

Table of Contents

Foreword.....	1
Introduction: "Studies in Creationism and Flood Geology," <i>Acts and Facts</i> Impact Article #238 (April 1993).....	3
1. "Causes for the Biogeographic Distribution of Land Vertebrates after the Flood," <i>Proceedings of the 2nd International Conference on Creationism</i> , vol. 11 (1990), pp. 361-367.....	5
2. "The Antediluvian Biosphere and its Capability of Supplying the Entire Fossil Record," <i>Proceedings of the 1st International Conference on Creationism</i> , vol. 11 (1986), pp. 205-213.....	13
3. "A Diluviological Treatise on the Stratigraphic Separation of Fossils," <i>Creation Research Society Quarterly</i> , vol. 20, no. 3 (December 1983), pp. 133-185.....	21
4. "An Anthology of Matters Significant to Creationism and Diluviology: Report 2," <i>Creation Research Society Quarterly</i> , vol. 18, no. 4 (March 1982), pp. 201-223	77
5. "The Essential Nonexistence of the Evolutionary-Uniformitarian Geologic Column: a Quantitative Assessment," <i>Creation Research Society Quarterly</i> , vol. 18, no. 1 (June 1981), pp. 46-71.....	103
6. "An Anthology of Matters Significant to Creationism and Diluviology: Report 1," <i>Creation Research Society Quarterly</i> , vol. 16, no. 4 (March 1980), pp. 209-219, 227	131
7. "Radiometric Geochronology Reappraised," <i>Creation Research Society Quarterly</i> , vol. 16, no. 2 (September 1979), pp. 102-129, 147, inside back cover	145
8. "The Cephalopods in the Creation and the Universal Deluge," <i>Creation Research Society Quarterly</i> , vol. 15, no. 2 (September 1978), pp. 94-112.....	177
9. "A Diluvian Interpretation of Ancient Cyclic Sedimentation," <i>Creation Research Society Quarterly</i> , vol. 14, no. 4 (March 1978), pp. 189-208	199
Study Questions	221
Index	225

Introduction

Studies in Creationism and Flood Geology

JOHN WOODMORAPPE

Over the last 15 years, I have engaged in intensive scholarship in scientific creationism, with which I would like to acquaint the lay creationist reader. Many questions and issues in flood geology have been given at least a tentative answer as a result of my little-known research, which has been written for scientists, especially geologists. The purpose of this *Impact* article is to summarize my research in everyday language for the average reader.

In my "Causes for the Biogeographic Distribution of Land Vertebrates After the Flood" (*Proceedings of the 2nd International Conference on Creationism*, 1990, Vol. II, pp. 361-370), I explain why the animals on different continents are so different from each other if they originated from one point (Noah's Ark in the mountains of Ararat).

The interior regions of the continents were very cold for some time after the Flood, due to blockage of sunlight by volcanic aerosols released during the Flood, and animals did not freely spread in all directions upon their release from the Ark, but were shunted across narrow bands of land warm enough to support life. This ultimately caused very different animals to end up on different continents.

The postdiluvian peoples, after their post-Babel dispersion, probably introduced different animals to different continents (such as Australian marsupials, South American mammals, and Madagascan primates). I point out that South America, Australia, and the island of Madagascar are all in direct line of maritime routes emanating from the Middle East, and hence are natural stopping points for the postdiluvian peoples.

Flightless birds on islands possibly resulted through microevolution (or, better, variation) from birds which had flown there. I present evidence that this can happen in a short time. Also because of this, we need not suppose that God created birds with useless wings.

In my "The Antediluvian Biosphere and its Capability of Supplying the entire Fossils Record" (*Proceedings of the 1st International Conference on Creationism*, 1986, Vol. II, pp. 205-218), I refute anti-creationists who have claimed that the material found in the fossil record could not possibly all have been alive on a recently created earth. I prove that the world's coal, oil, fossil crinoids, Karoo vertebrates, limestone components, etc., could all have come from the remains of creatures having lived in the short time between creation and the Flood and then buried by the Flood.

In "A Diluviological Treatise on the Stratigraphic Separation of Fossils" (*Creation Research Society Quarterly* 20(3): 133-185; December 1983), I examine, in great detail,

how one flood accounts for the fact that different fossils are found in different layers of rock. I test, using over 9,500 global locations of fossils, the tendencies of over 30 different types of fossils to overlies each other in rock. Then I propose and test a new mechanism to explain, through one flood, the relatively few cases where rocks bearing many different kinds of fossils overlies each other.

This mechanism, which combines biogeographic zones of living things with a tendency for crustal rock to downwarp also is used to explain why, in the lower layers of fossils, there are fewer fossil types that have any representatives still alive today. I demonstrate that evolution with geologic ages is not the sole (or even the best) explanation for this trend.

I address the fact that there are few, if any, human remains in lower fossiliferous rock. According to evolution, it is because humans did not appear until very recently. I provide a diluvian explanation for this, showing through actual calculations that the antediluvian humans were so dispersed in the great volumes of sedimentary rock that it is extremely improbable that any of them ever would have been discovered. Alternatively, such discoveries are so infrequent that any such find could be easily ignored or discounted by evolutionists.

In "An Anthology of Matters Significant to Creationism and Diluviology: Report 2" (*Creation Research Society Quarterly* 18(4): 201-23, 239; March 1982), I discuss various topics, including further evidences against organic evolution, against the existence of ancient reefs in ancient rock, and against the usual claim of overthrusts (rock strata mechanically pushed over each other) to explain away instances of fossils overlying each other in wrong order, according to evolution. I also provide 200 examples of fossils occurring in "wrong" rock strata, according to evolution, and show that there usually is no evidence to support the usual evolutionary rationalization that these are situations where fossils from older rock were washed out and redeposited in younger strata.

In "The Essential Nonexistence of the Evolutionary-Uniformitarian Geologic Column: A Quantitative Assessment" (*Creation Research Society Quarterly* 18(1): 46-71; June 1981), I show, by overlying world maps of rocks attributed by evolutionary geologists to different ancient geologic periods, just how small a percentage of the earth's land surface has rocks of many alleged geologic periods all in one place. I also show, through calculations, that rocks of geologic periods supposed to have succeeded each other in time, rarely succeed each other as layers of rock.

In "An Anthology of Matters Significant to Creationism and Diluviology: Report 1" (*Creation Research Society Quarterly* 16(4): 209-19; March 1980), I cover many topics. For example, I document recent discoveries which show that many fossils once thought by evolutionists to have been restricted to certain layers of rock strata have now been found in many other layers of rock. I also provide evidence against the usual claim of evolutionary geologists that certain processes, whose effects are seen in rock, must have taken a long time to happen.

In my "Radiometric Geochronology Reappraised" (*Creation Research Society Quarterly* 16(2): 102-29, 147; September 1979), I engage in a thorough and systematic refutation of the dating methods used by evolutionary geologists to support their claim that the earth's fossil-bearing rock formed gradually over hundreds of millions of years, supposedly indicating that the earth must be billions of years old. Whereas other creationists have questioned the assumptions underlying isotopic dating, I provide numerous geologic demonstrations of the invalidity of radiometric dating. This includes over 400 published instances of serious discrepancies between isotopic age and the expected age of the rock based on its fossils, according to standard evolutionary thought. I also show that, contrary to intuitively held beliefs, internal consistence in dates obtained by these methods, and even agreement between results of different methods, are not proof for their validity.

I refute the claim that various dating methods agree that the earth is 4.5 billion years old. I demonstrate that there are gross contradictions in billion-year values from earth's rock, and that there are even some values obtained which are much greater than the 4.5-billion-year accepted age of the earth.

Most creationists research on the fallacies of evolution (for example, that of Dr. Duane Gish of the Institute for Creation Research) has focused on vertebrates. In "The

Cephalopods in the Creation and the Universal Deluge" (*Creation Research Society Quarterly* 15(2): 94-111; September 1978), I focus on a group of invertebrate animals which include the modern squid and octopus. This group of animals is used by evolutionary geologists to a greater extent than any other fossil animal, to subdivide rock strata into alleged different spans of time. I show, in detail, the fallacies of these practices, as well as the fact that there is an even greater absence of expected evolutionary transitions among cephalopods than is the case among the vertebrates surveyed by Dr. Gish. Finally, I demonstrate how the ecological differences among cephalopods explain why all the living and fossil cephalopods were buried by one flood in the order in which they are found in rock strata. A popular-level version of this work on cephalopods, entitled "Cephalopod Conches," appeared in *Ministry*, January-February 1980.

In "A Diluvian Interpretation of Ancient Cyclic Sedimentation" (*Creation Research Society Quarterly* 14(4): 189-208; March 1978), I show how one flood explains the fact that most of the world's coal deposits occur in sandwich-like layers interbedded with rock, and that standard evolutionary geology has a difficult time explaining this. I then develop a model to show how vast sheets of rising and falling flood waters buried floating vegetation (which later became coal) in between layers of mud (later shale) and sand (later sandstone).

Currently, I am working on several creationist projects which I anticipate publishing in the future. I would hope that creationists will make full use of this research, and that it will serve as a springboard for further research by other creationist scholars. It is only through careful and intense scholarship that creationism can grow in explanatory power, which is the goal of all scientific research.

Causes for the Biogeographic Distribution of Land Vertebrates After the Flood

John Woodmorappe

This study evaluates patterns in the global spread of land animals after their release from the Ark, and shows that: 1) most families have a heterogeneous biogeographic distribution; 2) causes for this include sweepstakes routes caused by the Ice Age and selective anthropogenic introductions. This distribution of problematic groups (e.g., Australian marsupials) appears to be explicable in a creationist context.

Introduction

The (imagined) inability of the creation model to explain the biogeographic distribution of living things was a major factor in its 19th century rejection in favor of organic evolution (Laferriere 1989). Although, as pointed out by the anti-creationist Jeffery (1983), it is untrue that modern creationists have ignored biogeography, the global distribution of animals has never been systematically studied from a modern creationist perspective. This work is a pilot study designed to investigate some of these factors. It is of direct relevance to the young-earth concept in showing that millions of years of organic evolution (i.e., in isolated populations) are not necessary to explain the peculiar biogeographic distribution of certain land vertebrates.

As in the case with most sciences, biogeography as a discipline was largely founded by scientific creationists (Browne 1983):

The idea of an Ark in which pairs of animals were preserved during the Deluge had been a concept of far-reaching significance, as had the disembarkation on Mount Ararat and the subsequent dispersal of animals over the unoccupied globe. The biblical story, in fact, had done a great deal to stimulate investigations into the natural world and, among other things, provided the first systematic explanation for the phenomena of biogeography. Far from being the intellectual impediment ridiculed by Darwin and his circle, . . . the idea of an Ark focused scholarly attention on the topographic arrangements of species, as well as encouraging naturalists to build up a repertoire of theoretical commitments and practical expertise in the analysis of organic distribution.

Methodology

This work is limited to animals released from the Ark. It does not consider the biogeography of living things before the Flood (a subject considered elsewhere (Woodmorappe 1983) as part of the explanation for the stratigraphic separation of fossils). Only land vertebrates are recognized as having been on the Ark for the reasons given in Jones (1973). Non-volant vertebrates are emphasized, since the birds and the bats have fossil records too fragmentary (see Carroll 1988) for a meaningful paleobiogeographic analysis of their extant families. At the same time, it should be remembered that most extant avian families are not ende-

mic to particular continents (see Fig. 31 in Rich and Van Tets 1984), while some avian families have near-hemispheric distributions (see Table 1 in Keast 1984).

Throughout this work I assume only naturalistic causes for biogeographic patterns and reject the notion, advocated by some, that post-Flood vertebrates were guided back supernaturally to their former locations on the antediluvian earth. Only Late Tertiary rock contains faunas similar to extant life, but this is not evidence for such a return. Miocene/Pliocene rock is qualitatively different (in terms of thickness, areal distribution, and other features: see Ronov 1982) from earlier rock, so there is ample reason for concluding that Late Tertiary rock and its fauna are mostly post-Flood).

Most biogeographic studies to date have been at the specific level, yet it is almost universally recognized by creationists that the original created kind is broader than this. There are numerous instances of interbreeding between species, including those throughout large portions of families (for example, species within Anatidae: Scherer 1986), to say nothing of interbreeding between members of different genera (see Van Gelder 1977 for mammalian examples). Of course, many types of living things must have lost the capability of interbreeding at some time since the Creation. Jones (1972), using Biblical and scientific evidence, has concluded that the original created kind most closely corresponds to the family level of current taxonomy. This is accepted here. Since biogeographic distributions within kinds (i.e., usually within families) must have resulted from "microevolution" since the Flood (see Lester and Bohlin 1984 for examples of rapid speciation), they are not considered further.

This work approaches biogeography on an intercontinental, not subcontinental, scale. It should be noted, however, that biogeographic differentiation of families on a subcontinental scale is not great. Raup (1982), using computer-based randomly-chosen points on earth (as centers of circular areas of specified radius), has shown that a randomly-chosen hemisphere encompasses, on average, all living individuals of only 12% (maximum of 25%) of terrestrial families.

The paleontological record shows that many, if not most, living things have had a more widespread distribution than they do today (for example, consider tortoises: Auffenberg 1974). A comprehensive source for the biogeography of extant families as seen from both extant and fossil distributions (Carroll 1988) was therefore used as the primary source throughout this work. Since we cannot know which

families have gone extinct only since their disembarkation from the Ark, no extinct families (except for extinct Australian marsupials) are considered here. It should be added that biogeographic differentiation at all levels (but especially lower taxa) has been overstated because of "chauvinotypy" (Rosen 1988): the tendency to generate synonyms by naming taxa from one's nation, biogeographic unit, etc., as unique.

This work assumes that continents have always been fixed. However, if continental drift took place during the Flood, it is irrelevant to post-Flood biogeographic distributions. If it took place at the time of Peleg (Genesis 10:25), then all the factors discussed here remain valid. Only their sequence and timing would change.

Analysis

The biogeography of extant (Nowak & Paradiso 1982) and extinct (Carroll 1988) mammalian families, as well as that of reptiles (Carroll 1988), has been examined for biogeographic heterogeneity. Large areas of high endemism (e.g., Australia, Madagascar) are considered separately below, while the initial focus is on the families native (or once native) to Eurasia/Africa versus North/South America.

The table gives the number of families particular to a given group of continents. Of the 40 families common to both blocs of continents, four are families presently restricted to one bloc but one living also on the other (as seen from the Miocene/Pliocene: hence post-Flood sediments). We see that 81 of the 112 families occur in at least one of the continents proximate to Ararat. Whereas the remaining 31 occur only in North and/or South America. This latter group demands an explanation.

Table 1

	Eurasia/ Africa	N. & S. America	All 5 Continents
Reptilian Orders			
Chelonia	0	0	1
Squamata	6	6	14
Mammalian Orders			
Rodentia	10	12	6
Carnivora	2	0	5
Insectivora	4	2	3
Primates	11	3	0
Edentata	0	5	1
Artiodactyla	4	1	4
Sum of Families	41	31	40

Factors in Post-Flood Distribution of Land Vertebrates

Since animals left the Ark after their kinds (Jones 1973), there was ample opportunity for vicariance (splitting) of faunas in the Middle East, even to some extent without sweepstakes routes. Yet the key to the dispersal of animals

from Noah's Ark is the many sweepstakes situations in existence. The Ararat region is mountainous, generating nonrandom routes for migrating animals. The geography includes the Caspian and Black seas as barriers. The fauna, already separated by these local and regional sweepstakes routes, was in a position to be separated on the intercontinental scale.

Ice Age and Climate

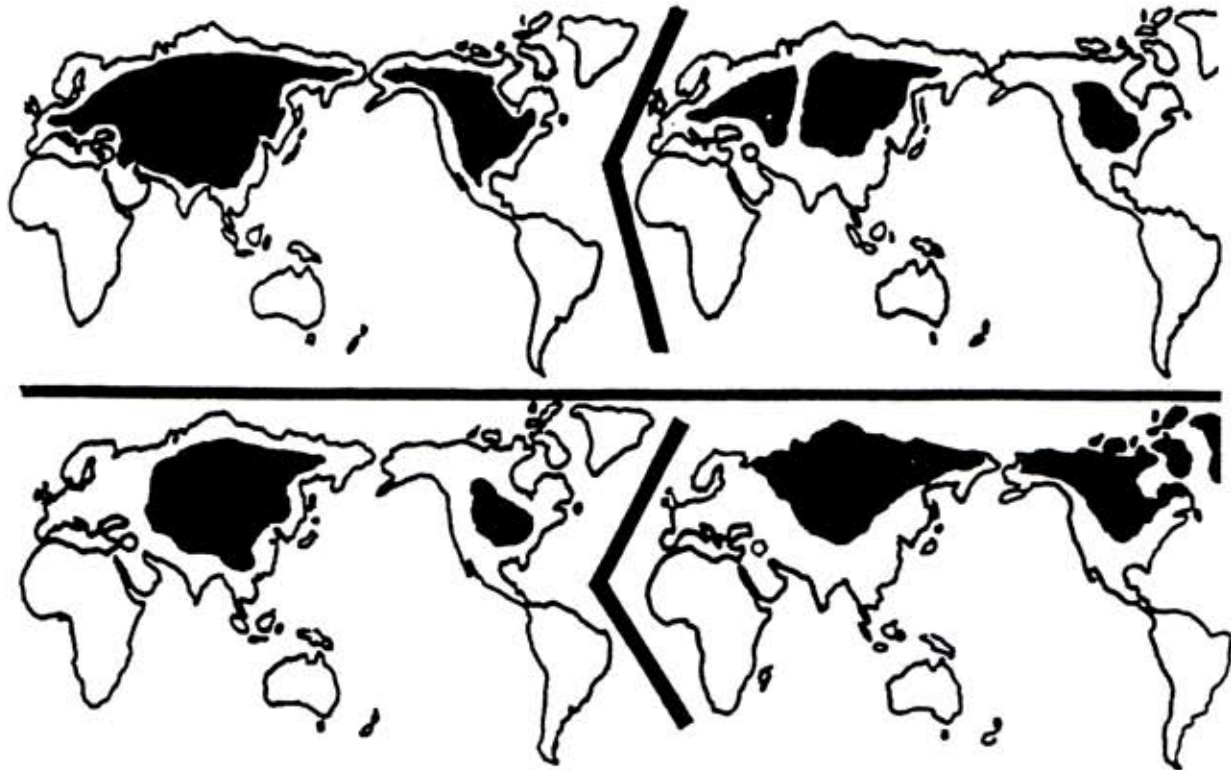
The Ice Age after the Flood (Oard 1986) must have closed off large portions of the Northern Hemisphere to the animals originally spreading from the Ararat region. But an ice cover is not even necessary. If Oard's hypothesis is correct, volcanic dust caused a reduction in surface land temperatures. By analogy with nuclear winter models (Covey *et al.* 1984), interior portions of continents (especially Eurasia) would have been too cold to support life for some time after the Flood.

Consider the situation depicted in top, left. Except for coastal regions, where oceanic warming is a factor, Eurasia and North America are inhospitably cold (i.e., the dark region). The inhabitants disembarking from the Ark are introduced to this situation. After the Middle East is populated, the animals effectively have only two sweepstakes routes to take—southwestward to Africa or southeastward to Southeast Asia and Australia. This causes an immediate bifurcation of faunas and, among other things, explains why the tropical faunas of Africa, southeast Asia, and (later) South America have little in common.

Subsequently, (top, left) mountainous regions (such as the Urals) warm up. This is caused by the temperature inversion engendered by the atmospheric dust. A new sweepstakes route now opens up, allowing animals to migrate northward from the Middle East. Since a polar ice cap does not yet exist, the Asian Arctic is at first hospitable to these animals. Many of these continue to expand their distributions along this coast, eventually reaching North America via the Bering land bridge. Eventually the Gulf Stream becomes dominant, warming Europe and western Asia (as predicted in a nuclear winter situation: Covey *et al.* 1984). This creates yet another sweepstakes route—from the Middle East to Europe. Some of the fauna that has by now populated the Asian Arctic (and North America) also moves to Europe. This explains the faunas that occur only in Europe and North America.

Since the earlier movement of faunas between Eurasia and North America had been disjointed and subject to sweepstakes routes, it is not surprising that the faunas are so different. The Ice Age seals this situation (bottom, right). Life along the Asian and North American Arctic coasts is snuffed out, and there is no further possibility of interchange between the faunas of Eurasia and North America.

The scenario described above is an oversimplification. In reality, sweepstakes routes must have opened and re-closed repeatedly as regions of inhospitable cold changed over a time span ranging from days to decades. This caused a further vicariance of migrating animals.



Anthropogenic Introductions

A major factor, heretofore neglected in the understanding of the spread of exotic faunas throughout remote parts of the world (i.e., relative to Ararat), is the fact that humans began a large-scale dispersal from the Middle East region only after the Tower of Babel incident (Genesis 11:78). Prior to this time, they must have been tending many of the animals that had been rapidly multiplying following their release from the Ark. As humans were forced to leave their habitations around Babel, they undoubtedly took animals with them for husbandry, game, and as a reminder of their former area of living. (For a summary of the numerous and diverse reasons for historically recent anthropogenic introductions of animals, see table 4 in Myers (1986).

These recent examples can offer only a very limited analogy to what must have taken place after the Flood. Post-Babel humans were actually in a position to bring along with them (and introduce to other continents) a much greater diversity of living things than would later be the case (when, for example, only European faunas could be brought by the post 15th century colonists to the New World). First of all, introductions into barren continents had a much greater effect on biogeography than the later introductions of living things into already-populated continents. Also, the diversity of living things in the Middle East was very great soon after the Flood. After all, first the Ark itself and then the whole Middle East region was a microcosm of the full diversity of land vertebrates that

would eventually populate the entire globe. Most every group of animals initially taken from the Middle East had a good chance of being a unique faunal assemblage when introduced to distant continents.

It is important to note that introduced animals spread much more rapidly as a result of repeated anthropogenic introductions than they do through their own biological capabilities (Myers 1986). This means that, even if normal spreading tends to make faunas more homogeneous over geographic areas, anthropogenic introductions will make faunal distributions more heterogeneous at a faster rate. Also, consider the rate of population increase among Ark-released animals. If, soon after the Tower of Babel incident, the inhabitants of the Middle East knew (i.e., from advance parties) that remote areas of the earth lacked vertebrates, they had that much more motivation to take many animals with them as "they scattered" all over the globe.

Land Vertebrates with Peculiar Biogeographic Distributions

There are a number of animal groups that provide classic examples of endemic distribution. Many of these, at first, seem difficult to explain in terms of an origin from the Ark at Ararat. This work offers some novel solutions, with anthropogenic introductions being the main factor.

We have modern examples of entire faunas whose original biogeographic distributions have been completely inverted by anthropogenic introductions combined with geographically-selective extinctions. For instance, wild

The Creation/Evolution controversy rages!
You know that. But do you know where to
find the solution to the controversy? The
Flood in the days of Noah!

Fossils are touted as the proof of evolution.
Rocks, we are told, prove the earth is old.

But under close examination, these rocks
and fossils are found to be the result of a
colossal flood, dynamic in intensity, and
global in scope—just like the Flood
described in the Bible.

Layers of coal
Fossilized dinosaur bones
Petrified wood
Sequence of fossils
Confusing radioisotope dates
And many more questions—

All answered by *Studies in Flood Geology*.



Institute for Creation Research
P.O. Box 2667 • El Cajon, CA 92021

ISBN 0-932766-54-4



9 780932 766540