

ROCK SOLID ANSWERS

The Biblical Truth Behind
14 Geologic Questions

Michael J. Oard and John K. Reed, Editors

With contributions also from:

Aaron Hutchinson, Emil Silvestru, Peter Klevberg, Rick Bandy,
John H. Whitmore, Andrew A. Snelling, and Ian Juby



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The Fall and Rise of Flood Geology



During the 18th and early 19th centuries, new ideas swept the West. The forces of the Enlightenment were not content with “ivory tower” philosophy but pushed their new worldview aggressively into every area of life. Early on, they set their sights on the new science of geology, recognizing its strategic importance as a springboard to a more vital target — the repudiation of biblical history and the subsequent overthrow of biblical authority. Although most intellectuals had rejected Genesis during the latter half of the 18th century (Rudwick 2005), there was strong public support into the early 19th century. But this quickly waned. A growing antipathy by opponents of Christianity and a growing apathy among Christians ushered in the desired “geological revolution.” Scientists gave lip service to the Bible, providing an excuse for the professional clergy. But by 1850, Flood geology was a minority position, well outside the scientific mainstream. By 1900, it had been reduced to an object of ridicule. Enlightenment philosophy had carried the day.

So we find ourselves at the beginning of the 21st century with natural (earth) history firmly lodged within the domain of secular geology. As with any monopoly, those who enjoy its privileges are also jealous to guard against competition — a reality ironically at odds with the spirit of scientific inquiry loudly proclaimed by the monopolists long ago. But competition is always present in the marketplace of ideas. During the latter decades of the 20th century, the ghost of Georges Cuvier (1769–1832) returned

to haunt mainstream geology. Lyell’s uniformitarianism fell beneath the onslaught of a revived secular catastrophism, often known as “neocatastrophism.” Evidence from the channeled scablands of the Pacific Northwest and the features formed by the eruption of Mount St. Helens proved inexplicable to the reigning uniformitarianism, which leaned heavily on low-energy analogs of modern depositional environments to interpret the rock record.

Ironically, the neocatastrophists were several decades behind the times. A new Flood geology had appeared in the early 1960s, challenging the same uniformitarian monopoly. Rather than open the door to the ancient taboo of Noah’s Flood, modern geologists have shown an amazing flexibility by converting en masse to neocatastrophism, desperate to maintain their vast geologic past, but with no real underlying principle to guide interpretation. Even the word “uniformitarianism” has come under fire, with a retreat to the older and more restricted methodological term, “actualism.” One might say that geologists have proven that they can accept a variety of historical models as long as they exclude the Bible. At a minimum, recent decades have shown that trends in geological history are driven by philosophical — not scientific — commitments.

Why are geologists so resistant to the alternative framework of Flood geology? Is not science advanced by the interplay between multiple working hypotheses? Some argue that Flood geology, because of its ties to the Bible,

has no place at the table. Of course this ignores the *equally* religious commitments of those who reject the Bible. It also illustrates how the outmoded philosophy of positivism (science is the key to truth) lurks in the minds of scientists. Neither history nor science can proceed purely on the strength of self-authenticating data. Both require assumptions about reality and time derived from philosophy or theology. Most creationists understand that, but many secular scientists do not. In other words, they are forced to rely on “antediluvian” philosophy.

No philosopher still believes that science is pure, objective, and untainted by philosophical presuppositions or psychological prejudice. That “modern” myth has become a post-modern farce — even more so when geologists are faced with the burden of using science to do history — the investigation of unique past events. It is as if the failure of Marxism, which signaled the collapse of a “scientific history,” has no relevance to geology. If geology does not become more flexible, it will validate the accusations of some that “open-minded” scientists are often the most dogmatic of people.

But whether they like it or not, Flood geology is here to stay because the Christian Church is waking up to its necessity in their faith. Many Christians have had a fling with compromise, but now understand that the circle cannot be squared. They see the intellectual schizophrenia of denying biblical history while clinging to biblical authority, and have found that contrary position equally unsatisfying to both heart and head. They see theological compromises as threadworn and the aura of omniscient science as tarnished. They have also ceased to buy the outmoded “religion versus science” argument that kept them at arm’s length for so long. That mindset has been superseded by an understanding of the role of integrated worldviews in this debate.

Christians are not the only people to react to the new understanding of the uncertainties of science. The scientist no longer stands on his mid-20th century pedestal. Some, like postmodernists, have simply thrown up their hands at the possibility of truth; denigrating religious truth and scientific truth with equal relish. They are opposed by die-hard scientists who still believe that truth is possible, but cling to the outmoded idea that science is the path to enlightenment. These academics have hunkered down inside their campus fortresses to fight off the barbarian hordes — only to find that the barbarians are the philosophy department in the adjacent building.

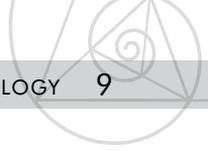
Neither option — denying truth or claiming all truth comes from science — is tenable today. A third way is

possible. A new generation of Christians has come to appreciate that truth comes from God and cannot be ceded to secular science. They are striving to rebuild the ruins of the biblical worldview, the only one that has historically been able to integrate knowledge and insure truth. Secular natural history, whether uniformitarian or neocatastrophist, resists the new Flood geology precisely because it forces this clash of worldviews out in the open. As the myths of the Enlightenment fall by the wayside, the secular position becomes increasingly tenuous. Theological, metaphysical, and epistemological commitments exist on all sides. Christians are willing to admit theirs and show how they integrate well with real science and real history. Sadly, many secularists resist that step, knowing that their assumptions rest on sand.

Though Flood geology is hampered by a paucity of practitioners, few publishing outlets, and no public or industry funding, it has one crucial asset that secular geologists lack — a healthy consistency between axioms, methods, and conclusions. Furthermore, it offers the possibility of breaking out of a hidebound dogmatism that forces geologists to squeeze 21st-century discoveries into a 19th-century framework. Flood geology offers an opportunity to explore ideas and evaluate data within a new and more intellectually satisfying paradigm. Needless to say, that paradigm has been attacked.

Rock Solid Answers seeks to defend against those attacks. We recognize that truth involves *defending* propositions as well as advancing them. The truth of the Genesis Flood, reasserted during the last half of the 20th century, has been challenged on a variety of fronts. Many of those arguments have been ably answered, especially in the arenas of theology and the life sciences. However, geological challenges appear to be in the forefront for most secular apologists, and diluvial geology has convinced a smaller cross-section of people than creationist positions in other disciplines. Therefore, the Creation Research Society has assembled a team of scholars to answer some of the most persistent arguments leveled by the geological establishment.

Contributions to this book are interesting in their own right, and demonstrate that advocates of Flood geology are careful, well-informed scientists. The chapters also reveal a common flaw in attacks on Flood geology — the old logical bugaboo of “begging the question,” or circular reasoning. Those opposed to Flood geology use conclusions driven by their presupposition of the truth of their own position, even arguing for uniformitarian processes in a neocatastrophist world. Evidently they fail to recognize that all they are really doing is finding new and com-



plicated ways of saying, “my presuppositions are different from yours.”

We can only conclude that they fail to see this logical error, clinging to faith commitments outside of science. For years they have believed that science is the synonym of truth, and they have shoved metaphysics, theology, and history under that umbrella. It is no surprise that they are less capable when faced anew with arguments of this sort. For Christians are not simply content to disagree with David Hume’s famous burn-everything-that’s-not-science-or-math tirade, but have even had the audacity to point out that science is not even *possible* absent Christianity (e.g., Lisle 2009; Pearcey and Johnson 2004; Reed 2001; Stark 2003).

Thus, as you read through this book, it is vital to recognize that deeper disagreements color the positions of secular and Flood geologists. Otherwise the following chapters will devolve into a simplistic back and forth of disparate “facts,” and truth is likely to be lost as the quantity of information becomes the basis for belief. However, if the reader will discern the more fundamental differences of opinion reflected in these chapters, the debate will assume a new clarity that we hope will lead to the discovery that diluvial geology is not simply a legitimate alternative to uniformitarianism and secular catastrophism, but is a door to a worldview that offers the more satisfying prospect of a unity of truth across the spectrum of knowledge.

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A Context for the Flood Geology Debate



John K. Reed • *PhD* — *Geology*

Michael J. Oard • *MS* — *Atmospheric Science*

A major challenge, perhaps even the greatest challenge, for Flood geologists is to simply get started — to reach the point where debate is taking place. Too many times, the only “debate” on the part of secular geologists is to simply dismiss with ridicule the diluvial position as one held only by ignorant Christians, clinging to an outmoded faith. This in part is driven by the old secular myths about the origin of geology, where brave empiricists (Hutton, Playfair, and Lyell) overcame the repressive persecution of an anti-intellectual church to lead humanity into a more enlightened and scientific view of the past. Only recently has historical research put the lie to that nonsense (Gould 1987; Rudwick 2005, 2008). This “victimized by Christianity” appeal was nothing more than the first line of defense by equally religious atheists, and was applied across the spectrum of knowledge. As the sociologist Rodney Stark (2003, p. 123) noted:

The reason that we didn’t know the truth concerning these matters is that the claim of an inevitable and bitter warfare between religion and science has, for more than three centuries, been the primary polemical device used in the atheist attack on faith. From Thomas Hobbes through Carl Sagan and Richard Dawkins, false claims about religion and science have been used as weapons in the battle to “free” the human mind from the “fetters of faith.”

If the historians and Stark are correct, then another way of looking at the issue is the first step required. One that makes the most sense is that geology is one of many areas where a much greater debate is underway between *opposing worldviews* (figure 1). No other explanation explains the historical data, which show a causal link between Christianity and science, and between Christianity and history. How can Christianity be “anti-intellectual” if its scholars were responsible for the origin of both disciplines, as well as numerous others? Western culture was built on the Christian religion . . . overtly until the Enlightenment, and implicitly even after. And that historical tipping point provides a clear clue as to Christianity’s opposite number, Enlightenment naturalism. This is confirmed by a simple piece of logic.

That logic goes like this: if the *affirmation* of biblical truth and authority is a religious position, then the *denial* of biblical truth and authority must also be a religious position. Thus, we must look for a religious point of view behind the anti-Christian “science” of the past two centuries. Is there a relationship between uniformitarian geology and naturalism, and is there evidence that a conscious effort was made to remove Christianity from natural history in the late 18th and early 19th centuries? Clearly, the answer to both questions is “yes.” For example, the Comte de Buffon (1707–1788) and James Hutton (1726–1797) were two Enlightenment authors advocating theories of earth’s past. Both overtly rejected biblical history. After

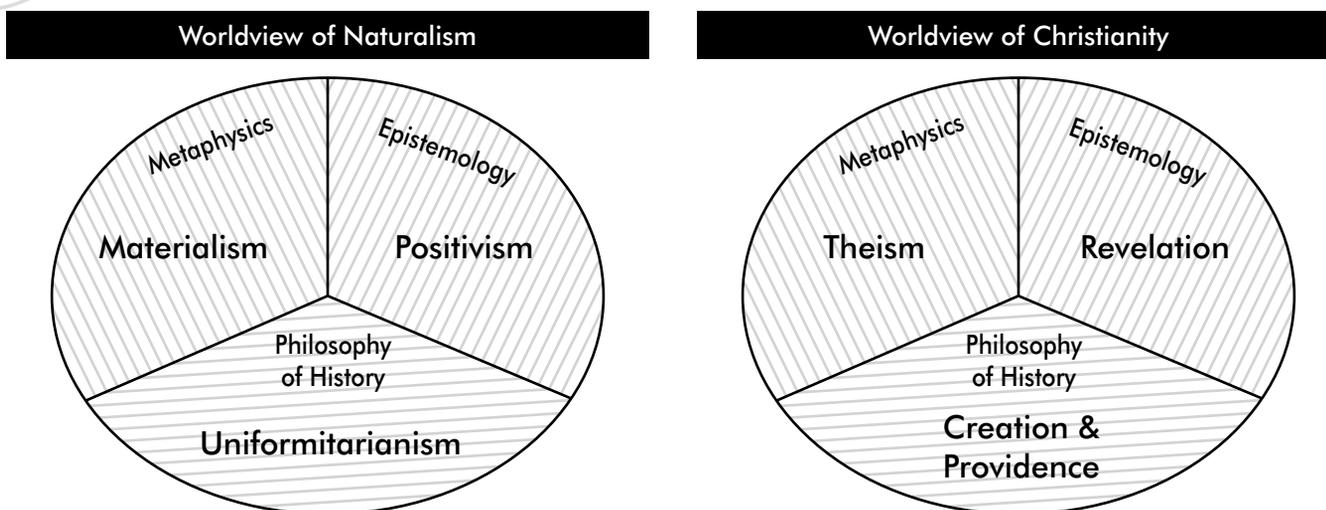


Figure 1. The differences between the worldviews of Christianity and naturalism at their most fundamental levels are stark in all three areas: metaphysics, epistemology, and their philosophy of history.

the excesses of the French Revolution, anti-Christian activity became more circumspect, but Lyell's obvious later animosity toward biblical Christianity (Mortenson 2006) was undeniable, as was that of Darwin, and their descendents down to our day.

If the context of the debate is a clash of worldviews, then clearly empirical evidence must be evaluated carefully, because commitments outside science might be driving the selection and interpretation of these "facts." Another conclusion would be that the two sides are separated not by a disagreement over particular data, but by distinct faith commitments. Modern examples of these can be seen in any of the books by the "New Atheists." Their arguments, while cloaked in science, are ultimately philosophical, and although they might be suspect, the authors' passion is quite real. Thus, all of the following chapters must be read while keeping in mind this fundamental religious opposition between Christianity and naturalism (e.g., Reed et al. 2004).

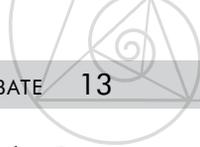
Other points worth considering as we begin the debate arise from the worldview battle. First, it is important to clarify differences between conclusions drawn from the faith commitments of naturalism, and those derived from the *science* of geology. Often the two are intermixed; a careful account is given of strata in a particular location, and then we are told that their characteristics "prove" an old earth with low-energy continuous processes shaping its surface. Second, we must recognize that debates over the meaning of empirical data will not ultimately resolve the issue. Since worldviews are involved, only the demonstrable formal invalidity of one or the other

can settle the argument. Finally, the disparity in the opposing positions must be taken into account. Secular geology controls academia, government agencies, almost all journals, almost all museums, public education, and the media. Thus the quantity of information is to be expected to reside in their corner. Fortunately, truth is not determined by the amount of data presented.

Given this framework, what consideration should a fair-minded person give to the following chapters? If there is a conflict between worldviews, then we must examine the consequences. Three significant ones come to mind. The first is the emphasis on formal errors in the discussion of empirical data. These may be difficult to detect, but provide the most direct means of evaluating the truth claims of the opposing positions. Second, we must assess the possibility of common ground; after all, if there is a religious conflict, are we just talking past each other? Finally, given the monopoly of naturalism, what reasons can we advance to convince them of the importance of holding an open debate?

Formal Errors in Arguments against Flood Geology

If secular geologists have propagated their worldview in their interpretations of the past, then we must beware of formal as well as empirical errors. For example, early interpretations of history demonstrated their antipathy toward Christianity by proposing ahistorical, steady-state visions of the past. Hutton's system was clearly timeless in the chronological sense understood in the West, being driven by his faith commitment to deism. Buffon's first system



and even Lyell's initial proposal of uniformity were both ahistorical, denying not only the content of biblical history, but even its framework of linear, chronological time (Gould 1987; Rudwick 2005). That was a step too far at the time and implicitly destroyed the possibility of a real history for the prehuman past. So a consensus developed for a linear, progressive geohistory that could be measured by chronological events.

But when we examine this closely, the philosophy becomes clear. The nature of time is a question to be resolved by philosophy or theology, not by science. Furthermore, this *framework* of history was *Christian* (Rudwick 1999). More importantly, it could only be justified theologically, by Christianity (Lisle 2009; Reed 2001). Thus, when we see a Christian concept of time used to debunk Christianity, logical alarms begin to sound. And if naturalism does not possess an equally-valid justification for this concept of time, then the alarms should be heeded.

Likewise, the geologic time scale asserts that the path of history can be traced by a sequence of rocks. But this requires the assumption that during each of the proposed geological eras, rocks were being deposited at the same time all over the world that could be later correlated *by their chronology* (Reed 2008). This assumption is also outside of science and could certainly not be demonstrated in the early 19th century when the time scale was being fashioned . . . if for no other reason than that vast reaches of the world's geology were completely unknown.

Arguments involving conflicting worldviews proceed on multiple levels. The following chapters will primarily address the empirical level. But while they do not dwell on formal arguments, logical flaws in secular arguments become apparent as you read — errors that reside in the accepted wisdom that is being countered. First, most of those secular positions are based on uniformitarianism. Even though many geologists have become “neocatastrophists,” many of the standard arguments are rooted in their uniformitarian past. And most, surreptitiously yet systematically, *assume* the conclusion they are trying to prove — that uniformitarianism is true! If one assumes present causes have operated over deep time, then one looks for low-energy processes.

Evidence that this framework was a conclusion reached apart from science is seen in the fact that it took 150 years for the interpretations of secular neocatastrophism to gain traction, despite their having been proposed by scientists like Cuvier prior to Lyell's uniformitarian theory. Clear and compelling evidence was ignored or suppressed because it

did not fit the model. That is why it took J Harlen Bretz decades to convince geologists of the catastrophic nature of the Glacial Lake Missoula flood that formed the channeled scablands of the Pacific Northwest (Oard 2004).

Another common error in logic appears in arguments against the Flood. It can be boiled down to the simplest form of proposition: “Datum *X* requires interpretation *Y*. Interpretation *Y* is contrary to my perception (time/energy/extent) of the biblical Flood. *Ergo*, Flood geology is invalid and secular geology is vindicated.”

The logical shortcoming is evident in the very beginning of that proposition. Does *X require Y*, or is there a hidden assumption beneath *X* that surreptitiously directs one toward *Y*? In other words, does interpretation flow from self-authenticating data, or does it arise from an interaction between data philosophical assumptions, faith commitments, and social or psychological factors? We affirm the latter and consider the former a relict of a naïve and antiquated view of science. The position that science is the door to truth is called positivism. It was popular in the 19th century and in the 20th century in a modified form. But that view has become increasingly untenable in the face of recent developments in both philosophy and science. Unfortunately, scientists tend to lag behind developments in philosophy and so the error crops out repeatedly in the challenges presented in the following chapters.

Thus, in addition to convincing empirical arguments, Flood geologists present secular counterparts with the more important challenge of correcting the formal flaws that flow from Naturalism (Reed et al. 2004). It is strange that many opponents of the Flood are so blind to this particular problem. Perhaps the dominance of their paradigm for two centuries has left them overconfident. The habit of secular scientists to dismiss the diluvial position with ridicule rather than with reason certainly suggests that.

Creationists have long argued that the interplay between belief structures or worldviews and forensic data found in earth's crustal features are significant and must be factored into any interpretation. The issue is not “religion versus science” but the history of one worldview versus the history of the other worldview. Working with this blend of science, history, and philosophy is inescapable because natural history is a mixed question (Adler 1965); one that requires the cooperation of multiple disciplines to reach the most comprehensive conclusions. Flood geology is a subset of a framework that is theistic, rather than atheistic; sets revelation as the arbiter of truth instead of science; and accepts biblical narrative as an outline of history, rather than an extrapolation from present processes.

So in one sense, the two positions are far enough apart that a simple empirical back and forth cannot produce resolution. If that is true, can there be a meeting of the minds — a common ground?

Finding Common Ground

Before common ground can be defined, the differences between the two positions must be understood by both sides. Secular geologists have long dismissed Flood geology as theistic superstition; a statement no more meaningful than its opposite: that they are indulging in *atheistic* superstition! The conversation has nowhere to go from there. So if common ground for discussion is to be achieved, the first step is seeing beyond the “facts” to the conflicting visions of history inherent to naturalism and Christianity. These two perspectives have widely varying positions about the nature of reality, the nature of knowledge, and the nature of history. Each side must understand the worldview of the other.

Advocates of naturalism see natural history as simply a matter of scientific inquiry. Since it deals with a time long before the advent of any scientific observer, there can be no valid human record of “prehistoric” times. This was the logic of the Enlightenment thinkers, who divorced a part of earth’s past from its biblical moorings and handed the study of it over to science. Their reasoning, influenced by the emerging science of archeology (Rudwick 2005), was that since a forensic approach was needed, science was the logical choice to investigate the ancient past. Their error was in forgetting that the definition of history is the empirical study of unique past events. And they compounded that error in their atheistic assumption that if God either does not exist or is not a legitimate subject for science, then the Bible has no relevance to the discussion.

The Flood geologist, on the other hand, recognizes that the investigation of unique past events is distinct from science per se. Furthermore, he sees science resting on axioms that are only justified by philosophy or theology. Since he affirms a God who reveals Himself, then the biblical record is not lightly dismissed or reinterpreted. Instead, it acts as a boundary for his forensic investigation. So finding common ground is a real challenge.

Despite these differences, there is common ground, and both sides should strive to meet there. Even if they do not agree about the origin and proper extent of science, both sides do agree that science is a valid tool in natural history, if used properly. Both agree that the addition of empirical data to the debate is a positive step. Flood geologists may be skeptical of uniformitarian or neocatastrophist

conclusions, but not because they dispute the empirical data. *Rather, they question the part of the interpretation that rests on non-empirical assumptions and non-empirical bias.* Therefore, a key to common ground is the clear statement by both sides of their own assumptions and bias. Once this is done, they can be factored into the debate. Any refusal by either side to perform that simple step should be seen as diagnostic of dogmatism.

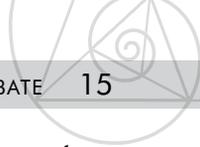
But what about all the Christians who advocate the deep time or evolution of secular natural history and who deny the Flood in its global extent? We respond by noting that an individual does not have to be consistent with their worldview; many people are not. We do admit that atheists over the past two centuries have been more consistent in their opposition to Christianity, and we regret that Christians have not been equally consistent by holding to a biblical earth history. However, the debate is not about the opinions of individuals, but about the truth of propositions by competing worldviews.

Therefore, we affirm the common respect for the scientific method, the belief in a real chronological history, and the desire to find truth. If nothing else, we recognize that common ground is found in naturalism being the philosophical child of Christianity (e.g., Glover 1984). The meeting place is found in a common set of ground rules which both sides recognize as comprising science. Though there is disagreement about the extent of the *domain* of science, there is sufficient agreement about the *method* for the debate to proceed in a meaningful way much further than it has at present.

Finally (though perhaps most importantly), the question should be raised as to why such a debate should occur. Ironically, advocates of naturalism seem to have lost their historical position of being the heralds of a skeptical openness in matters of science that would seem to demand a serious hearing for Flood geology — at least in its empirical aspects. Flood geologists are now the skeptics, calling for a new open-minded examination of multiple hypotheses in investigating earth’s past.

Reasons for Open Debate

So despite empirical and formal differences between the opposing worldviews, common ground does exist. Given that, can Flood geology exist as a respectable minority report in the earth sciences? Most secular geologists refuse to admit the possibility, and that is surprising, given their empirical methodology and the inherent uncertainties that follow empiricism. For example, as you read in the following chapters, you might weigh the evidence and conclude



that there is a 70 percent probability that the argument against the Flood is valid. Then you might read the next chapter and conclude that the same probability is only 20 percent. This uncertainty demonstrates that while Flood geology might not be a *winner* in each topic of debate, that it is certainly a *competitor*. If nothing else, the possibility of new evidence being found in the future makes such competition real. Furthermore, the history of science, littered as it is with myriads of rejected ideas, should instill an inherent caution in any scientist to reject out of hand something that might be powerfully supported by the next discovery.

For that very reason, final victory for *either* side cannot come from any amount of empirical data. Both sides can exist as competing concepts, but only the *formal* invalidity of one can result in a firm conclusion of truth or falsehood. The ongoing dismissal of Flood geology in the absence of a compelling demonstration of its formal invalidity is symptomatic of a rigid dogmatism. Furthermore, since Christians have made cases for the formal invalidity of naturalism (e.g., Lisle 2009; Reed 2001), secular geologists are faced with the necessity of both answering those cases as well as countering the empirical information in the following chapters.

If secular geologists assert that Flood geology is no competitor at all, they are in essence arguing a universal negative, and thus face a heavy burden of proof. There is a fault line running through geology that reflects anti-Christian psychology, not logic and science. On one hand, it poses as a bastion of skepticism; advocating an empirical, probabilistic view of truth. This is a holdover from attacks on the dogmatism of some Christians in earlier centuries. But they need to be consistent. Now that the naturalists are the dogmatists, can they recover that tradition, set aside their prejudice, and examine the evidence with an open mind? If not, they have created another logical inconsistency in their worldview. If, as we believe, this book readily answers common objections to Flood geology in a coherent and compelling fashion, then the continued refusal to admit creationists to the table of natural history reveals a dogmatism at odds with their own traditions.

Why are secular geologists so unwilling to consider theistic alternatives? Their refusal is evident: any geologist or student of geology who articulates such a view will find the road to a rewarding professional career blocked. Secular universities discriminate against both students and professors on this basis (Bergman 2008). No secular journal will publish diluvial ideas. The petroleum and mining industries follow academia and refuse to consider

exploration within a diluvial framework. This is diagnostic not of a confident empirical position, but of an entrenched monopoly.

These monopolists may claim they discriminate because Flood geology is so clearly wrong, but the presence of a worldview conflict in natural history and the arguments presented in the following chapters refute that claim. During the late 18th century, there was a call to do away with hoary traditions and unsupported dogma and embrace an open-minded methodology. Modern geology was in the middle of that movement, calling for tolerance when they were the minority. Seemingly, the children of the Enlightenment have become what their fathers fought against, recalling the old adage: “We have met the enemy and he is us.”

Another reason for open debate is that the object of our investigations is history, not science. There is a residue of positivism that pervades most scientific thinking. Even if science was the doorway to truth, a little common sense reflection tells us that repeated controlled experiments are quite different from speculation about unique unobserved past events. One only has to watch a special on the History Channel to see how nebulous theories of history can be. It seems as if every episode is reinterpreting a previously popular theory. Logic tells us that the self-congratulations of the hosts are premature; they seem blissfully unaware of the implication that their “new” version of “truth” can (and probably will) be debunked just as easily when another new piece of evidence is unearthed.

Finally, open debate would bring an economic advantage. Geology, as a science, has been stimulated and funded because of its important and direct economic applications. Oil and gas, all forms of mining, and groundwater occurrence and protection all affect the lives of nearly every human and depend on geologic thinking. Yet our imperfect understanding of the earth’s crust injects uncertainty into all these ventures. Anything that would provide greater insight into investigation and understanding would have significant economic advantage in reducing the expense of resource discovery.

The Biblical Case for a Global Flood

Flood geology is opposed within Christianity as well as by secular geology. For many years, many Christians sought compromise positions with an ascendant uniformitarian geology and evolutionary biology. Their ploys are well known. Days became ages. Billion-year gaps appeared in Genesis 1. The first part of Genesis was poetry. It was not intended for modern, sophisticated

Europeans. The Flood was an inundation of the Euphrates, the Tigris, the Black Sea, the Persian Gulf, or any other convenient body of water. But none of these ideas make sense, geologically or theologically. Secular advocates of naturalism and many Christians recognize that, and are reconciled to holding divergent views.

But there are Christians who still wish to have uniformitarian (or neocatastrophist) geology and the Bible too. It is to that group we address this section. Despite all of the attempts to twist words and phrases, the biblical case for a global Flood of a year's duration is overwhelming. The reasons for accepting what was the consensus view of the Church up until the Enlightenment are no less textually and theologically compelling than they were two thousand years ago. First, the context and language of the relevant texts strongly indicates a global Flood — there are dozens of phrases in Genesis 6–9 alone that are universal. Second, if the Flood were local, why bother with an ark? Third, if such a craft floated on the waters of a local flood, it would travel downstream and out into the ocean, not end up atop a mountain. The biblical story of the ark's landfall is perfectly consistent with a global Flood, as is the account of mountaintops being the first land seen as the waters fell. Fourth, Genesis 8:5 states that these mountaintops appeared 70 days after the ark landed, suggesting that its resting place was at a high elevation. Fifth, the duration of 371 days makes any local flood incredible at best, especially given the wording that suggests violent inundation. Sixth, men and animals were commanded to *repopulate* the earth, something not needed unless life had been extinguished. Finally, and probably most importantly, the local flood theory impugns the honor of God. He promised to Noah to never bring another similar flood on the earth again. If the Flood were not the global cataclysm described in Genesis, then God's promise was false — a position no Christian can afford to take.

Ironically, creationists and atheists find common ground here. They both agree that the Bible teaches the historical occurrence of a global Flood, both disagreeing with the fence-sitting Christians who want to have the best of both worlds. But as Elijah warned Israel, limping around between two contrary opinions is neither safe nor sane, and God calls them to choose fidelity to Him and to His revelation of His works.

The Road Ahead

This book addresses only a fraction of the challenges that face Flood geology — many of which have not yet been discovered or elucidated. Of course, that is no different

than uniformitarian geology or any other human investigative enterprise of such large scope — all face many intellectual challenges, which is why we enjoy them so much.

Furthermore, there are many challenges for which there are, at present, no satisfactory answers. Again, this is true for both sides. The lack of answers can be attributed to several causes. We may not understand the phenomena to be explained as well as we should. We may have too few people working the problem or insufficient funding. Finally, some things may never be explicable by human knowledge. But both sides will continue to strive toward answers like those provided in the chapters to come.

The topics discussed in this book were selected by several criteria. First, they are perceived as popular objections to Flood geology based on the frequency with which they are used by its opponents. Second, we had to find authors who had knowledge of the subject area and were willing to contribute to this project. Finally, we believe that these discussions help illustrate the role that non-scientific bias often plays in interpretation. All the authors agree that this book is not the final word on these topics; it is merely a step forward. Our uniformitarian counterparts may find new arguments that will require new answers. But we will continue our work too, perhaps publishing more books of this type. We are confident that as time, effort, and thought have provided answers to these challenges, additional progress will continue to enable us to answer new challenges as they are presented.

A significant advantage held by uniformitarian geologists is their entrenched position in academia and industry. Unable to access those resources, diluvialists must look elsewhere for support. Private institutions are beginning to provide some (e.g., the recent RATE project),¹ but that is still a drop in the bucket compared to funding and manpower available to uniformitarian scientists. Who knows what progress could be made in Flood geology were there even a small percentage of the same resources available!

It is the nature of any investigative effort to take on new challenges. If it weren't, the profession of geology would be boring and dry. Everyone starting his or her career yearns for some great discovery. Yet sometimes the adversarial view

1. RATE stands for Radioisotopes and the Age of the Earth. It was a joint research project by the Institute for Creation Research and the Creation Research Society to explore the many problems with radioactive dating methods that support an old age for the earth. Among the groundbreaking results, RATE showed that there may have been a period of accelerated radioactive decay within the past 6,000 years (see chapter 11).

of Flood geology prevents that same mindset from being applied to its challenges. Instead of being seen as opportunities, they are thought to invalidate the whole paradigm. That is both unfortunate and unfair, and we hope that one effect of the following chapters will be to change that perception. Flood geologists enjoy new challenges as much as anyone and appreciate the opportunity for exciting new discoveries in an underexplored paradigm. Once the nature of the conflict between uniformitarianism and diluvialism is seen in its proper context — that of competing worldviews — we are confident that a level playing field will become more acceptable to reasonable people. After all, geologists advocating different theories *within* uniformitarianism are at least able to work together with a professional attitude. Disagreement is kept to the level of objective discussion and debate. We ask for nothing more than the same professional courtesy.

Challenges for All

The debate between secular geology and Flood geology presents distinct challenges for all parties. Secular geologists are challenged to practice the scientific tolerance that they preach. Flood geologists are challenged to engage the data and build their models. If secular universities and government will not fund these activities, then Christian institutions should do so. Finally, readers of this book are also challenged. As you move through the chapters, you should carefully evaluate the arguments on both sides, on their merit as demonstrated by logic and evidence. You should also look beneath the empirical arguments and identify unstated assumptions springing from the different worldviews, and be prepared to see formal errors springing from those frameworks. You should evaluate the role of presuppositions — by both sides — that direct the interpretation of the data, noting especially how both sides can agree on the empirical content and come to dramatically varying conclusions.

Then, and only then, will you be participating in a genuinely open debate between the two positions.

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