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A BOOK REVIEW ABTICLE:

Science. The Bible. Evolution. Creation And The Flood

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∧ LTHOUGH THE claim is sometimes made that the evolutionary \neg origin of the cosmos, the earth, life, animals and man has been established beyond reasonable doubt, and although there are those who refer to evolution as a law of nature, there are still scientists and Christian scholars who believe that the theory of evolution is far from proven and who insist that the evidence advanced in support of evolutionary theories is far from convincing. Many religionists have accepted the evolutionary explanation for the origin of the universe, the planets, life, man and animals because the majority of scientists have adopted the philosophic evolutionary theory of origins in their respective scientific fields. Many Christian scholars and lavmen believe that if the church does not accept the current scientific views that its members will be driven out of the church or many prevented from joining it, because of opposition to true knowledge.

A survey of recent literature indicates a great interest in the

Man's Origin, Man's Destiny. By A. E. Wilder 'Smith. Harold Shaw Publishers, Wheaton, Illinois, 1968. 320 pages. Cloth. \$5.95.
The Creation of Life. By A. E. Wilder Smith. Harold Shaw Publishers, Wheaton, Ill., Cloth, \$5.95.
Evolution and the Christian Faith. By Bolton Davidheiser. The Presbyterian and Reformed Publishing Company, 1969. 372 pages. Cloth. \$6.50.
Genes, Genesis and Evolution. By J. W. Klotz. Concordia Publishing House, St. Louis, 1970. 544 pages. Cloth. \$5.95.
Rock Strata and the Bible. Paul A. Zimmerman, cd. Concordia Publishing House, St. Louis, 1970. 544 pages. Cloth. \$5.95.
The Bible, Natural Science and Evolution. By Russel W. Maatman. Baker Book House, Grand Rapids, 1970. 165 pages. Paper. \$3.50.
Biblical Cosmology and Modern Science. By Henry Morris. Craig Press, Nutley, N.J., 1970. 146 pages. Paper, \$2.50.
Where Are We Headed? A Christian Perspective on Evolution. By Jan Lever. Wm. B. Eerdmans Publishing Company, 1970. 59 pages, Paper. \$1.65.
Creation and Evolution. J. By Henry Morris, John W. Klotz, Paul A. Zimmermau, R. Clyde McCone, Donald W. Patten. Baker Book House, Grand Rapids, 1955.
Sonflict and Harmony in Science and the Bible. By Jack Wood Sears. Baker Book House, Grand Rapids, 1970. 97 pages. Paper, \$1.95.
Conflict and Harmony in Science and the Bible. By Jack Wood Sears. Baker Book House, Grand Rapids, 1970. 97 pages. Paper, \$1.95.
A Symposium on Creation II. By Donald Patten, Donald E. Chittick, Steven E. Austin, R. Clyde McCone, C. E. Allan Turner, H. Hewitt Tier. Baker Book House, 1970. 151 pages. Paper, \$1.95.
Stidicates For Creation. Essays by Henry H. Morris, Martin Naumann, John W. Klotz, Raymond F. Surburg. Bible Science Association, Caldwell, Idaho, 1969. 94 pages. Paper. \$1.00. Paper. \$1.00.

Paper, S1.00.
Paper, S1.00.
The Creation Alternative. Edited by Vernon Raaflaub and Walter Lang. Bible Science Association, Caldwell, Idaho, 1970. 96 pages. Paper, \$1.00.
Carbon-14 and Other Radioactive Dating Methods. Bible Science Association, Caldwell, Idaho, 1970. 16 pages. Paper. 20c.
Biology: A Search for Order in Complexity. John N. Moore and Harold Schulz Slusher, editors. Zondervan Publishing Company, 1970. 548 pages. Cloth. \$7.95.
Conflict and Harmony in Science and the Bible. By Jack Wood Sears. Baker Book House, Grand Rapids, 1969. 97 pages. Paper. \$1.95.

subject of evolution, in the relationship of science to the Bible, and in the matter of the proper interpretation of Genesis 1-2. While in certain denominations there is no concern at all regarding the implications of evolution for theology, education and sociology, yet there are other churches in which the theory of evolution and its relationship to the Bible is a live issue.

THEISTIC EVOLUTION PROPOSED

Two recently published booklets attempt to defend theistic evolution as compatible with Christian faith. Dr. D. C. Spanner, a Christian layman, who is Reader in Botany in The University of London in his *Creation and Evolution* assumes evolution to be true and wrote in his monograph as follows: "I believe also that there is a vast amount of evidence that organic evolution is a fact. It comes from many different lines of study, and it includes the origin, within living memory, of genuinely new species" (p. 12). He also believes that life had a single origin and that man most likely rose on the physical level. Dr. Spanner wants to defend the inspiration of the Bible and holds to traditional Christian doctrines. He holds that Genesis 1 is a revelation from God. In attempting to harmonize the interpretations of scientists with Genesis 1 and 2 he resorts to a hermeneutics that must be classified as allegorical and which violates other Scriptural references that interpret Genesis 1 and 2 as setting forth historical events.

Another European scholar who does the same thing is Dr. Jan Lever in his booklet, Where Are We Headed? Dr. Lever, a Dutch Christian layman, is professor of biology at the Free University of Amsterdam. His booklet consists of radio talks that were originally delivered in Dutch over the Netherlands Christian Network. Views that are propounded in these radio talks are similar to those set forth in his Creation and Evolution (1955). It is Lever's central thesis that a understanding of the modern picture of reality must be taken into account by Christians if the Gospel is to receive a hearing in today's world. To justify his evolutionary views the Dutch professor is forced to adopt a non-historical and allegorical interpretation of Genesis 1-3. All the conclusions that atheistic scientists have advanced in the areas of cosmology, biology, historical geology and anthropology are accepted and defended. Unabashedly he adopts the animal ancestry of man which the reader will find in chapter 8, entitled "Consciousness." There is no hint given to his original audience that some of his views had been and still are being challenged by specialists in all areas of the sciences.

SCIENCE AND SCIENTISM

In dealing with the data of sciences like biology, genetics, palaeontology, anthropology, geochronology, geology, astronomy it is necessary to distinguish between what can be tested and probed and what constitutes interpretation or theory. This leads to the distinction between "science" and "scientism." This is a difference many scientists and laymen fail to recognize. Henry Morris in the preface to Biology, A Search for Order in Complexity (1970), wrote: "Discussion of origins is not, strictly speaking, *science*. This is because origins are not subject to experimental verification. No scientific observers were present when life began or when different kinds of organisms first came into existence, and these events are not taking place in the present world: therefore, the problem of origins is simply incapable of solution by scientific means. The student should always be careful (some textbook writers do not) to distinguish between the actual facts of biology and the philosophy of origins with which particular biologists may try to explain those facts (p. xix)."

Dr. Maatman. Professor of Chemistry at Dordt College, has authored the book The Bible, Natural Science and Evolution. This volume deals with the real and difficult subject of the relation of the Bible to science and evolution. Professor Maatman, a member of the Christian Reformed Church, takes the stance that there are only two fundamental approaches, namely that of the non-Christian and that of the Christian. The Dordt College professor presents the Christian approach. He gives an excellent refutation of theistic evolution and also insists that the same arguments that are valid against atheistic evolution are also applicable to theistic evolution. He opposes the idea that man has evolved from lower forms of life. Maatman has pointed out the dilemma in which the atheistic evolutionist finds himself in that he needs constantly to operate with cause and effect relationships even in minute particles, though such a relationship cannot be proven statistically because of Heisenberg's principle of indeterminancy. The only thing that naturalistic scientists can do is to hope that in some future time some person will show the existence of cause and effect relationship also in minute particles, which so far has not been done.

THE DAYS OF GENESIS 1

Professor Maatman does not believe that the "days" of Genesis are normal solar days and thus joins a host of Biblical interpreters that espouses this position. In the chapter "The Bible on the Age of the Earth" he has cited all the possible arguments that have been advanced in the exegetical literature for considering the days as long geological periods of time. The reason that Maatman wants to understand the days as long periods of time is that he believes the arguments of historical geologists and astronomers to the effect that the earth is billions of years old and that the universe came into existence even earlier than the earth. Maatman accepts as correct the current calculations about the distance of the stars and the subsequent immense ages for the universe. While Maatman admits that there are no absolutes in science, he seems to accept as an absolute the law of uniformity, which holds that past processes in nature have always been the same and have never varied. He thus assumes that the Bible can be interpreted on the basis of scientific presuppositions and therefore rejects the idea of a young universe.

Drs. Zimmermann, Klotz and Morris in the books under review defend a different point of view regarding the "days" of Genesis 1. Dr. Zimmermann in an essay entitled "Can We Accept Theistic Evolution?" appearing in A Symposium on Creation I, pp. 55-80 asserted that the interpretation of the early chapters of Genesis should not be determined by science, which has espoused an antisupernaturalistic stance. Christians who endeavor to harmonize the Bible by adopting the conclusions of naturalistic scientists need to violate basic hermeneutical principles to achieve such an harmonization. Theistic evolution is only possible by resorting to a nonliteral interpretation of Genesis. Thus Dr. Zimmermann wrote:

The questions concerning the language of the text in Genesis must be determined by: 1. The decision must grow out of the text. 2. It must be in harmony with the context. 3. It must not contradict any clear passage of Scripture or any article of faith, particularly the doctrine of law and gospel (Romans 5:12-19). No interpretations dare be employed which undermines the certainty that the text is in every word the Word of God, or which is out of harmony with the confessions of the church (p. 56).

Dr. Klotz also takes the same position in his Genes, Genesis and Evolution, republished in a revised edition by Concordia Publishing House. Thus Klotz asserted: "In Ex. 20:11 we are told that the Sabbath day was observed in the Old Testament because in six days the Lord made heaven and earth, the sea and all that in them is, and rested on the seventh day. This statement clearly implies that the days of creation were ordinary days and that God rested on the seventh day rather than on the seventh era, for the Jews were required to rest for a day and not for an era (p. 86)." Dr. Henry Morris in his Biblical Cosmology and Modern Science (p. 56) takes the same stance taken by Drs. Zimmermann and Klotz. Thus Morris wrote:

According to a straightforward reading of the Biblical record, the world was created in six days only a few thousand years ago. On the other hand modern cosmologists insist that the earth and the solar system evolved about five billion years ago, that primitive life forms evolved from non-living chemicals about one or two billion years ago, that all other forms of life have gradually developed during the subsequent geologic ages and that, finally, man evolved into essentially his present form about one or two billion years ago (p. 56).

Dr. Robert Preus, in an essay found in the Concordia publication, *Rock Strata and the Bible Record*, a symposium volume edited by Paul A. Zimmermann, has given the teachings of the Lutheran Confessions on the doctrine of creation, an interpretation based on a literal understanding of Genesis 1-3 and thus would rule out any form of the evolutionary theory.

Those who wish to harmonize Genesis 1 with the long time periods of historical geology fail to realize as Morris has pointed out that there are at least 23 differences to be accounted for between Genesis 1 and 2 and the geological time table postulated by evolutionists. Both Drs. Klotz and Morris reject the theory of a long time gap between Genesis 1:1 and 1:2. The syntax of the Hebrew will not permit such an interpretation.

Those who wish to escape the literal meaning of Genesis 1 and 2 endeavor to claim that in the opening chapters of the Bible there is to be found a special literary genre, which has been labelled "myth," "saga," "legend," "parable" or "poetry." Raymond Surburg has dealt with the hermeneutics involved in this type of approach on pages 59-92 of the paperback book, *Evidences for Creation*. In the same essay the allegation of the borrowing of the Biblical creation account from Babylonian sources is refuted.

EVIDENCE FOR EVOLUTION EXAMINED

In opposition to Drs. Lever and Spanner who believe evolution established as scientific fact recent writers sharply disagree with those who support evolution as fact and admitting that it is merely an unproven hypothesis. Two Christian laymen who are specialists in the sciences of biology are Drs. Davidheiser and A. E. Wilder Smith. Dr. Davidheiser has a Ph.D. in zoology from Johns Hopkins University. He became a converted Christian after receiving his doctorate and before embracing Christianity he was a believer in evolution and had accepted the explanations given by advocates of evolution as the great key to the development of the universe and of the origin of life, as well as of the origin of animals, and the descent of men from members of the animal kingdom. Thus he wrote as a person once trained in evolution and convinced of its validity. After accepting the Christian faith he began to investigate the claims of evolution and gradually became convinced that the claims made for evolution were not sustained by scientific facts. At present he is professor at Biola College, Mirada, California. In the opening chapter of his book, Evolution and the Christian Faith he wrote: "It is of the utmost importance to realize that a very real struggle is going on and that the theory of evolution is a very important factor in the accelerating trend toward apostasy (p. iii)." Davidheiser shows from the scientific literature that man is depicted as having descended from the primates or from the monkeys, a fact that cannot be inferred from Genesis 2, except by the wildest type of allegorization.

Dr. A. E. Wilder Smith, professor at the University of Illinois at the Medical Center in Chicago, agrees with Davidheiser. Smith, in his book, *Man's Origin and Man's Destiny* devotes many pages to an evaluation of the position of theistic evolutionists who endeavor to harmonize theistic evolution and Genesis 1 and 2. Wilder who has three doctorates in three different scientific fields from European universities and who has lived for many years in Europe shows how theistic evolution is held by many evangelical Christians in Europe. In an appendix of his book, Dr. Smith evaluates the views of Dr. Hans Rohrbach, Professor of Mathematics at the University of Mainz, who in Naturwissenschaft und Gotteserkentnis (1965) and Naturwissenschaft und Glaubensbekenntnis (1965), and Die Biblischen Wunder, Biblischer Schöfhungsbericht, Weltbild der Bibel und die Moderne Wissenschaft presupposes the existence of a race of pre-Adamic men who were animals and that God took one of these and breathed into him a soul and thus Adam became a human being. Dr. Wilder shows the impossibility of this view if one holds to a literal interpretation of the Scriptures as Dr. Rohrbach claims he does.

In The Rock Strata and the Bible Drs. Robert Preus and Fred Kramer have explicated the Biblical and Lutheran doctrine of creation as set forth in the Lutheran Confessions and the Holy Scriptures. Both are proponents of creationism and make no allowances for evolution in the Biblical account of Genesis 1-2. Both of these professors rule out the use of myth or any other literary form which would deny the facticity of the opening chapters. In fact, all contributors to *The Rock Strata and the Bible* rule out Genesis as myth or legend.

THE CLAIMS OF EVOLUTION EXAMINED

Wilder in Man's Origin and Destiny, Klotz in Genes, Genesis and Evolution and also the latter in his lecture in Evidences for Creation, Maatman in The Bible, Natural Science and Evolution and Davidheiser, Evolution and the Christian Faith have all examined the various types of evidence advanced by scientists for the evolutionary theory. Both Davidheiser and Klotz give their readers a history of the development of the evolutionary theory from Greek times to the twentieth century. Charles Darwin is usually credited with bringing about the adoption of evolution in Western civilization by the publishing of his two books: The Origin of Species (1859) and The Descent of Man (1871). Dr. Davidheiser is convinced that evolution was sponsored by scholars who had liberal theological inclinations and credits the spread of theological modernism to its being allied with evolution. He shows that Darwin, who prepared himself for the ministry and whose only academic degree was a theological one eventually ruled out God in every way from any consideration in the creation and governance of this world. Darwin died as an agnostic.

Dr. Klotz summarizes Darwin's theory like that of Lamarck's as setting forth the following series of postulates and conclusions: 1) First postulate: variation. Individuals of the same species differ. 2) Second postulate: overproduction. In most cases far more individuals are born than can possibly survive to maturity. First conclusion: struggle for existence. The individuals that are to survive must compete with other members of the same species. 3) Third postulate: survival of the fittest. In this struggle for existence those individuals will survive which are best fitted for their environment. Fourth postulate: inheritance of favorable characteristics. Fit individuals pass their fitness on to their descendants. The final conclusion based on these postulates is given by Dr. Klotz as follows: "New species arise by the continued survival and reproduction of the individuals best fitted or adapted to the particular environment" (p. 35). Lamarck is often considered to have advanced the cause of evolution beyond that of Darwin. Klotz claims that the difference between the two may be stated in this way: "The important difference was that Darwin did not stress the way in which favorable characters are inherited, and Lamarck did not stress natural selection as the guiding factor in evolution" (p. 38).

Dr. Davidheiser claims that Darwin's natural selection theory, which Herbert Spencer called survival of the fittest was the explanation that sold scientists of the second half nineteenth century on the theory of evolution. Some of Darwin's critics pointed out weaknesses in his natural selection theory, especially the fact that it did not explain the origin of the types from which it was assumed that the fittest were selected. Later on when Hugo De Vries set forth his mutation theory it was at first considered a rival to Darwin's. But soon it was combined with that of Darwin and together the claim was made that now the mechanism of evolution was adequately explained. However, during the second and third decades of this century scientists became convinced that neither Darwinism nor De Vriesinism had really accounted for the mechanism by which evolution had occurred. More time was needed, so many claimed, to dis-cover a more reliable answer. Though scientists gave up Darwinism they did not surrender the belief in Evolution. The evidence that twentieth century scientists have been able to produce for natural selection and mutation is very meager and fails to sustain these two as the mechanism of evolution.

Somewhat similar to Darwin's theory of natural selection was his theory of sexual selection. Darwin believed that individuals chose mates which pleased them. Biologists and anthropologists have rejected this Darwinian view as not meeting the facts.

Mutations and natural selection are thought to be the mechanism for evolution. In evaluating these Davidheiser asserts: "Mutations are changes which are inherited, and they affect both superficial and important characteristics. Even when the effect seems superficial, however, it may be associated with detrimental physiological effects" (pp. 208-209). Mutations have been studied most thoroughly in fruit flies, Drosophila, where they produce abnormalities. When found in human beings they produce abnormalities of teeth, hemophilia, muscular dystrophy, and other undesirable traits. Davidheiser cites Professor Dobzhansky, eminent zoologist and geneticist, who wrote: "Most mutants which arise in any organism are more or less disadvantageous to their possessors. The classical mutants obtained in Drosophila usually show deterioration, breakdown, and disappearance of some organs." Dr. L. C. Dunn, Professor of Zoology at Columbia University, who also is cited, says: "Such events, known as mutations, are the ultimate source of the hereditary variety of characteristic of all species. It is this variety upon which natural selection and other evolutionary forces act in forming varieties, races, species, and other natural categories."

It is pointed out by Davidheiser and others that although evolutionists argue that mutations are the basis for evolutionary variation, there are a number of biologists that do not believe that mutations are really the answer to the question: "How has evolution occurred?"

Davidheiser has examined all the evidence for evolution ad-

vanced in the last hundred years such as the alleged evidence from comparative anatomy, the evidence from vestigial, rudimentary and atavistic structures, the argument from embryonic recapitulation, the evidence from taxonomy, the arguments from genetics, the evidence from ecology, seriological tests, animal distribution, and the fossil records (cf. chapter vi, pp. 231-301).

One of the most thorough examinations for the claims of evolution that has been made by a Christian scholar is that of Dr. Klotz in Genes, Genesis and Evolution (Revised Edition, 1970). The reader will find that Klotz, who has a Ph.D. in biology from the University of Pittsburgh, neither prostitutes his stature as a dis-tinguished biologist nor sacrifices his Christian scholarship. Like Davidheiser, he is well acquainted with the scientific literature on the topics on which he writes. In the second and revised edition of his book he has brought his presentation up to date by quotations from the latest scientific literature. Here the reader will see gathered together the most recent research and findings of biology, anthropology, and archaeology. A comparison of the 1959 with the 1970 edition seems to show that in his revision Dr. Klotz has even built in an even more conclusive argument against evolution. Most of the topics examined by Davidheiser are also examined in detail by Klotz and often at more length than by the former. Together the material presented by these scholars should be extremely useful and helpful for those students who want to see reliable evidence before committing themselves to a theory which ultimately requires as much belief in miracles as does the Biblical doctrine of creation.

Dr. Sears in Conflict and Harmony in Science and the Bible has briefly examined the evidence for evolution in two chapters of his short five chapter book. He, like a number of recent writers has taken note of the English scientist G. A. Kerkut, who although a committed evolutionist in his book, *Implications of Evolution*, has shown that there are two views of evolution, which he has called "the general theory of evolution" and the "special theory of evolution." By the latter term is meant that variation and development take place within what the Bible calls "kinds." By the "General Theory" is meant the evolution of man ultimately from the amoeba. While there is evidence for the "Special Theory" there is no convincing proof for that which is generally considered to be the evolutionary theory. In his forthright book, Kcrkut wrote that "the evidence that supports it (the General Theory) is not sufficiently strong to allow us to consider it as anything more than a working hypothesis" (p. 157).

Kerkut is not opposed to evolution, but he is an honest scientist. Thus he wrote:

May I here humbly state as part of my biological *credo* that I believe that the theory of Evolution as presented by orthodox evolutionists is in many ways a satisfying explanation of some of the evidence. At the same time I think that the attempt to explain all living forms in terms of an evolution *from a unique source*, though a brave and valid attempt, is one that is pre-

mature and not satisfactorily supported by present-day evidence. It may in face be shown ultimately to be the correct explanation, but the supporting evidence remains to be discovered (p. vii).

Kerkut has pointed out that if the "General Theory of Evolution" were true seven assumptions would need to be fulfilled. They are as follows:

- (1) The first assumption is that non-living things gave rise to living matter, i.e. spontaneous generation occurred.
- (2) The second assumption is that spontaneous generation occurred only once.

The other assumptions follow the second one.

- (3) The third assumption is that viruses, bacteria, plants and animals are interrelated.
- (4) The fourth assumption is that the Protozoa gave rise to the Metazoa.
- (5) The fifth assumption is that various invertebrate pyla are interrelated.
- (6) The sixth assumption is that the invertebrates gave rise to the vertebrates.
- (7) The seventh assumption is that within the vertebrates the fish gave rise to the amphibia, the amphibia to the reptiles, and the reptiles to the birds and mammals. Sometimes this is expressed in other words, i.e. that the modern amphibia and reptiles had a common ancestral stock, and so on.

Dr. Sears has examined six of the seven assumptions and shows that none of them is provable and that there are valid reasons to doubt the correctness of each.

Drs. Klotz, A. E. Wilder Smith, Sears all examine in their writings the matter of the animal ancestry of man. Professor Wilbert Rush, in *Rock Strata and the Bible* (pp. 133-178) has given an excellent discussion of the fossil remains of men and has shown that there is no real evidence for the descent of man from the Primates.

The reader may find a comprehensive discussion of the alleged ancestry of man in Klotz (chapter 9, pp. 322-380). Klotz claims that "one of the problems in connection with human evolution is the fact that there are very few human and prehuman fossils" (p. 322). Dr. Sears points out that there are two different schools of anthropology, the polyphiletic school and the unilinear. The former school derives four modern races, while the latter school groups modern man into only three races. Now if anthropologists have this trouble when classifying modern man, how much more so is this the case when treating of primitive man, where the evidence is not too abundant. The fact is that the evidence for human evolution is fragmentary, and has many difficulties of interpretation connected with it.

THE SECOND LAW OF THERMODYNAMICS

Drs. Morris, Wilder Smith, Davidheiser contend that the second law of thermodynamics does not support the idea of evolution. In his lecture given July 9, 1968 at Concordia Theological Seminary, Springfield, Morris stated: "The Second Law states that the universe is decaying. Every process operates in such a way that to some degree the system decays, or runs down. Every system tends to become disordered . . . The Second Law says that disorder or randomness tends to increase. Speaking in terms of energy, the availability of energy tend to increase." (Evidence for Creation, p. 17). A non-living structure left to itself tends to deteriorate and disintegrate. Davidheiser says: "The tendency toward randomness in nature is the opposite of evolution, for according to the theory of evolution, more complex forms have developed from less complex forms. Therefore it has been said that the theory of evolution is contrary to the second law of thermodynamics" (p. 221). While evolutionists claim that the second law of thermodynamics is inoperative in the biological realm, Klotz states that it would be unusual if the biological world were to follow a different principle than that found in the inorganic world (p. 519).

that found in the inorganic world (p. 519). It is the conviction of Dr. Morris that the cosmology advocated by evolutionists is a cosmology not consistant with Biblical teaching. The cosmology that endeavors to understand the origin, meaning and destiny of all things without belief in a transcendent Creator and Sustainer is the cosmology of evolutionism which holds to the principle of uniformitarianism. The origin and development of everything in the cosmos is attributed to forces and processes resident in matter that have eternally existed and assumes that the cosmos will have no end. This is in direct conflict with the Scriptures which teach that the universe had a beginning and will again be destroyed. Morris believes that both the first as well as the second law of thermodynamics supports the Biblical position.

The most persuasive evidence for evolution appears to be the tremendous expanse of geologic time and the fossil record associated with the geologic ages. Evolutionists contend that the fossil record shows the gradual increase in complexity of living forms with the progression of the geological ages. The geological column, which has been constructed by historical geologists on paper, but is found nowhere in nature in the form outlined, is interpreted in the light of the principle of uniformitarianism.

Morris and others claim that the fossil record shows that the same classification used today is also found in the fossil record; the same phyla, orders, families are found in the rocks as are known today according to the taxonomic classification employed by scientists. The gaps between the "kinds" that evolution needs to bridge are not found in the rock strata. Those scholars and scientists who accept literally the words of Genesis 2:3 and Exodus 20:11 rule out the billion-year history of life upon the earth and the supposed millionyear history of human life upon the earth, postulated as minimum figures by historical geologists and anthropologists. Those scholars that respect the reliability and facticity of Genesis 1 and simultaneously accept the geological time table erccted by historical geologists have resorted to three different ways of harmonizing science and Genesis. Either the geological ages are placed prior to Genesis 1:1 or they are inserted between verses 1 and 2 of Genesis 1, or the "days" are interpreted as long periods of time of undeterminable length. Morris and others believe that such vast time periods cannot be put in Genesis 1-11 even though one recognized the existence of gaps in the geneologies of chapters 5 and 11. Cf. the essay by Fred Kramer "A Critical Evaluation of the Chronology of Ussher," in *Rock Strata and the Bible* (pp. 57-67).

An area where there is a divergence on the part of scholars who espouse creationism is the question of time in the Bible and Geology. The Concordia volume, Rock Strata and the Bible endeavors to come to grips with this problem. Three chapters in the latter volume were written by geologists. Dr. Kenneth Currie sets forth current methods used in determining the age of the earth (pp. 68-92). He and Dr. Paul Tychsen seem to accept the time scale of historical geology which believes that the past can be assumed to have been controlled by the same laws that operate now. This is known as the principle of uniformitarianism. The chapters by Tychsen and Currie endeavor to answer these questions: What is the history of geological dating? What are the fundamental assumptions that scientists make when they apply research to the age of the earth? The contributions of Currie and Tychsen present the position of historical geology. Dr. Zimmerman claims that "it should also be clearly recognized that the question of the age of the earth and of evolution are separate questions. An ancient earth in itself does not provide proof for evolution. It is true, of course, that the evolutionist requires billions of years for life to evolve and develop. But the creationist does not base his doctrine on the question of time (p. 56)." Eminently worth reading is the chapter by Klotz, "Assumptions in Science and Palaeontology," in the same volume that contains the chapters by Currie and Tychsen.

While there are creationists who accept the uniformitarian reconstruction of earth history and adopt modern scientific theories about the origin of the solar system, there are other creationists who do not believe that the earth is billions of years old and that man has been millions of years upon this planet. Members of the Creation Research Society (not all by any means) and members of The Bible Science Association believe in a young earth. Dr. Klotz in *Genes, Genesis and Evolution* wrote:

To the problem of the age of the earth Scriptures gives us no definite answer. The figures of Bishop Ussher are not inspired, and his date for the Creation (4,004 B.C.) does not appear to be correct. However, Scripture indicates that the age of the earth must be measured in thousands rather than millions and billions of years (p. 116).

How about the dating method currently employed that appears to support figures running into billions of years regarding earth history, the solar system, and man's age upon the earth? A number of scientists in the books under review disagree with the chronometers that are employed by astronomers and historical geologists. Dr. Donald Chittick examines the current methods of determining geological periods and the age of the fossils in two articles, "Carbon-14 Dating of Fossils" and "Dating the earth and Fossils," (pp. 57-76) in A Symposium on Creation II, and by Harold Slusher in "Geochronology" (pp. 65-71) in The Creation Alternative (1970).

Instead of operating with the law of uniformitarianism to understand and explain the history of man, of the earth and the universe, Morris and Patten and others believe that the principle of catastrophism needs to be employed to explain the developments of earth history and also account for the fossils embedded in the various rock strata of the earth. Geologic catastrophism in one form or another is necessary to explain many of the phenomena of the earth's crust and especially the preservation of the fossils whose arrangement in the rocks is cited as proof for the evolutionary hypothesis. Thus Morris asserted:

The uncounted millions, probably billions, of animals and plants of all kinds that have been buried in the sedimentary rocks could, of course, never have been preserved at all against the ravages of scavengers, decay, bacteria and the elements, had they not been buried quickly and permanently.

There are many phenomena with which historical geology can only properly deal on the basis of catastrophism, which Morris claims is being used in a limited way as an explanation for the nature of volcanic terrains, the evidence of continental glaciation, the great faults, folds, rifts, thrusts and other textonic phenomena.

PATTEN AND ASTRAL CATASTROPHISM

In the twentieth century a number of people recognized the necessity of catastrophism as a legitimate geological principle. Donald Patten, a geographer by training and editor of A Symposium on Creation II. also opts for an understanding of earth's history within the framework of catastrophism and creationism. Patten in *The Biblical* Flood and the Ice Epoch (1966) put forth the view that answers for earth's history must be sought for in the solar system; that past astral catastrophies existing within the solar system negate the present uniformitarian principle employed by historical geologists during the last one hundred years. In his published writings Patten has proposed the view of historical celestial crises, a series of global cataclysms, raising mountain ranges by tidal upheavels within centrifugally-rotating magma under the earth's crust, and raising oceanic tides of subcontinental dimensions externally upon the outside surface of the Earth's crust through the historically-recorded Flood or Deluge.

Patten contends that through the agency of astral phenomena, the earth became engulfed in simultaneous gravitational upheavels, and magnetic interactions. These came to our planet with suddenness like the biblical flood and the ice age, which terminated a previous carth climate, different in many ways to the existing one. It also terminated many great species, found today only in compressed alluvium, glacial till, volcanic ash, or icy perma frost. It also terminated a longer lived race of men, reported in Genesis among other sources to have become engufed in evil times. Patten has contributed chapters in support of the position just outlined in an cssay in A Symposium on Creation I (pp. 93-138), and one in A Symposium on Creation II (pp. 11-44). Patten is therefore in basic disagreement with the Position of Morris on the causes for the Flood.

THE BIBLICAL FLOOD: LOCAL OR UNIVERSAL?

The Concordia volume Rock Strata and the Bible devotes its last two chapters to the Biblical flood. Dr. Fred Kramer in "The Biblical Account of the Flood" examined the Biblical data dealing with the flood. He is aware of the fact that prior to the adoption of uniformitarianism, catastrophism had been associated with Noachian Flood and had been used by many geologists to explain the sedimentary rock strata with their multitude of fossils. Today there are those who claim that the Biblical flood was merely a local phenomenon, and this position would eliminate the claim of those who hold that a world-wide flood could have been responsible for significant changes in the earth's surface.

Professor Kramer holds that the Biblical flood was universal in character. About the possible effects of the flood he wrote:

Major physical changes which Scripture docs not describe and which we do not pretend to understand must nevertheless have taken place to account for the rapid subsiding of so great a flood. One is lead to think of major changes in the earth's crust, the rise and fall of land masses, etc. (p. 191).

Again Kramer wrote: "So great a mass of water as that represented by a universal flood rushing with great speed to the ocean would work great destruction on the surface of the earth. Major changes in the topography would surely be expected" (p. 191). Whether the Noachian flood may have left traces upon the earth's surface, Dr. Kramer claims cannot be established.

Kramer's essay is followed by that of geologist Paul Tychsen entitled: "Geology and the Flood." Tychsen operates with the ages of historical geology and states that if one were to attempt to fit the Biblical flood within the times scale or historical geology it would have occurred in the "waning stages of the Pleistone epoch or the beginning of the Recent (or Holocene) epoch (pp. 196-197). In his essay he shows how uniformitarian scientists reason in reaching their conclusions about the age of the earth. According to Tychsen "geologic research has discovered records of many great floods. It has also shown an unusual rise in the world's water level at a time approximately 6,000 years ago. But it is impossible at this point in time to identify any of these phenomena from the past with Noah's flood. Geology simply does not provide us with an answer of this type. Nor does the Bible enable us to establish the date of Noah's flood" (p. 200).

HIGH SCHOOL AND COLLEGE TEXTBOOK ON BIOLOGY FROM A BIBLICAL PERSPECTIVE

Biology: A Search for Order in Complexity, produced by The Creation Research Society, is intended for high school and college students and presents the facts of biology from a Christian perspective. Twenty scientists, most holding doctorates in some branch of science, read and approved the volume. The editors were Dr. John Moore, professor of natural science at Michigan State University and Harold Sluser, professor of physics and astronomy at the University of Texas. Chapters 23-25 discuss the arguments for evolution and show that there are problems that the evolutionist must satisfactorily answer if evolution is to be taken seriously.

THE ORIGIN OF LIFE

Scientists are working hard at the production of life in some form or other. The most recent book written by Dr. E. A. Wilder Smith, *The Creation of Life*, demonstrates that there is no way in which science can explain the origin of life through an automatic system. Smith quotes from "Mathematical Challenges to the Neo-Darwinian Interpretations of Evolution," a report of proceedings of the Wistar Institute Symposium. A computer showed that it was impossible to form even one enzyme by random forces. Statistically life's order cannot arise from randomness. The complexity and incredible intricacies of the living cell rule out the accidental formation of life. Wilder Simth follows William Paley's argument that there is a remarkable design in nature pointing to a Great Designer.