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Preface

Geology forms a dividing line between Christian critiques of the worldview of naturalism. Most who affirm a theistic framework reject the atheistic conclusions of either gradualist or punctuationist evolution—rightly noting their incompatibility with a Christian worldview (or any theistic worldview, for that matter). Although some Christians continue to deny the pervasiveness of naturalism in other facets of the sciences and may even affirm theistic evolution, that perspective appears in decline due to serious theological and scientific challenges from the modern creationist and Intelligent Design schools.

But surging skepticism about Darwinian biology is not accompanied by a strong reaction against uniformitarian geology, which constructed the framework within which Darwin's species originated. Many Christians, satisfied that the inherent atheism of evolution has been blunted, have yielded the field, believing that the debate in geology is nothing more than a trifling detail about the age of the cosmos and the Earth.

However, recent decades have seen the rebirth of interest in diluvial geology. Although research is limited by resources, the past years have witnessed the accumulation of a serious body of literature addressing the biblical and geological implications of a history that includes the global destructive cataclysm of Genesis. Numerous uniformitarian shibboleths have been revealed as contrary to sound science and sound thought. Though secular neocatastrophists strain to deny any influence of the new diluvialism, it is more than coincidental that their movement has flourished in the wake of a renewed emphasis on the importance of the Genesis Flood.

As with any new paradigm, modern diluvial geology is the home of a remarkable diversity of original thought, with vigorous discussion on topics ranging from plate tectonics to the nature of the Ice Age. One of the most interesting debates is concerned with the relationship between the Genesis Flood and the uniformitarian geological timescale, or geologic column. What exactly is it? Are parts of it separable from the old-earth geochronology? What would a diluvial stratigraphy entail?

This symposium attempts to capture the current range of diluvial opinion about the geologic column in an effort to better clarify what has become an admittedly murky debate. Recent exchanges in the literature show a tendency for various participants to talk past one another, and so this book has brought those disparate views together to better define the real differences within that community and identify concrete issues that will provide the basis for continued research by adding clarity to the problems and their potential solutions. It is not an apologetic to uniformitarian geology; rather it assumes the reader will either be a diluvialist or will at least possess both an interest in the topic and an open mind towards its approach to natural history.

Though it may be hard to see at this stage of history, we are convinced that diluvial geology represents a major paradigm shift that holds the potential to stimulate a revolution within the earth sciences—a change in perspective that will cast off the Lyellian straitjacket that seeks to prevent geologists from investigating the greatest geological event in our planet's history. Such a revolution would—we are convinced—spur scientific rigor, restore a solid philosophical foundation beneath both science and history, and promote an increased confidence in biblical history and Christianity—the same religious culture that gave birth to modern science. We invite the reader to look and see.

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Introduction

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Road cuts on highways. Scenic overviews in the mountains. Hiking trails in canyon country. We cannot travel from place to place without noticing rocks. In one place we see flat-lying sediments in orderly alternating layers. In another, great blocks of granite rear up before our vision as rugged mountains. Clues to the titanic forces acting on the crust are unveiled in faults and folds. Limited to Earth's surface, most people see only tantalizing hints of the complexity of what lies beneath their feet. In recent centuries, geologists have come to appreciate that ordered complexity; curiosity and economics have combined to spur investigation into the mysteries of Earth's crust. Technology has multiplied our ability to see: in 1869, John Wesley Powell had to brave the dangers of the Colorado River to see the strata of the Colorado Plateau revealed in the sides of the Grand Canyon. Today, a geologist can sit in the comfort of an air conditioned control room, collect the detailed readings of instruments ascending a 30,000-ft well drilled in deep-ocean waters and "see" every inch of the penetrated strata while determining lithology and bedding; measuring density, porosity, and radioactive emissions; discovering whether oil or gas might reside in the pore spaces and then calculating how rapidly it might flow to the surface.

Through these efforts, we are continually gaining a better empirical understanding of Earth's crust. Geologists have described igneous basement rocks and the sedimentary fill of overlying basins. Folds, faults, and tectonic fabrics have been discovered and mapped, from roadside outcrops to continents. Both the three-dimensional geometry and the internal composition of rock bodies have provided means of dividing, classifying, and correlating these units. However, empirical data are merely building blocks. Their arrangements are determined largely by theoretical models; some are amenable to modification by the data they seek to explain, while others rest on untestable assumptions about nature and time. As has been true throughout human history, it is the conceptual clash of those indemonstrable axioms that tends to create the largest intellectual explosions.

In 1815, William Smith published what most consider the world's first modern geologic map, one that shows the rock record of England and Wales (Winchester, 2001). One of his most significant innovations was linking the lateral distribution of rock bodies perpendicular to strike into a superposed vertical sequence seen in his extensive explorations of pits and mine shafts. Since that time, most geologists have conceptualized the rock record in terms of a vertical succession of layers, examples of which are seen in the Grand Canyon. Each layer is thought to represent a discrete time period that can be correlated all around the Earth. *Therefore, the essence of the geologic column is an interpretive framework for the rock record built on successive, globally-correlated, synchronous time periods.*

Another complementary paradigm shift was underway in early 19th century Britain that dramatically reinforced this new way of looking at the rock record. The rising influence of the Enlightenment elite was beginning to call into question the biblical chronology and downplay the geologic effects of the Flood. James Hutton brought this fight into the geological arena at the end of the 18th century with his uniformitarian theory that added long periods of time to the equation—a view cemented into modern geology within a few decades by Charles Lyell. Geologists were faced with an enticing explanation for the rock record—it represented a vertical succession of time units, each displaying long periods of gradual sedimentation and other geologic activity. Since that time, the position that attributes the majority of the rocks to the action of the biblical Flood has been a minority position—at times, vanishingly small.

This new explanation meshed well with the exuberant confidence that science could unveil a universe long shrouded by religious dogma. The history recorded in Genesis traced a story of just a few thousand years. If the world's story actually stretched far beyond the oldest accounts into the mists of time, the only possible record of those lost ages would exist in the rocks. Thus, the vertical succession of rock layers presented itself as a great calendar, and the sedimentary layers became a chronological account of the newly-discovered "deep time." Furthermore, the fossil contents held forth the possibility of widespread correlation across disturbed zones and lithological changes, implying a global column. All that was required was to set the boundaries of these eras and then interpret the hidden stories in their constituent rocks. Since time had become the primary determinant in the new science of geology, and since geologic processes in the past were assumed to be no different from those observed in the present, it seemed reasonable that the different rock units would not only represent distinct time units, but that they would do so all over Earth. The millions of years available in each age would certainly allow local variations in sedimentation, tectonism, etc., to be averaged out into one representative section. This translation of rock units into globally correlative time periods was the key to uniformitarian stratigraphy—still the dominant school in historical geology today.

But in the world of ideas, there was to be no unending succession of such "uniform" thought. Just as the geologic calendar was being "calibrated" to purported absolute dates by radioisotopes, a few pioneers during the middle of the 20th century began to demonstrate unambiguous evidence of catastrophic events in the rocks. Over a period of decades, a school of "neocatastrophism" emerged which recognized that the rock record was punctuated by catastrophic events, but set them still within the context of a slightly revised history still dominated by uniformitarianism, evolutionism,