severe than this.

Several lessons can be gained from this. First, God never asks man to believe in nonsense. Second, pagan philosophies are as alluring in the twenty-first century as they were in the sixteenth, and science suffers for it. Third, the Genesis Flood can stand in the marketplace of ideas. 

\*William A. Hoesch, M.S. geology, is research assistant in Geology.

# The Globular Cluster Bomb

by David F. Coppedge\*

Some of the most stunning astronomical objects are globular clusters. These spherically-distributed celestial ornaments can pack a million stars within a tiny angle of space as seen from Earth. For example, M13 in Hercules fills the eyepiece of a 14" Schmidt-Cassegrain or 20" Dobsonian telescope. Omega Centauri, better placed for southern-hemisphere observers, is the largest globular of our galaxy and one of the few visible with the naked eye.

Stars in a globular appear densely packed but are actually widely spaced. About 180 of these clusters orbit the center of the Milky Way at various inclinations, and globulars have also been detected around other galaxies. They have played an important role in the development of astronomical thought since the Christian astronomer William Herschel named them in 1789. Few amateurs at star parties may know that they are now centerpieces of a significant upset in astronomy occurring right now, after a near century of consensus.

In 1914, Harlow Shapley noticed their spectra were different from those in the galactic disk. He named the disk stars Population I, and the globular cluster stars Population II. Because they are low in elements heavier than helium, the Population II stars were assumed to be older than the Population I stars. (A third category, Population III, is assumed to comprise the very first stars after the Big Bang, made out of pure hydrogen and helium, but none have been observed.) The distinct spectral signature of globulars, combined with their lack of dust and gas, gave rise to the view that they represent some of the oldest objects in the

universe, mostly composed of old red giants in regions where no new stars are forming. The disk, by contrast, was thought to be young and actively engaged in star formation. This had been the textbook orthodoxy for most of the twentieth century.

The story started to unravel three years ago (see *Astronomy*, Nov. 2003) when the Hubble and other orbiting telescopes found globulars containing mixed populations of stars, with exotic members called "blue stragglers" and even planets. *News@Nature* last August reported that the findings are "changing our ideas completely" and will require us to "tear up textbooks." New explanations are being considered. Perhaps they formed during galactic mergers. But each new solution breeds new problems: how was there enough material left over to form these densely-packed clusters?

One thing is clear; globulars can no longer be thought of as simple, homogeneous collections of ancient stars. The article said, "In a complex Universe, astronomers thought they had at least one simple system to tell them how stars are born. Turns out they were wrong." Moreover, this upset can have ripple effects on other theories. One astronomer said, "If you have problems reproducing star formation in globular clusters, you will have problems with a galaxy."

Astronomers will undoubtedly come up with new ideas. There's an important lesson here about how science is done in these days of Big-Bang-to-man theorizing. It's not that scientists are unable to concoct a story to fit the data, it's that the data require a story to fit a belief. 

\*David F. Coppedge works in the Cassini program at the Jet Propulsion Laboratory.



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