

The Saving Waters

Implications of the Noachic Flood from a Biblical and Scientific Standpoint

by Martin Sponholz

[Minnesota State Teachers' Conference, Trinity Lutheran School Belle Plain, Minnesota Oct. 16, 1986]

The world we live in today is a world that was formed in the saving waters of the Noachic flood. Such an event was one of the most significant events for the physical world and with it our Lord saved the world from total damnation by buying time that from the believers that were saved, a nation might be raised from which Christ Jesus could be born. Such an awesome event merits frequent study and review. Such a study and review, that the floodwaters are part of His story of our salvation, is the intent of this paper.

An excellent Lutheran reference work published thirty five years ago, in 1951, by Dr. Alfred M. Rehwinkel, was a masterful work of the heart titled *The Flood in the Light of the Bible, Geology, and Archaeology* and served well for many of us teaching about the flood. Ten years later, out of the Baptist and Presbyterian camp, came a more scientific volume *The Genesis Flood: The Biblical Record and its Scientific Implications* by Rev. John C. Whitcomb and Dr. Henry M. Morris. Nearly every church or school library of our synod has these two volumes. Aside from needing a little updating of changing scientific views, these books still provide an encyclopedic list of scientific phenomena associated with the account of the flood in the Bible. Most of us studied all or parts of these books.

Most of us also studied under Prof. Roland Hoenecke, our Lord's faithful servant now retired, who continually kept our minds and academic labors on the Word of God, even the very form of the Words. He taught us these Words were the all-important Words. They were the primary source above all other sources. When the very form of the Words demanded an understanding of the original Hebrew, he sent us to H. C. Leupold's *Exposition of Genesis*. When passages proved difficult, Prof. Hoenecke led us through that tried and true formula of Martin Luther of letting Scripture interpret Scripture. Today students have the complete works of Martin Luther in our own language, and for a study of the flood we have Luther's very lectures on Genesis where the reformer gives a translation and a rambling commentary, a work of love, verse by verse of the sacred Word. You have asked for a new study of the flood at the time of Noah. This work cannot be different than those of the past.

Accepted Modern Science with Respect to the Flood

What in modern science agrees with the biblical account of the flood? When examining the work of our contemporary scientists who are answering the questions about nature they themselves raise and who receive world-wide acclaim for their answers, I must conclude that very little in modern science agrees with the biblical account of the flood.

This conclusion does not sit well with one who might insist that there is a "true science" or that the "laws of science are true, but evolution is just a theory." These ideas were quite standard in conservative church bodies in the 1940s. These ideas have their roots in the previous century when physicists, for example, claimed to know all the laws. Max Plank was told by his professors that all the laws of physics were proved and nothing new was left to discover. Plank would have to be satisfied with a life of research measuring the known constants with greater and greater precision. Known science could be dictated with authority. If in fact the laws of science were the true way in which God maintained the universe, as it was believed, teachers were doing the correct thing by teaching a "true science." Evolution also was taught "only a theory." A feeling of harmony in the science class with respect to the Bible could be counted on. In fact, many university professors steeped in

evolutionary thought were quite tolerant of religious beliefs. Rehwinkel wrote with high regard for a professor of geology at the University of Alberta (Rehwinkel, p. viii).

But research scientists are poking holes into the so-called established laws of science every day. By 1905, in physics, Max Planck with thermodynamics and radiation energy and Albert Einstein with atomic random motion, photo-electric effects and relativity, changed science in incredible ways which are just beginning to filter down into the basic textbooks used for the foundations of normal science from which come the sciences we teach the children. Since DNA, biology is no longer the same. The concept of random distributions of electrons has transformed chemistry. Plate tectonics or continental drift, considered a joke when first proposed, has completely overthrown accepted understandings in the earth sciences.

Attitudes toward harmony between religion and science, or at least a tolerance, are drastically changed today. Perhaps beginning with the centennial of Charles Darwin's famous work, *The Descent of Man* written in 1871, a scientist could become quite bold about his world views which were separate from the Bible. A renowned science educator wrote:

In the epoch-making work [*The Descent of Man*] Darwin showed that man evolved from ancestors who were not men. An overwhelming amount of evidence in support of this thesis has been accumulated by Darwin's successors. This was necessary especially because of the hostility which Darwin's theory of man's origin encountered. The hostility persists even now in some circles, but it would be a waste of effort to gather still more evidence to convince the doubters. Their doubts come not so much from lack of knowledge as from resistance to knowledge.

(Theodosius Dobzhansky)

A similar attitude toward the Genesis record of nature was boldly written by a Nobel Prize-winning microbiologist, Salvador Edward Luria. He lamented the loss of federal funds in the constitutional test case for the right to teach creation in the public schools of Arkansas.

More distressing, at least to me, however, is what the wide support for such nonsense as creation science (as distinct from biblical scholarship) means in terms of the position of science in the culture of our supposedly scientific society. In fact, our society is permeated not by science, but by an exploitative distortion of science-based technology, as irrational. as the irrational aspects of religion. Science itself, the sober evaluation of data, the restrained proposition of hypothesis, and the building of verifiable or at least disprovable theories, is probably as alien to the majority of people in American society as it was to the Hebrews of the Old Testament.

(S. E. Luria, page 157)

When studying the exceedingly complex structure of the DNA molecule and the resulting reasoned requirements for the formation of life with all of its variety, several prestigious scientists have turned to the possibility of life being seeded on earth from a source of intelligent life in outer space (Francis Crick, the formulator of DNA, and Fred Hoyle, a British astronomer). Such beliefs have been called "panspermia."

A modern molecular biologist, Michael Denton, wrote an extensive work on *Evolution: A Theory in Crisis* and concluded that much of Darwin's ideas and Lamarck's laws of evolution are quite wrong. Nevertheless his use of the Bible and its unchangeable truth is that of ridicule.

Ultimately the Darwinian theory of evolution is no more or less than the great cosmogenic myth of the twentieth century. Like the Genesis based cosmology which it replaced, and like the creation myths of ancient man, it satisfies the same deep psychological need for an all embracing explanation for the origin of the world which has motivated all the cosmogenic myth makers of the past, from the shamans of primitive peoples to the ideologues of the medieval church.

(Michael Denton, page 358)

St. Augustine developed a methodology that recognized God's gift of truth as given in two "books," the revealed Scriptures and the revealed experience of nature. Since both were of God, they both had to be true. Such an approach to knowledge did little for the hatred the early Christians held for a pagan understanding of nature during the few centuries after St. Augustine. During the Renaissance, from England to Prussia, it permitted Christian scholars to contribute much to the development of science and spawned the great scientific revolution led by Galileo Galilei.

Today, however, the two book approach has led to the abandonment of the Bible, even where it speaks clearly of events in nature. The scientists' explanation in most Christian circles reigns supreme over the Holy Word in things of nature. Criticizing the modern creationist movement one such reader of the two books states:

They [creationists] have persuaded themselves that the story of the Flood in Genesis can be interpreted only as a flood that completely covered the entire globe and that the mountain tops all around the world were under water. They typically have not recognized other valid interpretations of Creation and the Flood. Having locked themselves into these rigid interpretations they are in disagreement with modern scientific ideas. Not willing to allow tensions to exist, they have sought for harmonization with the facts of nature or with science not by reevaluating their biblical exegeses but by wholesome distortion of science and the facts of nature... People must recognize that this modern, young-Earth, Flood-geology creationism is simply not truthful. It is simply not in accord with the facts that God has given... Nature is also from God, and nature would lead us to believe that the Earth is extremely old.

(Davis A. Young, pages 92-93)

Other essays in *Is God a Creationist*, written by theologians, smoothly state a belief in a God-breathed inspiration of the Bible, hold to the inerrancy contained in the Bible and see no conflict with modern evolutionary science which claims man as a descendant from an ape and rejects a global flood. One writer, Father Bruce Vawter, a professor of theology at De Paul University in Chicago, in a conference paper given to the Lutheran School of Theology, also in Chicago, claimed that by affirming the floating ax-head of the Elisha tale, one was trivializing the Bible. Attacks against those such as ourselves, who believe and teach that God's account of the flood given by Moses is true, today are quite verbally severe. This is why we must continue to study what these true words from Moses, from our Lord, tell us.

Science as a Detective's Case

I can recall in a graduate climatology seminar Prof. Reid Bryson of the Climate Research Center and the University of Wisconsin at Madison gave a list of the many possible hypotheses for a sudden collapse in the correlation of time measurements by C^{14} to valid time measurements by tree rings and glacial varves (J.C. Vogel, *C¹⁴ Trends before 6000 B.P.*). That list included a meteoric burst, extensive volcanic activity and tidal waves, an intensive solar burst or a highly energized cosmic ray pulse. I thought to myself that any catastrophe is acceptable as long as it is not the catastrophe given in the Bible. How does one solve this kind of mystery?

Science, when looking to the past, has often been compared to a detective's case brought to trial. In a mysterious case in which an event occurred in the past, a detective gathers evidence together with testimony and a reasonable motive. In science, when an event occurred in the past, the scientist gathers his data and presents his case in a journal before a jury of peers. The analogy is fairly good except that the defense, facing a prosecution's case built only on technical evidence of experts, can readily overcome such damaging testimony with counter expert testimony. A reasonable motive is needed without which all testimony may be circumstantial. A case is quite weak without strong eyewitnesses of the event and only a true confession can make a case ironclad.

Science, looking backwards is the same. Many geologists praise James Button for his first exposition of the uniformitarian principle in *Theory of the Earth* in 1795. Sir Charles Lyell, in his most influential work

Principles of Geology in 1833, established the doctrine of uniformity in a popular manner. These two works established in geology that “the present is the key to the past.” When a jury must deliberate on what really happened, the past is the key to the present! For the earth, of what value are the interpretations by Devonian sedimentary rocks, or the thoughts of the Silurian Sea or the testimony of the Ordovician period? In nature, what are the motives for the Cambrian Sea covering the land? Where are the witnesses of the hundreds of millions of years as each layer of sediment was laid down, dried out, eroded and flooded again and again and again? Can these seas confess? The fossil, the rocks and the seas say nothing! A motive is needed.

The Lord saw how great man’s wickedness on the earth had become, and that every inclination of the thoughts of his heart was only evil all the time. The Lord was grieved that he had made man on the earth, and his heart was filled with pain.

(Gen. 6:3-6, NIV)

Eye witnesses are required.

Noah and his sons and his wife and his sons wives entered the ark to escape the water of the flood.

(Gen. 7:7, NIV)

And Jesus, the Son of God, said,

For in the days before the flood, people were eating and drinking, marrying and giving in marriage, up to the day Noah entered the ark; and they knew nothing about what would happen until the flood came and took them away.

(Matt. 24:38-39, NIV)

The case becomes ironclad when we have a true confession.

Never again will I curse the ground because of man, even though every inclination of his heart is evil from childhood. And never again will I destroy all living creatures, as I have done.

(Gen. 8:21, NIV)

This was not a confession of wrongdoing, but a testimony of His love for mankind that all might be saved and a judgment upon those that refused his free gift of salvation. Before we can look at the flood from a scientific point of view, it is of paramount importance to listen to God’s Holy Word through His inspired writer Moses. We know his testimony is true because our Lord told us in His Word that it is true.

...and how from infancy you have known the holy Scriptures, which are able to make you wise for salvation through faith in Christ Jesus. All Scripture is God breathed and is useful for teaching, rebuking, correcting and training in righteousness, so that the man of God may be thoroughly equipped for every good work.

(2 Tim. 3:15-17, NIV)

The Noachic flood is important to the story of our salvation. With these saving waters God saved Noah. He saved Noah’s children. He saved the line of descendants from which Jesus could be born, and through His Son he saved us. Our understanding of the extent to which our merciful Lord will go to save His believers is buoyed up on these saving waters. That is a comfort that brings tears of joy welling up in each of us, knowing that the almighty God cares and does so much, clearing an entire world that His church might have a place to

grow. And he has done even more than that. His Son suffered the pangs of hell for us, died for us and rose from death that we also might live eternally with Him in heaven.

The Record of the World Before the Flood

God's Word as a record of the time before the flood is the only primary source. What was the world like before the flood? What was the climate like? How many people lived on the earth before the flood? What were the nations like? These things we are not told. We are told the time of creation for human beings on this earth was the same as every land animal with all being created on the sixth day. We are told there were seasons connected to the creation of the sun, moon and stars. We are told there were sufficient numbers of people to build cities. We are told the skills for tools of bronze and iron existed before the flood. Arts and crafts merited mention in Moses' record. Lamech of Cain boasted in song of killings, of combat and of a contempt for God's vengeance.

I have killed a man for wounding me,
a young man far injuring me.
If Cain is avenged seven times,
then Lamech seventy-seven times.

(Gen. 4:23-24,NIV)

Enough is mentioned in the Bible to understand the full extent to which the depravity of sin had taken mankind. Six hundred years before the devastating flood, Lamech of Seth, in a touching prayerful way named his newborn son Noah, meaning "rest" (Leupold, page 245). It was a display of Lamech of Seth's trust in his Lord and his hope that God would bring comfort from the labor and painful toil under the immense burden of sin devastating the entire world. Indeed, in Noah's life this prophecy came true. Rest and comfort came to an earth groaning in pain under the burden of sin even as the New Testament speaks of the labor pains of the earth now waiting for the final judgment. Comfort indeed would come to God's church, then the church of the Promise, freeing it from the utter decay caused by the great falling away from the faith due to mixed marriages "when the sons of God went to the daughters of men and had children by them." (Gen. 6:4, NIV)

Certainly when a believer marries an unbeliever there is hope that the believer can lead his or her mate to the Savior (1 Cor. 7:10-17). It is obvious from God's wrath that each one did not retain the place in life that the Lord assigned to him and to which God has called him. The sons of God, the believers in the promised Savior did not stay in their place as believers. With a heavy heart and a hope in his Lord, Lamech of Seth named Noah and raised this child as a believer. Lamech, with his church collapsing in unbelief, lived 595 years longer which was long enough to witness Noah's faith, Noah's children and their marriages to faithful believing wives. He may even have lived long enough to witness the beginning construction of the immense ark. With such comfort Lamech of Seth could die at rest in his Lord.

Noah's grandfather, Methuselah, likewise appears to have died close to the start of the mighty saving rains. What a comfort to the ears of this oldest patriarch. He was born soon enough to still have heard from Adam's own lips the promise of her Seed, the Savior from sin, and in spite of the falling away from that promise by all the youth of the church, Methuselah could see his grandson Noah build the ark as God told him. With mocking all around, this family of believers kept true to their Lord. It happens frequently that we see our Lord call several members of a family within a short period of time. All believers have hope in eternal life with their Savior. We know that time belongs to our heavenly Father, and He may spare them from some trouble we cannot foresee in their pilgrimage on earth. He gives us our own life, our struggles in life and our strength for those struggles. For Methuselah and Lamech of Seth it was to raise Noah. For Noah and his sons and their wives it was to endure the flood and start a new world. It is the same with our parents, with us and with our children after us.

God's Judgments

“My Spirit will not contend with man forever, for he is mortal; his days will be a hundred and twenty years (Gen. 6:3, NIV).” What grievous sin brings the house down? Willful unbelief! We are all sinners, but when we refuse to look to God for our salvation, that is the unforgivable sin. It is not murder, but mixed marriages in which the believer, knowing better, willfully followed the unbeliever that led to eternal punishment. Not teaching the children about their Savior destroyed God's church. Seeing the Nephilim, the giants, men of renown, and worshiping them as heroes or seeking that same worldly notoriety and rejecting the humility of confession with redemption in the Lord are plagues of the sort that led to eternal death without hope. Such were the times of Methuselah, Lamech of Seth and Noah. Such are the times of today of which Jesus spoke:

For then there will be great distress, unequalled from the beginning of the world until now – and never to be equaled again. If those days had not been cut short, no one would survive, but for the sake of the elect those days will be shortened.

(Matt. 24:21-22, NIV)

When such rejection of God's truth occurs, for the sake of the believers our Lord has always worked miracles to save His people. The one hundred and twenty years of grace shows the great love of God desiring to save all people.

Why was Noah saved? “But Noah found favor in the eyes of the Lord.” (Gen. 6:8, NIV) “By faith Noah, when warned about things not yet seen, in holy fear built an ark to save his family. By his faith he condemned the world and became heir of the righteousness that comes by faith.” (Heb. 11:7, NIV) The New Testament writer to the Hebrews tells us why Noah was chosen to be saved. It was not good works that saved Noah. He certainly was not a man without sin. His actions after the flood are a witness to his weakness. It was that same faith God has given us. For us that faith is in the knowledge that Jesus has come, suffered and died for us and rose again freeing us from sin and death. For Noah that faith was the belief that Christ would come. Noah knew through faith that God would save His believers in the ark and that The Offspring of the woman would indeed be born to crush the head of Satan (Gen. 3:15).

After the instructions on how to build the ark, the Lord told Noah: “I will establish my covenant with you, and you will enter the ark – you and your sons and your wife and your sons' wives with you.” (Gen. 6:18, NIV) An important part of preparing for the saving flood waters, of course, was to build the ark according to God's plan. A more important part of preparing for the coming flood was to receive the affirmation of God's covenant that the Savior would come from Noah's offspring. Martin Luther teaches this the best:

In my opinion, however, the text speaks of the spiritual covenant or of the promise of the Seed who would crush the head of the serpent. That covenant the giants had, but they forfeited it when they missed it for pride and ungodliness. Similarly later on, when the Jews boast in a carnal manner of God, the law, the worship, and the temple, they lose these gifts and perish. For Noah, however, God confirms this covenant, that he may firmly believe that Christ will be born from his descendants and that God, in his great wrath, will let a seed bed of the church remain. Accordingly, this covenant includes not only physical protection,... but also eternal life.

Hence the meaning is: “I shall punish those who insolently despise the threats and promises. I shall deprive them in the first place of the protection and confidence that they derive from My covenant and without mercy. But I shall convey this covenant to you, that you may be saved not only from the violence of the water but also from eternal death and damnation.”

God expressly says: “With you.” He does not mention the sons or the wives whom He nevertheless also intended to save; He mentions Noah alone, by whom this promise was passed

on to his son Shem. This, then, is the second promise of Christ, and it is taken away from the other descendants of Adam and bestowed upon Noah alone.

(Luther's Works, Vol. 2, page 71)

The Ark

Only a few places in the Bible have explicit instructions for building something physical in such detail as the ark. The key part is that these instructions are expected to be followed in every detail. But Noah, as a sinner, was not trusted with every detail. The closing of the door, insuring the safety of the passengers and eliminating the temptation of lingering with the door open to view a world from which the passengers were to be separated, was controlled by God alone. God would save Noah, Noah's family and the animals His way at His appointed time. No one and no thing could take credit.

Much has been speculated about the size of the ark besides the dimensions of 450 feet by 75 feet by 45 feet given in the Bible (NIV). Could such an ark truly hold a pair of every kind of bird, animal and creature that moves along the ground? It is enough for us to know that our Lord was the architect of the ark. He certainly knew the kinds of creatures that were expected to be taken on board. Others have speculated that the ark was equivalent to five hundred box cars of a freight train or the same storage capacity as a 20,000 ton draught ocean freighter. None of these fully answers the question of adequate room. What is significant to me is that it was not until 1884 that the Cunard Shipping Lines of the British Empire commissioned a ship longer than the given length of the ark. Even then such a ship was considerably narrower than the ark. In fact, it is only in our own age of super ships that the size of the ark could be accepted by reason. All other ages knew only of ships like the *Nina* of Columbus's time, 60 tons with dimensions of 70 feet by 23 feet by 15 feet (Morison, page 109). Yet in our age such an ark is ridiculed. Two large size dinosaurs would have no problem fitting into such an ark. Considering the fact that most animals are the size of squirrels or raccoons, the problem of size, if it was a problem, fades away. Mice, for example, could readily make a home among the hay and manure of the elephant cage.

The meaning of the word "kind" is always a point in question. Leupold's analysis of the Hebrew word, both in the creation account and in the flood account, identifies "kind" as a limiting term like "species." Yet species has become a highly technical term to the modern scientist and, in fact, has changed its meaning over the last two centuries as biologists have developed different classification systems. Essentially the Hebrew word for "kind" was a limiting word that did not allow for transmutations of organism types (Leupold, pages 68, 80 and 276-278), and just where those limits might fit a human system of classification, at the order, or genus, or species level or in some other way cannot be pinned down. Farmers throughout recorded history have always been altering the species of their cattle and plants. The corn of today is very different from the corn the pilgrims first saw. Beef cattle on the bitter cold North American prairie is not at all the same as the original stock brought from Europe. If you canned tomatoes today the same way your grandmother did and did not take into account the changes gardeners have bred into these plants, you could give your family a tragic case of food poisoning. The four species of finches Charles Darwin found on the Galapagos Islands indeed may have evolved from a common stock of finches. If farmers can alter the species, be assured they cannot do what God did not establish in His creation and His method of maintaining that creation both before and after the flood. Church bodies may have been too hasty rejecting a micro-evolution within the unknown limits of the kinds. With less number of kinds than the number of species, more room would be available on the ark.

The large-scale evolution or macro-evolution, a fish evolving into a bird or a lizard, however, is beyond "Each kind reproducing after its own kind." Man evolving from an ape cannot, by any stretch of the imagination be associated with the tender loving care shown by the Triune God taking clay, forming a man and breathing into him the breath of life and taking a rib from the man's side and forming the perfect beautiful suitable helpmeet called woman. Human authority, science, must yield to the authority of Scripture, which, although it is not a science book, is speaking of God's control over the natural world which He made. Although I would like a scientific definition of "kinds" to help answer my doubting curiosity concerning the number of animals taken on

the ark, here the Bible is not scientific. At the same time the Bible tells the truth about the natural event which saved the entire world by saving eight believers to carry on the work of the Church of the Covenant, and there were at least two of every kind of animal of the land and air in that ark.

The Obedient Waters

Living here on the Minnesota prairie in the center of North America as far from the ocean as it is possible to be, it is difficult to imagine this global flood. We have no reason from Scripture, nor from nature, nor from science to believe the oceans were any different with respect to their ability to rage and toss before the flood than now. A normal sea is indeed quite capable of raging. Those ragings are truly in the realm of our lack of understanding. God's questions to Job about the sea still remain a mystery to the oceanographer.

Who shut up the sea behind doors when it burst forth from the womb, when I made the cloud its garment and wrapped it in thick darkness, when I fixed limits for it and set its doors and bars in place, when I said, "This far you may come and no further; here is where your proud waves halt"?

(Job 38:8-11, NIV)

If you ever stood long hours on an ocean beach, on calm days or on turbulent days, you would observe the ocean appears higher than you. Looking out to sea, the horizontal plane of the water surface appears to curve upwards the further you look. And, on stormy days the ocean is higher than you. Out at sea, distant from land, the ocean currents are maintained by a sea that is not level. For example, the ocean surface of the Atlantic is lower toward North America than it is toward Europe, giving the famous Gulf Stream which was first identified and mapped by Ben Franklin. Oddly, the water does not run downhill to fill in the low spot as it might on land. Instead the Gulf Stream runs perpendicular to the fall line. These utterly complex seas are proud and at times rage and pound on the beach. In a hurricane, the entire sea is lifted and rolls inland far many miles in some places. Once the storm tide pushed the entire city of Galveston, Texas out to sea. Tidal waves following earthquakes can do the same thing and are nearly impossible to predict. In these seas we see the hand of the Almighty Creator daily holding back the proud waves and giving them their limit which is far more than just gravity.

Between the Palmer Peninsula of Antarctica and Tierra Del Fuego of South America the two great oceans of the earth, the Atlantic and the Pacific, each with different surface levels, meet in immense turmoil. Because solar energy strikes a spherical earth unequally, at these screaming latitudes a great contrast of warm moist tropical air meets with the dry polar air of the south. Both sea and air rage continually. These seas were not even known until 1578 when Sir Francis Drake comfortably sailed through the Straits of Magellan into the Pacific Ocean only to sail a little too far south into the screaming winds and waves which pushed his fleet back eastward through the unknown wide passage that now bears his name. A description of those seas is given us by Francis Fletcher, a preacher on Drake's ship. His description is given to show that normal seas can rage without the spur of judgment.

For September 7 the second day after our entrance into the South sea (called by some *Mare pacificum*, but proving to us rather to be *Mare furiosum*) God by a contrary wind and intollerable tempest, seemed to set himself against us; forcing us not onely to alter our course and determination, but with great trouble, long time, many dangers, hard escapes, and finall separating of our fleet, to yeeld our selves unto his will. Yea such was the extremitie of the tempest, that it appeared to us as if he had pronounced a sentence, not to stay his hand, nor to withdraw his judgement till he had buried our bodies and ships also, in the bottomlesse depth of the raging sea...

For such was the present danger by forcing and continuall flawses, that we were rather to looke for present death than hope for any delivery, if God almightie should not make the way for us. The winds were such as if the bowels of the earth had set all at libertie; or as if all the clouds under heaven had beene called together, to lay their force upon that one place: The seas, which by nature and of themselves are heavie, and of a weightie substance, were rowled up from the depths, even from the roots of the rockes, as if it had beene a scroll of parchment, which by the extremity of heate runneth together; and being aloft were carried in most strange manner and abundance, as feathers or drifts of snow, by the violence of the winds, to water the exceeding tops of high and loftie mountaines. Our anchors, as false friends in such a danger, gave over their holdfast, and as if it had beene with horror of the thing, did shrinke downe to hide themselves in this miserable storme; committing the distressed ship and helpelesse men to the uncertaine and rowling seas, which tossed them, like a ball in a racket. In this case, to let fall more anchors, would availe us nothing; For being driven from our first place of anchoring, so unmeasurable was the depth, that 500 fathome would fetch no ground; So that the violent storme without intermission; the impossibility to come to anchor; the want of opportunitie to spread any sayle; the most mad seas; the lee shores; the dangerous rocks; the contrary and most intollerable winds; the impossible passage out; the desperate tarrying there; and inevitable perils on every side did lay before us so small likelihood to escape present destruction, that if the special providence of God himselfe had not supported us, we could never have endured that wofull state: as being invironed with most terrible and most fearefull judgements round about. For truly, it was more likely that the mountaines should have beene rent in sunder, from the top to the bottome, and cast headlong into the sea, by these unnatural winds; than that we, by any helpe or cunning of man, should free the life of any one amongst us.

Not withstanding the same God of mercy which delivered Jonas out of the Whales belly, and heareth all those that call upon him faithfully, in their distresse, looked downe from heaven, beheld our teares, and heard our humble petitions, joynd with holy vowes. Even God (whom not the winds and seas alone, but even the devils themselves and powers of hell obey) did so wonderfully free us, and make our way open before us, as it were by his holy Angels still guiding and conducting us, that more then the affright and amaze of this estate, we received no part of damage in all the things that belonged unto us.

But escaping from these straites and miseries, as it were through the needles ey (that God might have the greater glory in our delivery) by the great and effectuall care and travell of our Generall, the Lords instrument therein; we could now no longer forbear, but must needes finde some place of refuge, as well to provide water, wood, and other necessaries, as to comfort our men, thus worne and tired out, by so many and so long intellerable toyles: the like whereof, its to be supposed, no traveller hath felt, neither hath there ever beene, such a tempest (that any records make mention of) so violent, and of such continuance, since Noahs flood, for as hath beans sayd it lasted from September 7 to October 28, full 52 dayes.

(Francis Fletcher, *The World Encompassed*)

Drake's ship had not experienced unusually stormy weather relative to the region, only the normal continual turbulence where the two great oceans clash.

In the air, a change of air pressure of just an inch of mercury over a horizontal distance of five hundred miles gives a full scale hurricane with winds approaching one hundred miles per hour. In our atomic age we understand large quantities of energy as multiples of atomic bombs. A hurricane has 500,000 times as much energy as a Nagasaki type bomb. An atomic bomb test in the Pacific lifted 10,000,000 tons of water while an average hurricane can lift 2,500,000,000 tons in a few hours and may continue several days traversing several thousand miles (Dunn and Miller, page 123).

In the sea just a few inches difference in the surface level of the ocean generates the Gulf Stream which flows several thousand miles moving awesome quantities of water. Without question, very minor fluctuations of air or water can cause tremendous violence. Facing such changes without the wrath of God desiring to “wipe from the face of the earth every living creature” is fearful enough. We cannot imagine what the ocean would be without God’s almighty staying hand. Indeed the sailor knows his God is continually controlling the fearful winds and waves. With a hymn a sailor prays:

Eternal father, strong to save,
Whose arm has bound the restless wave,
Who bade the mighty ocean deep
Its own appointed limits keep
Oh, hear us when we cry to thee
For those in peril on the sea.

O Savior, whose almighty word
The winds and waves submissive heard,
Who walked upon the foaming deep,
And calm amid the storm didst sleep:
Oh, hear us when we cry to thee
For those in peril on the sea.

O Holy Spirit, Who didst brood
Upon the chaos dark and rude,
And bid its angry tumult cease,
And give, for wild confusion, peace
Oh, hear us when we cry to thee
For those in peril on the sea.

(William Whiting)

To understand a non-scientific, but true view of the obedient waters we must go back to the creation when “darkness was over the surface of the deep, and the Spirit of God was hovering over the waters.” (Gen. 1-2, NIV) Leupold sees the original Hebrew for “surface of the deep” as surging and raging with the Spirit of God hovering and instilling order out of chaos and bringing these violent waters under control (Leupold, page 47). The creation of more order in the water immediately follows, dividing the waters by an expanse on the second day. “So God made the expanse and separated the water under the expanse from the water above it.” (Gen. 1:7, NIV) On the third day, the waters below the expanse were gathered into a sea with dry ground appearing. Thus the waters of the atmosphere were organized before the waters of the sea. On a sphere of chaos we can picture the seas forming into their respective oceans as the lands are pulled up out of the seas. Such land, permeated with water in richly filled aquifers from the good creation, is described in more detail in the second chapter of Genesis. “When the Lord God made the earth and the heavens, and no shrub of the field had yet appeared on the earth and no plant of the field had yet sprung up; the Lord God had not sent rain on the earth and there was no man to work the ground, but streams came up from the earth and watered the whole surface of the ground.” (Gen. 2:4-6, NIV)

There is much speculation as to whether these streams were special and no longer exist or are similar to the spring fed streams of today. Other speculation raises the question of whether or not rain was a new phenomenon as a result of the flood. In the creation week, before the weather systems were given their structure and order to provide rain for the plant life, water came out of the ground. I do not doubt the existence of weather systems and rain before the flood, nor do I doubt a richer flow of underground streams and springs.

As from a ship's log we read how the waters obeyed their Creator: "In the six hundredth year of Noah's life, on the seventeenth day of the second month – on that day all the springs of the great deep burst forth, and the flood gates of the heavens were opened. And rain fell on the earth forty days and forty nights. (Gen. 7:11-12)

God Who hovered over the waters giving them order, Who separated waters above the expanse from below the expanse, Who placed the waters below the expanse in aquifers and seas, Who continually held these great deep seas to their boundaries, now in a saving judgment closes the door of the ark on Noah, his family and the animals and buoys the ark up on flood waters. He permits the waters to return to a bit of chaos, to rage seemingly out of control in ways He never permitted before or since. Reading about the springs of the great deep before the flood gates of the heavens, we see the very reverse of the creation of order of the second and third days occurring. The lands broke up as our Lord withdrew His hand holding the sea to its boundary and perhaps the lands sank as the water in the aquifers gushed upwards. The clouds formed and with great fury released the torrents of rain from the expanse above. There is no doubt in my mind that the land is not static here. As the great weight of the water built up in the first forty days, the land became depressed as the thin crust of the earth was pushed into the fluid sublayers. Even today the central land masses underneath the ice in Greenland and Antarctica are depressed below sea level due to the heavy ice resting on top which is less dense than the flood waters would have been. No life could escape the destruction from underneath and from above, quakes and geysers from underneath breaking up the land and more than hurricane force winds and rains crashing down from above.

"Every living thing on the face of the earth was wiped out... Only Noah was left, and those with him in the ark" (Gen. 7:23, NIV) when God saved His Church and saved a line of believers from whom the Savior, Jesus, could be born. The totality of the flood, covering "all the high mountains under the entire heavens" (Gen.7:19, NIV) permitted the family whom God had saved by these waters to step out on a new earth at rest for a while from the torment of unbelief of the past. God alone guided the ark, protecting it with the wind and wave from the unbelief of the old world. Mercifully the Lord closed the springs, stopped the rain and sent a drying wind so that by the seventh day of the seventh month, just one hundred and fifty days from the beginning of the flood, the ark was brought to rest on the mountains of Ararat. The waters continued obediently to recede relative to the land.

You covered it with the deep as with a garment;
the waters stood above the mountains.
But at your rebuke the waters fled,
at the sound of your thunder they took to flight;
they flowed over the mountains,
they went down into the valleys,
to the place you assigned for them.
You set a boundary they cannot cross;
never again will they cover the earth.

(Ps. 104:6-9, NIV)

For the survivors, the days of their turbulent ordeal gave way to days of rest, but also patient waiting. Only at God's appointed time was the door of the ark opened. Throughout the entire account of the flood physical labor was real and certainly must have been part of keeping Noah and his family faithful to their Lord. The ark had to be physically built, food had to be gathered, the animals had to be secured in the ark and cared for the entire year, and Noah's family had to remain steadfast in their belief that their God was the Saving God from the flood and of the covenant of the coming Christ. It is the difficult task that the Lord gives us in His church, teaching his children, that not only brings the children to their Lord, but brings us to Him also. Some people are concerned about overpopulation on the ark. Were there more than two rabbits or more than two mice? What of it? The animals entered the ark in pairs. They left "one kind after another" (Gen. 8:19, NIV),

indicating that those domesticated animals that would readily breed while in captivity, generally quite small in size, would have left the ark by families. Experience in most zoos has been that wild animals in captivity do not breed. They would have left the ark still in pairs. What happened to the dinosaurs? The modern scientist would have them eliminated by a sudden catastrophic event, poisonous gas eruptions from volcanoes, a collision of the earth with another planet or asteroid, or an immense shower of meteorites. Again, any catastrophic event except the catastrophic event of the Bible would be acceptable. We cannot answer what happened to the dinosaurs with certainty. If they were in existence and not extinct before the flood, then they were on the ark and came off the ark. I would suspect most of the fossil remains of the dinosaurs are from the flood. Since they are extinct today, they probably could not survive in the new post-flood world. Perhaps they were hunted down by a human population newly hungry for meat.

The Real Flood

The two-book approach to knowledge, from the Bible and from nature, is certainly a reasonable approach. We know the centrality of the Bible is Jesus Christ. The Bible is not a science textbook. There are all sorts of hydrological, oceanographical and meteorological questions about the flood I could be interested in that simply are not in the Bible. That the flood waters buoyed up the ark with Noah, his family and the animals, preserving the covenant between God and man, that the eternal Son of God might be born of a woman and save us from sin, is central to the flood account. But real flood waters buoyed up the ark. The ark was a real ark made of real wood. It was built by real people and coated with real pitch inside and outside. The real flood waters killed all of the real living people and real birds and real animals. These flood waters really covered the highest mountains and all of the earth.

The first book of the Bible says that. All these awesome details, far more than are needed to convey the true record of saving Noah and his family, are given to us. Like a diary or a ship's log, Moses wrote down through inspiration all the many details, even the very calendar dates. All of these details cannot be ignored. One cannot pick and choose what one wants to hold true and cast out all the rest just because it does not fit some human system of thought. All these details are part of the written record of the salvation of Noah and us just as were the details of the exodus from Egypt, the wealth of the Kingdom of Israel under Solomon, the bondage in Babylon, the return to the Holy Land with Ezra and Nehemiah, the virgin birth of Christ, Jesus' ministry on earth, His physical death, His resurrection, His ascension and the acts of the apostles. When they appear to contradict a human understanding of the common events in the book of nature, they cannot simply be dismissed. Where the Bible speaks on natural physical events, those events occurred as they were described. The Bible gives a true written record of the flood. Jesus himself used details of humans living just before the flood to show the reality of His second coming, Judgment Day (Matt. 24:37-39).

A one-time event, such as the global flood disaster, is certainly beyond laboratory testing and is thus out of the scope of normal science. Yet the flood is far more than a Platonic image or ideal. It was real. The flood is far more than a scholar's explanation where the lecture hall is the place of work and a library book is the laboratory. The flood, having destroyed the whole earth and revitalized it, has to be the single most important geological event that left its mark everywhere, in and under the sea, in every valley, on every mountain, in the very shape of the continents, in the distribution of minerals, in the kinds of soils and in the distribution of plants. The ark itself was real. As a real object, if God did not destroy it or if Noah's descendants did not use it for building materials and kindling wood, then it might remain for a legitimate archaeological search and study. The ark did, in fact, exist. It might still exist just as the *Titanic* did exist. It was worthy to some to believe the *Titanic* existed and to search for it. The *Titanic* was found. We have no fear that any amount of study and research by archaeologists, geologists or any other scientist will uncover something other than the truth of the Bible. If an expedition into the mountains of Ararat finds the ark, we know they will find a massive ship, not a canoe. But such work must accept the true account of the past to understand the present, lest an observer fails to see the flood because of all the fossils and stratified rocks.

Would our work benefit from such archaeological finds? I confess Rehwinkel's book was of interest to me in college, but it did not strengthen my faith. The Word of God in Bible class and in sermons on Sundays and Holy Communion kept me in the faith during eight years of university studies. In a parable Jesus told of a beggar named Lazarus and a rich man. The rich man in hell pleaded that Lazarus be allowed to leave heaven to warn his five brothers by giving them a sign about the truth of life everlasting. Abraham, in heaven, said, "If they do not listen to Moses and the Prophets, they will not be convinced even if some one rises from the dead." (Luke 16:19-31, NIV) The Pharisees and Sadducees demanded to be given a sign from heaven by Jesus. He gave the biblical account of Jonah (Matt. 16:1-4). A different Lazarus, brother to Mary and Martha, indeed was raised from the dead in view of many witnesses. The Sanhedrin met, determined Jesus in fact was "performing many miraculous signs" and plotted to kill the Son of God (John 11). Jesus himself rose from the dead and ascended into heaven. Jesus could do that because of the saving flood waters. Noah and his family were saved in an ark by a flood that left marks and signs all over the earth for all to see and no one to miss.

Real Science

If no one can miss the flood record in nature, why do they miss it? Here is where that second book, the book of nature, is not such a good reference. There are no written readable words in nature. The mountains, the rocks, the fossils do not speak. They do not write. Nature itself stands as God's creation and as His record of what He has done physically. However, human beings through the ages have attempted to explain the natural world in which God has placed them and have historically changed their understandings frequently. Those changing views made in the attempt to explain nature are the laws of science. By that attempt science and nature inevitably are separated. That separation (between science and nature) is undeniably large and saturates every fiber of thought about nature including the very observations of nature. You cannot take a wind instrument and place it into an air stream to make an observation which in turn will not alter the air stream. The wind instrument itself is already built on a preconceived notion of what air is. Facts of nature, observations, theories and laws are all intermingled in the human endeavor called science, so much so that there is no independence, but only an interdependence of human thought with human experience of nature. In fact, that interdependence is the beauty of the human invention of science. Mankind can change the laws of science he has developed. He is not bound to them so that when a new mathematics or a new classification system is invented, giving a new tool with which to interpret nature, he is free to change the laws. Changes of the theories and laws that will come from such new tools many times are of benefit to mankind as "He causes the sun to rise on the evil and the good, and sends the rain on the righteous and the unrighteous." (Matt. 5:45, NIV)

The reading of the book of nature occurs only after some human being has written it, and that kind of writing cannot claim it was God-breathed. Without the inspiration of our Lord, there can be no ascendance of knowledge toward certain truth. The reality of the limitations in science are fully documented by great scholars of our time. Sir Karl Popper sees science progressing primarily through refutations. Science is capable of concluding what nature does not do or how nature does not work. Key experiments in the history of science demonstrate errors of the accepted laws making way for new theories and new laws (Popper, *Conjectures and Refutations and Objective Knowledge*).

Paul Feyerabend rejects the scientific method as the method that leads to discovery. In fact, he sees no special method used by scientists at all. Using the research of scientists in the past, particularly Galileo Galilei arguing for a Copernican world view, Feyerabend shows men of science using every trick in the book – propaganda, name-calling, appeals to authority, exaggerations, good data when effective and weak data when effective – all to persuade an audience to a certain point of view (Feyerabend, *Against Method*).

Thomas Kuhn sees science as a structure built around paradigms which remain undetected through the historical development of a particular field of science. The hidden paradigm or imaginative model defines the problems for research, gives the methodologies for measuring and interpreting the observations and identifies acceptable explanations. Of course, if the paradigm is wrong, all that is built upon it will collapse when the paradigm fails to keep a faithful cadre of practitioners. The failure of a paradigm in science and the invention of

a new one in science causes a major revolution which creates new definitions, identifies new problems, gives new methodologies and interprets, some times the same, observations very differently (Kuhn, *The Structure of Scientific Revolutions*).

In a recent book, *Evolution: A Theory in Crisis*, Michael Denton as a molecular biologist rightly identifies the paradigm in evolution as that philosophical overview in which all living organisms have evolved from a single first cell by a process of natural selection. The role of this paradigm dictates the interpretation of all genetic changes within species. The paradigm of evolution guides all interpretations of age and order of rock strata. As Darwin's macro-scale idea is more and more seen as a failure, confidence in it as the guiding paradigm is lost, and in failure it may soon lead to a new revolution in at least the biological sciences, if not all the others as well. Denton laments that in spite of overwhelming arguments from design, or mismatches of the biological classification system built on Darwin's evolution with new findings about genetic change via DNA structure, a Darwinian natural selection governing macro-evolution prevails and is defended at all cost.

Whether the Kuhnian view of the role of and the priority of paradigms is right, it certainly provides a satisfying explanation of why even in the face of what are "disproofs," Darwinian concepts continue to dominate so much of biological thought today. Consequently, biologists wishing to operate within a scientific framework, even those only too well aware of the seriousness of the problems, have no alternative at present but to continue to subscribe to the Darwinian world view. It seems more than likely that, given the need for and the priority of paradigms in science, the philosophy of Darwinism will continue to dominate biology even if more by default than by merit; and that until a convincing alternative is developed the many problems and anomalies will remain unexplained and the crisis unresolved. The lack of any scientifically acceptable competition leaves evolutionary biology in a state of crisis analogous to the crisis in medieval astronomy when, although the Ptolemaic system was admitted to be a monstrosity, the lack of any conceivable alternative imprisoned the science for centuries within the same circle of belief.

Whatever view we wish to take of the current status of Darwinian theory, whatever the reasons might be for its undoubted appeal, whether we wish to view it as being in a classic state of crisis as described by Kuhn, there can be no doubt that after a century of intensive efforts biologists have failed to validate it in any significant sense. The fact remains that nature has not been reduced to the continuum that the Darwinian model demands, nor has the credibility of chance as the creative agency of life been secured.

(Denton, pages 356-367)

Persons active in the creation research groups have said similar things and are quite good at finding great quantities of details which contradict many of the tenets of modern science rejecting the creation or flood records in the Bible. Many creationists are quite correct showing limitations of science. But these creationists must believe such limitations also. Science is not nature and science has limits, thus the theories and scientific explanations based on the truths of the Bible are still only theories of human beings. There is no Lutheran science, no creation science, but only science from human beings. If our science classes fail to show the historical nature of science and science as a human activity, then we are doing more for the evolutionist than the public sector. When we ignore the human artistry in science, we leave the student of science with the belief that science has all the answers in fixed certain laws which are true. All a pagan need do is bring the data to the young person at the university in a convincing manner since he already knows science is always true from his Christian teacher. Yet the pagan knows he or she works with artistic paradigms.

It is proper to show all of the barefaced errors of the philosophy of evolution exposing its rejection of creation and the flood. It is of paramount importance to teach the human development of scientific systems of thought put together by both Christians and pagans in the market place. It is an error to teach a brand of science in the name of Christian education that bears no relationship to the main stream of science in our society

without the historical knowledge that human beings have invented it. Creation science, so called, too enthusiastically brags that it is in agreement with the Bible while at the same time leaves the impression that the laws it teaches are the very laws God created. Most unbelieving scientists do not make such claims for the laws of science they have discovered. They are quite aware of the separation between their abstraction of science and the real natural world. I personally fear we may get too comfortable with a science textbook which claims to be written with a Christian point of view. With a pagan text, we are never comfortable and that tension makes us treat science as a human understanding of nature. I can understand the fears of causing a child to stumble in the faith by exposing too much of the pagan ideas to too young a faith, but generally the younger the child is, the better is that child's faith. When such Christian science books are believed to be necessary, as Christian teachers we must also expose the weaknesses of science and be honest with the children about the great differences between such Christian views of science and the views of the actual scientists. We must all remember Isaac Newton invented gravity in 1686. God did not say how things moved in the heavens or on earth. When geologists explore for minerals buried deep beneath the earth's surface, they must use formulas far more complex than those of Isaac Newton in order to prospect by gravitational anomalies.

It is far better to leave the complexities of the flood, particularly its physical origins such as the cause of the rains or the structure of the fountains of the deep, to the unknown. I personally reject extraordinary causes such as collisions of planets, secret or unknown magnetic fields, space oceans, nuclear reactions within the earth's core or a sudden tilting of the earth's axis. True, God is capable of anything and could use such events. By referring to such unheard of events, however, we ignore the already nearly unbelievable powers in nature every day. What are daily calamities of severe thunderstorms, tornadoes and hurricanes telling us? If God can make these occur at any time and in any place, surely they could occur everywhere at once. Dreams of climates before the flood such as the canopy theory are uncalled for and add to Scripture. They do a disservice to the scientifically trained lay people of our congregations, and they make individuals who use them appear foolish. Again God could probably create an earth with a universal climate, but the Bible tells us that the sun, moon and stars were given for seasons and He created them that way before the flood. Solar energy coming to the earth, a sphere, is extremely difficult to spread out uniformly without massive winds and an oppressively heavy atmosphere.

Much in the past was made of human foot print existing together with dinosaur tracks. There appears to be trouble with such findings today. The reported human foot prints may not have been human after all. It should be noted, however, that it is to the credit of the Institute for Creation Research that they were honest and upfront about these disappointing discoveries (John Morris, *The Paluxy River Mystery*).

A hideous story existed in some church circles claiming that a computer at NASA came up with exact times of events including the long day recorded in Joshua. The computer is an idiot, not a truth machine. As an idiot it will uncomplainingly print out exactly what it's told. Even the new challenging synthetic thought machines can only "think" exactly the way they were programmed to think. We dare not pass on to our children a trust in fraudulent claims.

Dwelling on science at the expense of learning the truths of Scripture can lead to error even when not intended. I am sure Rehwinkel had pure Christian motives when he discouraged teaching about ice ages. He believed such ice fields would have to be many thousands of feet thick at their source in order to cover the large portions of Minnesota and other vast regions of North America. In 1951, when he wrote his book *The Flood*, deep ice core drilling of both Greenland and Antarctica did not exist. Using laws of science from physics, Rehwinkel rightly claimed ice thicker than 2000 feet would melt of its own weight at its base, thus not permitting ice ages. I lived on ice 11,000 feet thick with temperatures as low as one hundred twenty one degrees below zero, and I did not float away. An ice age is possible.

Much is made of the second law of thermodynamics, that every energy process in which some energy is transformed into other forms of energy, some energy is lost to a non-useful form. The net result is that available energy in equilibrium exchanges becomes less and less, supposedly not permitting things to evolve to higher and higher energy structures. It turns out, at least since 1977, that physicists now believe this second law of thermodynamics is only a special case, during equilibrium cases, not in general (Prigogine). Also as long as we

might believe that atoms exist, such energy transformations at the atomic level must be in terms of statistical probabilities and words like “always” cannot be used. Again the second law of thermodynamics is not defined in the Bible. The grip of sin may be destroying all people. Sin is the cause of death. The entire world will be destroyed in fire. These facts are in the Bible. But none of these are related to molecular order and thereby to entropy and the second law of thermodynamics.

It is better to let science be science as an endeavor of human beings. We must also let God be God speaking to us with clear words in the Bible and also giving us nature apart from formulas, classifications and other human abstractions. We are not Calvinists who believe they need a reasonable explanation for all things. We are Lutherans who accept Scripture alone by faith alone. Where our reason cannot understand, we must accept the Word as true and leave the understanding to God. I cannot understand life after death, but I believe it with my whole being even though science only shows me death and decay. “And after my skin has been destroyed, yet in my flesh I will see God; I myself will see him with my own eyes – I, and not another. How my heart yearns within me!” (Job 19:26-27, NIV)

God Himself asked Job the question we are asking about the flood. “Have you journeyed to the springs of the sea or walked in the recesses of the deep?” “Does the rain have a father?” (Job 38:16,28, NIV) Our submarines have gone to the bottom of the sea. Scientists have not found springs of the sea, but maybe by not finding them they have uncovered part of the promise that there never will be another global flood. The rain remains a mystery to this very day. Although all of us teach about the hydrological cycle of evaporation from the sea to condensation in the clouds with the large droplets falling as rain, when it comes down to the exact process of how it really works, it remains unknown. In the lab, under pure conditions, more than three hundred percent humidity is needed before condensation will occur without a particle of dirt being inserted. Where condensation nuclei have been used in the laboratory, cloud drops are readily formed, but droplet growth fails to develop to meet normal rainfall requirements. We do not know how the flood got started. We also do not know how it rains today. In view of the fact that we do not know how it rains today, why should we expect to know how the flood got started?

The Rainbow

Noah offered a sacrifice, a burnt offering, to his almighty Preserver. And:

The Lord smelled the pleasing aroma and said in his heart: “Never again will I curse the ground because of man, even though every inclination of his heart is evil from childhood. And never again will I destroy all living creatures as I have done. As long as the earth endures, seedtime and harvest, cold and heat, summer and winter, day and night will never cease.” (Gen. 8:21-22, NIV)

As a sinful being, Noah recognized in Whom he must put his trust. God knew no man can fulfill His law. With Noah’s family now isolated for awhile from the overwhelming influence of sin, God’s church was preserved. The Lord would again isolate a separate group of people by removing Abraham from Ur of the Chaldeans. The Lord isolated the children of Israel another time in the Land of Goshen. He gave them their own land in Palestine, helped the Kingdom of Judah while captive in Babylon and permitted the Jews to return to their homeland as a very separate people. From these people, whose customs and laws all pointed to the redeeming sacrificial perfect Lamb of God, would come Jesus our Brother, our Savior and our God. The flood was part of that saving isolating process, and the Lord assures His chosen survivors, the storm weary humans and animals, that this was the only world-wide flood and that never again would there be such a total destruction by a flood. The rainbow was His special signature that marks the certainty of that promise.

And God said, “This is the sign of the covenant I am making between me and you and every living creature with you, a covenant for all generations to come. I have set my rainbow in the clouds, and it will be the sign of the covenant between me and the earth. Whenever I bring

clouds over the earth and the rainbow appears in the clouds, I will remember my covenant between me and you and all living creatures of every kind. Never again will the waters become a flood to destroy all life. Whenever the rainbow appears in the clouds, I will see it and remember the everlasting covenant between God and all living creatures of every kind on the earth.”

(Gen. 9:12-16, NIV)

Was this the first rainbow? A scientific understanding of the rainbow lets us see the bow with its brilliant spectrum of colors as such a fundamental phenomenon of matter and energy tied up with water and light, both of which were created on the very first day, that it is hard to imagine no dispersion of the color spectrum before the flood. Perhaps the place, dimensions and frequency of occurrence of the rainbow have become significantly different after the flood. We only know the rainbow as God has given it to us after the flood. When the seemingly evil, dark, greenish yellow clouds with lightning raise their menacing towers and march across the land today, they still turn the domesticated peaceful animals of the barnyard into frenzied restless creatures. Even little sparrows soar as high as they can. A rainbow from horizon to horizon encompassing every living thing is truly a calming sight to all creatures. We know for certain that since the flood the rainbow now has the meaning that there will never be another flood. No matter what difficulties a storm may bring, it has been given limits as to what it can do. God is in control.

Just what a rainbow is has tantalized scientists from as far back as they have written down their explanations. Aristotle explained the great round bow as a partial reflection of the spherical sun by the water in the clouds. To him visible light depended upon the seeing powers of an observer. You could see only as far as you could send light out from your eyes. The farther out you could see, the weaker and darker your extended light became until at your personal limit you could only see blackness. The red ring of the rainbow therefore was the largest because it was the closest. It was red, not like the sun, because of the distance you were looking. The green arc of the rainbow again showed the spherical nature of the reflected sun, but the darkening of the observer's sight to green showed it was farther away and deeper in the cloud. Violet was a smaller ring still farther away (Aristotle, *Meteorologica*).

Aristotle did not trust inductive reasoning, developing generalizations from a few known facts. Aristotle correctly warned against inductive reasoning in his work *Analytica Posteriora*. He trusted only deductive reasoning, concluding particular results from known general truths. His explanation of the rainbow was developed from such general truths as light reflection from water, the spherical nature of the sun and the diminishing of brightness and color with distance. It is interesting that this certain method of deduction failed to give a satisfactory explanation of God's rainbow for all ages.

Robert Grosseteste (1168-1253 A.D.), Bishop of Lincoln and Chancellor of Oxford University, gathered a faculty dedicated to inductive reasoning. To overcome the warning of Aristotle some 1500 years earlier, Grosseteste invented scientific demonstrations and laboratory repetitious modeling of nature. A person could never be sure if his theory developed from a few observations would work for all observations both past and future. If a person could make the predictions of theory repeat themselves in the laboratory, then conclusions by inductive reasoning would be correct. Grosseteste gave us modern laboratory science and paved the way for a hands-on approach to science in education until our very modern times. Many a non-science scholar still debates the value of laboratory science and ridicules its worth. Yet for science, it is the only hope of solving problems, reaching conclusions or seeing results aside from the precious few deductions possible in nature. Grosseteste's explanation of the rainbow, repeated in the laboratory, claimed light from the sun refracted through the rain drop and then reflected back to the observer on a cloud screen (A. C. Crombie, *Robert Grosseteste and the Origins of Experimental Science*). This explanation from the thirteenth century I received as a child. It of course is wrong, but then so was my textbook.

It turned out Aristotle was exactly right about inductive reasoning. Even with laboratory procedures, conclusions drawn from a few observations might indeed work for a few more observations, but for all observations in the open uncontrolled natural world it is an entirely different matter. Theodoric of Freibourg (1249-1315 A.D.) as Robert Grosseteste, clung to the Aristotelian teaching that the distance traveled by light

made light change color although the distance traveled for the light in these medieval theories was limited to the short distances within the rain drop. Theodoric's explanation of the rainbow replaced the reflection off a distant cloud by the reflection within the raindrop itself. Thus light from the sun refracted as it entered the rain drop. Then the refracted colored light reflected off the back of the raindrop or its inside back surface. These light rays then refracted again as the reflected light came back out of the raindrop into the air (Harre, pages 85-95). The dispersion of colors was not fully explained until Isaac Newton demonstrated in the laboratory that white light could be separated into many colors and many colors could be mixed again to form white light and published his explanation in *Opticks* in 1704.

The picture given by Theodoric of Freiburg coupled with Isaac Newton's dispersion of light is what I'm sure most of us use in the classroom to explain the physical properties of the rainbow. Again Aristotle's warning is to us: "The more demonstration becomes particular the more it sinks into an indeterminate manifold, while universal demonstration tends to the simple and determinate." (Aristotle, *Analytica Posteriora*, Book I, Chapter 24) We can never be sure that what we have concluded from a few things is true for all things. The Renaissance scientists turned to Ockham's razor, following William of Ockham (died 1349 A.D.), and taught that the most likely correct explanation was the one constructed on the fewest logical statements. Said in another way, the most acceptable explanation is the simplest explanation based on the fewest assumptions. This idea served mankind several centuries and is not a bad approach, but it is simply a pragmatic tool and does not settle problems of inductive reasoning, the chief method of science, with certainty.

Today optical explanations of the rainbow may only be a superficial description of what really is going on. Optics has difficulty explaining a multitude of alternating inner red and green bows on the inside of the primary bow although light wave interference patterns are the most acceptable reason. Optics cannot explain why the primary bow must be a forty-two degree bow. Forty-two degrees is the angle constructed from the center of the primary bow's arc to the observer's eye and to any point in three dimensions to the primary arc. Light enters a water droplet as a prism and as a prism should project colors at many angles. Optics has difficulty explaining why the air space on the inside of the primary bow is bright and the region on the outside of the primary bow is discernibly darker where light has evidently been absorbed somewhere.

The most recent explanation comes from quantum physics. White light enters the raindrop, but much light is trapped in the skin of the water drop and whirls around and around without escape, a possible reason for the loss of light in the dark band. Light energy builds up in the skin of the droplet to certain quantum levels and bursts out at quantum angles such as 42° and 50°. Without a thorough mathematical analysis, it is impossible to express in English words a better explanation than that these angles are the quantum angles (Nussenzveig, 1977). I'm sure many teachers will prefer the explanation of Theodoric of Freiburg and Isaac Newton, but they are rather inadequate with regard to the entire rainbow. Again an idea of science trying to explain nature has failed, embarrassing many who trusted it. A new idea of science has taken the old idea's place and has won many accolades for the new explainers. It remains that inductive reasoning cannot provide certain proof as Aristotle warned long ago, and that idea is still alive and well.

At the University of Wittenberg, Aristotle's *Meteorologica* was the chief scientific authority on the rainbow. Martin Luther spoke of it in his lectures on Genesis:

In such matters reason sees what is most likely to be the case, even though it is incapable of determining the truth in every instance; for this is the prerogative, not of the creature but of the Creator. Yet I for my part have never given less credence to any book than to the Meteorological because it is based on the principle that all things have their origin in natural causes.

(*Luther's Works*, Vol. 2, page 146)

Luther never opposed the conjectures of science as a worthwhile endeavor. Trusting God's Word first, he always left them as a human activity. He knew that science, natural philosophy, had its source and limits in human understanding.

This sign should remind us to give thanks to God. For as often as the rainbow appears, it preaches to the entire world with a loud voice about the wrath which once moved God to destroy the whole world. It also gives comfort, that we may have the conviction that God is kindly inclined toward us again and will never again make use of so horrible a punishment. Thus it teaches the fear of God and faith at the same time, the greatest virtues. Philosophy has no knowledge of these and carries on a discussion solely about the material and the formal cause; it does not know the final cause of this beautiful creature. But theology points it out.

(*Luther's Works*, Vol. 2, page 148)

The causes Luther alludes to are of Aristotle and have recently been explained in a modern context by Prof. Siegbert Becker in his masterful work, *The Foolishness of God*, on Luther's use of reason. Material cause, the substance of nature, and formal cause, the workings, structure and function of things in nature are the main concern of the scientist. The efficient cause, who effected the existence of things, in nature generally must be seen as the Creator and Maintainer of nature. That is the Triune God. The Greeks invented science to explain nature separate from their gods and modern science follows the same goal. This is why there cannot be a complete understanding of nature by science. Aristotle rightfully claimed that unless all four causes were understood, a course of study was incomplete (Aristotle, *Physica*). The final cause, the motive of the Creator for making and doing what material cause and formal cause display, is the most difficult. We have the entire book of Job struggling over the final cause for Job's losses of material wealth, children and personal health. Although we are told of our Lord's dealings with the devil, Job was not told. Job was only told to trust his Lord. We must trust our Lord also. Final causes in nature are rarely open for our understanding.

Robert Boyle, an English scientist of world renown, argued for the rightful place of efficient and final causes in science. He claimed biology could best be advanced knowing God created all things with purpose and reason even though final causes were difficult to arrive at. He also warned of the highly speculative nature of trying to arrive at efficient and final causes for the non-living physical sciences (Lennox, *Isis*, Vol. 72). That modern science cannot understand all causes is a true limitation. They cannot be overcome by guessing and inventing reasons for God. And that is why we walk a tight rope with less enthusiasm for a Calvinist brand of creationism.

Evidence of Faith for the Flood

We know very little of the world before the flood. We can see many of the geological scars left behind after the flood. But we can only look at them after we understand the limits of science, that science is a human endeavor, that science is not a synonym of nature, that science has much difficulty with efficient and final causes, and that the laws of science have a very changing history. Only then will we understand what science can and cannot do. Only then can we take interest in the science research groups dedicated to the biblical record of events of nature touching the story of God's plan of salvation for all people.

Some geologists show the existence of basement rocks, Precambrian rocks around the world which, being deep enough, have escaped the destruction of the flood. These rocks contain no fossil evidence in the general sense. Where rare pollen and fossils have been found, they generally have been fossils of a late age group introduced into the Precambrian region. The very existence of fossils, buried suddenly in order to be preserved, found in every strata in every region of the world on every mountain suggests a world-wide catastrophic flood. Water markings, such as wave action, suggest violent turbulence and rapid formation of the sedimentary layers and are found everywhere. Polystrate trees, trees which stand vertically through several sedimentary layers of several ages, by every reasonable interpretation after the knowledge of the flood suggest rapid and simultaneous deposition of the sedimentary layers and not hundreds of millions of years for each age. Finally the entire geological column, used so convincingly to show simplest fossils are deepest and interpreting that to mean evolution from simple animal forms into complex animal forms, is really the strongest evidence for a global flood. That the geological column is so globally uniform suggests a global sudden deposition. The

simplest land forms of life would be expected to be entombed with sea creatures first. More structured land creatures capable of rapid overland motion could escape for a while to be buried in a higher stratified layer. Finally the most advanced forms of animal life such as birds and large mammals would be the last to die and be entombed in the muck of sand, rock and water to be cemented in a mixture and solidified later. Mammal and bird fossils are rare. Larger carcasses would float, decay or be eaten by sea creatures and not be buried to form fossils at all. The deep trenches through many layers of stratified rock can be explained by flood waters rapidly rushing off the land. As the land was uplifted with less water pressure on it, much larger rivers than today carrying away the flood waters carved the river valleys rapidly through thick soft muck layers before they hardened into today's sedimentary rocks (Wysang, *The Creation - Evolution Controversy*).

None of this can be used to prove the Bible. Remember, it is a human interpretation of nature. I'm not sure it is always "better" in the scientific sense of answering most of the problems or having the fewest assumptions. We cannot explain every ripple and every rock of the Grand Canyon. Some have tried to eliminate the ice ages. My scientific training before becoming a ninth grade teacher was dedicated to glacial and polar meteorology. I have tried to interpret continental ice age theory in the northern hemisphere as a one time event following and resulting from the flood. As a meteorologist I see a great temperature contrast with the drying winds after the flood. But the Bible says nothing about temperatures. Temperature changes occur with a lot of evaporation. Several polar regions imply glacial growth of a continental scale. Today 95% of the world's fresh water supply is sitting on Greenland and Antarctica, now the apparent last of the great ice caps which may be stored old flood waters (Sponholz, "The Fluid Ice"). Creation research has problems with evidence of erosion between stratified layers which caused some scientists to abandon the time-honored flood explanation in the first place. Australian animals, distinct and distant from any other continental animals with no apparent land bridge that could be traced to the mountains of Ararat, are another problem. A long time Christian warrior against the non-biblical evolutionary sciences, John W. Klutz, in a new book *Studies in Creation*, honestly identifies some problems in a creation and flood-based science. We dare not be offended at these honest confessions of scientific problems. If we use science, our arguments will never be better than science.

Some thoughts on plate tectonics bear mentioning. God could have ripped the land mass apart in the flood to form the present seven continents. He also could have moved the continents and the sea floors around in the act of forming them on the first three days. Some people would like to divide the land mass at the time of the dispersion of the people at the Tower of Babel. Most scientists see the shifting plates move over a span of 400,000,000 years of evolutionary history.

Plate tectonics theory began with continental drift theory. As a student in geology under Prof. Laudan at the University of Wisconsin at Madison I was given five reasons why continental drifting was wrong. The young Rocky Mountains were supposed to be old in the drift theory. The old Appalachian Mountains were either supposed to be young or could not exist. The mountains in Australia were on the wrong side of the continent, and I do not remember the rest. Not believing in evolution, I was not a very attentive student. While in Antarctica many of my scientific and exploration colleagues found fossil, mineral and rock structure evidence linking the Trans Antarctic Mountains with mountain ranges of South America, South Africa and Australia. Sitting in on Prof. Laudan's lecture many years later, I heard him quote many of my friends' discoveries as evidence for the expanded theory of plate tectonics and not once mentioned how those five problems raised against the new system of thought were solved. That is the way of science.

The National Geographic Magazine presented a very good popularization of the entire plate tectonics system. More than just continents, many plates including large sections of the ocean floors, are believed to be moving, and where they confront each other, mountains rise as pressure ridges and the edges of the plate are pushed upward or downward. Where they are pushed down into the magma, the continents are seen as being recycled, melted and burnt up. Volcanoes and earthquakes mark the active regions of these confrontations between the plates. On a *National Geographic* map with yellow and red dots marking the earthquake and volcanic activity, these great rings of fire vividly were documented (Matthews, 1973).

My personal view is that I do not believe plate tectonics have anything to do with the flood. I believe they are the beginning marks that will give way to the complete destruction of the earth by fire on Judgment

Day. Another thought that actually occurred to me while sitting in Prof. Laudan's class the second time is that plate tectonics would make an excellent Paul Bunyan and Babe the Blue Ox story.

Is evidence for the flood a gift of God to reinforce our faith or could it be a product of the devil to provide a false foundation easily crushed? I will say yes to both parts. The changing laws of science tend to trap a teacher into giving out false crutches to prop up the faith. I spoke earlier about Rehwinkel rejecting the ice ages using good laws of physics of his day. Factual discoveries in Antarctica have changed that. As teachers we must stress the historical changing nature of science (Sponholz, "The Changing Laws"). We must first use the two edged sword of God's Word before we try innovations of human ideas. The past is the key to the present. Moses and the prophets have told us the truth about the past.

We also have the disciple Thomas, who indeed was ready to go to Jerusalem and even die with Jesus (John 11:16). When he would not accept the word of his fellow disciples, all of whom failed, Jesus came to him with medical evidence. *The Flood* by Rehwinkel and *The Genesis Flood* by Morris and Whitcomb were important to me at times on the university campus. They also at times were a detriment. Pastor Richard Balge, Dr. Siegbert Becker and Prof. Roland Hoenecke always patiently listened to one wild scientific story of mine after another. They also always brought me back to the Word. I do not think it was the wounds in Jesus' hand, feet and side that convinced Thomas that his Lord and Savior was alive. It was the recognition of his Lord Who came to him when he was weak. Truly those who believe and have not seen are blessed. Ideas from science are weak compared to the Word. The flood did occur. It did leave its mark. It is part of God's infallible Word. A doubting believer is not the same as a doubting unbeliever. A doubting believer rarely demands infallible proofs. He knows he does not live in an intellectual vacuum. The Bible describes a real world to him, and he wants a touch more of a scientific explanation. When you show him some such scientific evidence, but properly qualify it with the limits of science, always returning to the Word as the final authority, then there is room for the Holy Spirit to show our weak brother his Lord and Savior.

For Christ died for sins once for all, the righteous for the unrighteous, to bring you to God. He was put to death in the body but made alive by the Spirit, through whom also he went and preached to the spirits in prison who disobeyed long ago when God waited patiently in the days of Noah while the ark was being built. In it only a few people, eight in all, were saved through water, and this water symbolizes baptism that now saves you also – not the removal of dirt from the body but the pledge of a good conscience toward God. It saves you by the resurrection of Jesus Christ, who has gone into heaven and is at God's right hand – with angels, authorities and powers in submission to him. (1 Peter 3:18-22, NIV)

It is God's saving purpose for you and me that He sent the flood to save Noah and his family and the animals of our world. Our Lord has often saved the hopeless with miracles involving water. He showed Hagar a well of water in the desert. He parted the sea for His people and drowned the pursuing Egyptian army as He let the waters return to their previous order. He gave sweet water from bitter water. He quenched a thirsty nation by letting water gush from the rock more than once. When the allied armies of Edom, Israel, and Judah marched out onto the desert, He had them dig ditches and flooded them with water without wind or rain to give the armies strength to do battle against the Moabites. He changed water into wine, controlled the fish of the sea to give his disciples a good catch, walked on water, let Peter walk on water, rebuked the wind and the wave and gives us an everlasting drink.

Our Lord baptized the earth in His flood. After His crucifixion He announced His victory over Satan to the scoffers in hell that they might not scoff any more. He saved Noah who believed and built an ark, and in the saving waters let those that refused to be saved perish. Our baptism by water and the Word is the same. Our old Adam is drowned. We are saved. The rainbow stretching from horizon to horizon embracing all the earth displays God's wondrous might and power to all and at the same time is directed to me. I and I alone see the rainbow that I see. When I rush my entire family out into the yard to see the rainbow, my children see the rainbow, but each sees their own bow in different drops. God's promises are to all people; God's promises are

to each individual. Everyone can see God's power and judgment in nature so no one has an excuse. When the scientific giants in the earth today reject what they see, they too will be lost.

There is a little town, Grytvicken, on South Georgia Island with a small church over a century old. Sailors from all nations came there to repair their sails, gather fresh water from the glacial melt waters, take on fresh food supplies and worship their Lord before they would return to those terrible storm-tossed southern seas. The sails gave way to coal, but still the walls of that church at Grytvicken resounded with the Christian hymns of the sailors. Grytvicken today is nearly deserted as seagoing vessels have unlimited range with diesel fuel and refrigerated food supplies and no longer need to come to South-Georgia. A British scientific station is now using the old weather-beaten buildings at Grytvicken. The church is no longer used for worship services, no hymns are heard and no Holy Word is read. The scientists use the church for a storage shed for their oil drums, their seal carcasses and their collecting crates for fossils and other marine species which they knew evolved by chance by themselves over millions of years.

The Christian can be assured that studies of nature cannot ever contradict the true and Holy Word of God. The Christian cannot be assured that scientific studies will always find the truth. Nor can a Christian boldly pursue a scientific career without facing incredible challenges to his or her faith. At one time in my life I was compelled to walk away from some of the most exciting frontiers of scientific knowledge. My Lord called me to teach ninth grade, I believe less for the sake of the ninth graders, but more for me, that I might be required to come to Him daily in preparation for teaching the children. People of today who reject the record of the flood in the Bible do so not because of overwhelming evidence one way or the other. They reject such teachings because they, like the people in Noah's day, want to reject what they really know as true.

First of all you must understand that in the last days scoffers will come, scoffing and following their own evil desires. They will say, "Where is this 'coming' he promised? Ever since our fathers died, everything goes on as it has since the beginning of creation." But they deliberately forget that long ago by God's word the heavens existed and the earth was formed out of water and with water. By water also the world of that time was deluged and destroyed. By the same word the present heavens and earth are reserved for fire, being kept for the day of judgment and destruction of ungodly men. (2 Peter 3:3-7, NIV)

The covenant of the rainbow shines only to the physical world and physical life, and we can never find our Savior in any book of nature, but only in His written Word. We have that Word. We live in the world saved by the flood. We have the Word that plainly shows us Jesus as the fulfiller of all of God's promises.

If he did not spare the ancient world when he brought the flood on its ungodly people, but protected Noah, a preacher of righteousness, and seven others; . . . then the Lord knows how to rescue godly men from trials and to hold the unrighteous for the day of judgment, while continuing their punishment. This is especially true of those who follow the corrupt desire of the sinful nature and despise authority. (2 Peter 2:5, 9-10, NIV)

When we see His rainbow, we know much more than the comfort that there will not be another flood. We know much more than the comfort that our Lord is in control of the seasons and the times. We know He has gone to great lengths saving each of us. We know He continues to guide and protect us in everything we do. We know when we die His angels will lead us to Him where we might live forever. The rainbow can remind us of that. His Word assures us of that.

Works cited

- Aristotle. *Analytica Posteriora*. trans. G. R. G. Mure. Chicago: University of Chicago Press, 1945.
- Aristotle. *Meteorologica*. 340 B.C. trans. H. D. P. Lee. Cambridge: Harvard University Press, 1952.
- Aristotle. *Physica*. *Great Books of the Western World*. Chicago: University of Chicago Press, 1952.
- Becker, Siegbert W. *The Foolishness of God: The Place of Reason in the Theology of Martin Luther*. Milwaukee: Northwestern Publishing House, 1982.
- Crick, F. and L. E. Orgel. "Directed Panspermia." *Icarus* 19 (1973): 341-346.
- Crombie, A. C. *Robert Grosseteste and the Origins of Experimental Science*. London: Oxford Press, 1953.
- Denton, Michael. *Evolution: A Theory in Crisis*. London: The Hutchinson Publishing Group, 1985.
- Dobzhansky, Theodosius. "Man's Evolutionary Future." *Science Teacher* 38 (January 1972).
- Dunn, Gordon E. and Banner I. Miller. *Atlantic Hurricanes*. Baton Rouge: Louisiana State University Press, 1960.
- Feyerabend, Paul. *Against Method*. Schocken Books, 1978.
- Fletcher, Francis. *The World Encompassed by Sir Francis Drake*. London: Printed for Nicholas Bourne, sold at his shop at the Royall Exchange, 1628.
- Harre, Rom. *Great Scientific Experiments*. London: Oxford University Press, 1983. 85-95.
- Hoyle, F. and C. Wickramasinghe. *Evolution From Space*. London: J. M. Dent and sons, 1981.
- Hutton, James. *Theory of the Earth*. Edinburgh: 1795.
- Klotz, John W. *Studies in Creation*. Saint Louis: Concordia Publishing House, 1985.
- Kuhn, Thomas. *The Structure of Scientific Revolutions*. Chicago: University of Chicago Press, 1962.
- Lennox, James G. "Robert Boyle's Defense of Teleological Inference in Experimental Science." *Isis* 72 (1981).
- Leupold, H. C. *Exposition of Genesis*. Grand Rapids, Michigan: Baker Book House, 1942.
- Luria, Salvador. *A Slot Machine, A Broken Test Tube*. New York: Harper and Row Publishers, 1984.
- Luther, Martin. "Lectures on Genesis." trans. George Schick. *Luther's Works*, Vol. 2. ed. Jaroslav Pelikan. Saint Louis: Concordia Publishing House, 1964.
- Lyell, Sir Charles. *Principles of Geology*. London, 1833.
- Matthews, Samuel W. "This Changing Earth." *National Geographic Magazine*. January 1973.

- Morison, Samuel Eliot. *Admiral of the Ocean Sea*. Boston: Little Brown and Company, 1942.
- Morris, Henry M. and John C. Whitcomb. *The Genesis Flood*. Philadelphia: The Presbyterian and Reformed Publishing Company, 1961.
- Morris, John D. "The Paluxy River Mystery." *Acts and Facts*, (Institute for Creation Research). March 1986.
- Newton, Isaac. *Opticks*. 4th ad. London: Printed for William Innys at the West-End of St. Paul's, 1730.
- Nussenzveig, H. Moyses. "The Theory of the Rainbow." *Scientific American*. April 1977: 116-127.
- Popper, Sir Karl R. *Conjectures and Refutations*. Harper Row, 1968.
- Popper, Sir Karl R. *Objective Knowledge*. London: Oxford University Press, 1972.
- Prigogine, Ilya. "Time, Structure, and Fluctuations." Lecture to the Nobel Foundation, Stockholm, Sweden, 1977. reprinted *Science* 1 September 1978: 777-785.
- Prigogine, Ilya and Isabelle Stengers. *Order Out of Chaos*. New York: Bantam Books, 1984.
- Rehwinkel, Alfred. *The Flood*. Saint Louis: Concordia Publishing House, 1951.
- Saint Augustine. *Literal Commentary on Genesis*. 416 A.D.
- Sponholz, Martin P. "Changing Laws." An Evening Forum, Dr. Martin Luther College. New Ulm, Minnesota. January 13, 1977.
- Sponholz, Martin P. "The Fluid Ice." Creation Science Seminar, Lutheran Science Institute, Wisconsin Lutheran College. Milwaukee, Wisconsin. March 21, 1981.
- Sponholz, Martin P. "Science and the Truth of Nature." *Centennial Essays*. ed. Richard E. Puss. New Ulm, Minnesota: Graphic Arts Department, Dr. Martin Luther College, 1984.
- Vawter, Bruce. "Creationism: Creative Misuse of the Bible." *Is God a Creationist?* ed. Roland Mushat Frye. New Yorks Charles Scribner's Sons, 1983.
- Vogel, J. C. " C^{14} Trends Before 6000 B.P." *Radio Carbon Variation and Absolute Chronology*. Proceedings of the 12th Nobel Symposium. Uppsala, Sweden: Institute of Physics.
- Whiting, William (1825-1878). "Eternal Father, Strong to Save." *Lutheran Book of Worship*, Hymn number 467. Minneapolis: Augsburg Publishing House, 1978.
- Wysong, R. L. *The Creation - Evolution Controversy*. Midland, Michigan: Inquiry Press, 1976.
- Young, Davis. "Christianity and the Age of the Earth." *Is God a Creationist?* ed. Roland Mushat Frye. New York: Charles Scribner's Sons, 1983.

5. Install water-saving shower heads or flow restrictors. Your hardware or plumbing supply store stocks inexpensive shower heads or flow restrictors that will cut your shower flow to about three gallons a minute instead of five to ten. They are easy to install, and your showers will still be cleansing and refreshing. 6. Take baths. 7. Turn off the water while brushing your teeth. Before brushing, wet your brush and fill a glass for rinsing your mouth. 8. Turn off the water while shaving.

What does saving water mean? Saving water means cutting down on the amount of water that you use, whether on an individual or on a corporate scale. So, to save water means to preserve water, and to keep it safe. This can apply both to our day to day life and also to the lives of future generations who get to enjoy the water that we have saved for them. Saving water will not only cut down on your water bills: it will also help you to save the environment for future generations as well. Water conservation includes all the policies, strategies and activities to sustainably manage the natural resource of fresh water, to protect the hydrosphere, and to meet the current and future human demand. Population, household size and growth and affluence all affect how much water is used. Factors such as climate change have increased pressures on natural water resources especially in manufacturing and agricultural irrigation. Many countries have already implemented policies aimed at water conservation.

Water is an indispensable part of our life. It covers 70% of the earth in which only 3 % is clean and usable. It is necessary to save water for many reasons. Water conservation plays an important part in protecting environment. In addition, water conservation can help you save money. In general, saving water is to protect yourself and your beloved ones. Therefore, on Vkoool, I want to share with you some ways on how to save water at home. I hope that they will give you more useful information. Save water, save our planet. Our water comes from rivers, lakes and sources like the Ladybower Reservoir in Derbyshire (pictured). Climate breakdown is one of the biggest drivers of water shortages and is expected to heap even more pressure on our depleting supplies. People in England are facing shortages by 2050 unless we save water fast – according to the UK Environment Agency. Read on for ways to take action and save our water supplies.

1. Turn off the taps. Don't let your water consumption run out of control.