

REVIEWS

Problems of Creation and Science

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CREATION — ACCIDENT OR DESIGN

By Harold G. Coffin

with chapters by Ernest S. Booth, Harold W. Clark, Robert H. Brown,
Ariel A. Roth, and Edward E. White

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512 pp illustrations \$7.95

This volume in defense of the conservative creationist position is in the tradition of Price,¹ Clark,² and Marsh³ but introduces many significantly untraditional features. Written as a text for courses in science and religion in Adventist colleges, it covers a wider range of topics than any of its predecessors. The discussion is concise and rather simply presented; in fact, at times the level of presentation seems to fall short of the college level. This criticism does not apply to the chapters on radioactive dating techniques written by Robert H. Brown; contrary to the advertising blurbs, these chapters will not be easily understood by the "intelligent layman"! In most other areas, however, the volume is probably quite readable for the average minister or informed layman. The heavy reliance on Scripture and Ellen G. White's writings as sources of scientific information of equal or even greater authority than observational or experimental findings will undoubtedly please many in this group of readers.

Although few of the significant ideas or arguments are entirely novel, the approach is fresh in many ways. The tone is relatively free of the scorn and vitriol for the evolutionist which so characterized the writings of Price. The appeal is rather that the creationist's viewpoint is at least a reasonable alternative to the evolutionary one. Considerable emphasis, particularly in the last chapter, is placed on the concept that the differences between the creationist and the evolutionist viewpoints are due to differences in what is referred to as "faith." Coffin writes: "The creationist readily recognizes the role of faith in his beliefs. . . . Thus compulsive evidence for creationism cannot be claimed. Faith must be called upon to bridge the gap between the evidence and proof. . . . By faith the creationist accepts the Biblical account as a correct history of the earth. By faith men receive the evolutionary theory as a true basis for understanding prehistoric times" (pp. 461, 463).

Another departure from the practices of some other church authors in this field is the relatively sparing use of direct quotations from books and journal articles by

evolutionary scientists. All too often in the past, an Adventist author has lifted a quotation out of its scientific context, thereby conveying the impression that the evolutionist author holds views which he almost certainly does not. In cases where direct quotations are used, Coffin rather carefully avoids opportunities to convey such false impressions.

On several topics Coffin presents more than one viewpoint, a practice again not usually followed by his predecessors. For example, he presents arguments pro and con the existence of the inorganic matter of the earth before a creation week about 6,000 years ago, without adopting a definite position on either side.

In other areas he presents newer viewpoints that have gained some, but by no means universal, acceptance among us. For example, his interpretation of "after his kind," clearly not quite that of Marsh, owes much to views of Coffin's associates at Andrews University. His ready acceptance and affirmative presentation of evidence for extensive glaciation during the earth's history is a dramatic departure from the classical views of Price and Marsh. Clark and Booth have advocated the acceptance of the evidence for glaciation, of course, for the past twenty-five years, as Coffin indicates.

The author also frankly presents and discusses many of the major problems that face the creationist viewpoint of this volume. Some of these are (p. 460) :

1. Speciation rates required in the short span of postflood time;
2. Radioactive dating results;
3. Supposed growth positions of plants and animals in sedimentary beds;
4. The stratification of the fossils in the earth;
5. Et cetera.

It is not clear what the author has in mind under the last category, but one might suggest geographical distribution of plants and animals as a problem not discussed to any extent in this volume. The discussion of the four listed problem areas is helpful and illuminating but certainly leaves it clear that serious difficulties for the creationist viewpoint are raised by the known scientific facts in these areas.

The section on the formation of new species covers fifty pages but scarcely addresses itself to the problem of the phenomenal rates of speciation required by a 6,000-year chronology. Even with the more conservative viewpoint of Marsh on the created kind, very extensive and rapid postflood speciation would seem to be required. Coffin appears willing to admit even more variation, since he does not adopt such a restrictive view on the genesis kind. Little scientific data are presented to account for this variation. Perhaps Coffin should have consulted Ryckman, an Adventist biologist who has ably studied speciation phenomena in certain groups of insects and has published extensively in the field.⁴

Brown's two chapters on radioactive dating are among the best written in the book. The background and problems are well presented, and the case for the existence of the matter of the earth before a creation week 6,000 years ago is seriously considered. Curiously, no mention is made of the opposing work of Gentry.⁵ Because of the wide publicity and frequency of Gentry's presentations in Adventist circles and his attempts to provide published experimental data and to gain scientific recognition for a 6,000-year date for the origin of the earth's matter, disregard of his work seems unfortunate.

Whether the comments be pro or con or neutral, at least reference should have been made, so that readers would have some perspective from which to view Gentry's presentations.

Brown proposes a solution to the problem of the radioactive dating of fossils by use of associated volcanic or other minerals containing radioactive isotopes. It is the familiar one of incomplete removal of previously accumulated daughter products. Attractive as this solution is in a general way, it seems to run into problems in detailed application, as Brown admits. Furthermore, his presentation hardly does justice to the problems presented by the impressive argon-potassium dating of the Tertiary deposits of the western United States by Evernden and associates.⁶ As Brown states, "Much patient investigation may be required before a fully satisfactory understanding of the radiogenic content of volcanic material is developed." As far as I am aware, no geochemist with a conservative creationist viewpoint is currently attacking the problems of argon-potassium dating at a direct experimental level.

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The chapter on radiocarbon dating is well done but, again, is unsatisfying. On the basis of the scientific evidence, Brown adopts the usual Adventist posture that back to about 2000 B.C. the radiocarbon dates are probably accurate. Several of the theories popular in Adventist circles to account for radiocarbon dates earlier than 4000 B.C. are rather abruptly dismissed by Brown. This is probably appropriate, but he will be in trouble with some people! Brown's own solutions are ingenious but incomplete, and I believe his peat-bog data have been rather carefully selected and may not be representative of the literature.

Inasmuch as radiocarbon dating equipment and procedures are commercially readily available, it is amazing that no conservative creationist scientist has addressed himself seriously to an experimental attack on the problems of this area. If all the man-hours of theoretical discussion among us had been channeled into experimental activity and analysis, would our position be any different? Hare's attempts to approach radiocarbon and other dating problems through analysis of amino acid degradation should have been discussed in this connection.⁷

The problems posed by supposed growth positions of plants and animals in sedimentary beds have become well known to Adventists in the last ten years since Ritland started his summer vacation tours for Adventist theologians and biologists to study the fossil forests of Yellowstone and other geological phenomena. Although Coffin discusses the problems of Yellowstone only briefly, he analyzes a somewhat parallel situation in Nova Scotia in detail, attempting to build a plausible case, with some experimental evidence, for rapid marine deposition of the successive forest layers in the Nova Scotia coal deposits. Classically these have been interpreted by geologists as a case of *in situ* fossilization. Coffin actually cites them as evidences of the flood! Can he convince the geologists? If he can, no doubt they will direct his attention to the fossil reefs, which he also discusses but with less success. (Roth's current attempt to attack the fossil reef problem experimentally is a welcome change among us.)

Coffin is at his best dealing with the fossil record and the flood, although he views the subject from a perspective which Price no doubt would have regarded as downright heretical. Price and Marsh to the contrary, Coffin argues that there is a genuine

sequence in the fossil record. Clark, the first in Adventist circles to expose this view publicly, contributes a chapter on his "ecological zonation" theory. Attractive as this theory is in general terms, it too has its problems, as Coffin admits.

In another chapter Coffin presents his own ideas of a modified form of ecological zonation. The Cambrian through Silurian strata are attributed at least in part to pre-flood fossilization. Major flood activity is held to account for the Devonian through Cretaceous strata. The Tertiary is regarded as largely postflood. These innovative and stimulating ideas open new possibilities in creationistic thought — in fact they may represent the major contribution of the Geoscience Institute to date.

Although this interpretation of the geologic column may solve certain problems, it raises others or leaves them unresolved. Restricting the activity of the flood to only a portion of the column reduces the number of physical events required of the flood but requires those that do occur during these epochs to take place much more rapidly than those that do not. Unfortunately, Coffin has little to say about the detailed problems of uplift, folding, erosion, invasion by the sea, et cetera, so effectively portrayed in most textbooks of historical geology. He does not fully exploit the significant problems that are apparent if these events are spread over many millions of years. On the other hand, he does not make any real attempt to deal in detail with the problems presented by his ultrashort chronology attributing Devonian through Cretaceous strata to a worldwide catastrophe of a year or so in duration.

Coffin's view partially solves the problem of fossil and living species limited to certain geographic areas in Tertiary and recent times. However, identification of the Tertiary as postflood seems to require an even more rapid rate of speciation. Also it presents a serious time problem to account for all or most of the Tertiary geologic record in a period of 4,500 years or less. The apparently *in situ* fossil forests of Yellowstone can be compressed only with great difficulty into this time period. Curiously, Coffin's discussion is not always consistent with his own theory. For example, Tertiary Miocene beds in the San Joaquin hills of Southern California are apparently attributed to the flood (p. 66).

The sections of the book devoted to the arguments against and the difficulties of the evolutionary theory are not so convincing as they might be. The chapter entitled "Can Man Create Life?" is particularly unsatisfactory in that it fails to present some excellent scientific data; Coffin prefers to appeal to theological authority. (A much superior discussion can be found in the article by Gish.⁸) Coffin also fails to capitalize on the inadequacies of the fossil record as a support of evolution. (Ritland does a better job in this book *Meaning in Nature* for academy students.⁹) Kerkut's book¹⁰ is mentioned, but much greater use could have been made of some of his arguments regarding the inadequacies of current evolutionary theories of the origin of major groups.

In the section on lack of evidence for plant evolution, the classic problem of the origin of the Angiosperms is not even mentioned. Since the conservative creationist faces many problems of chronology and time, it is surprising that these and many other sound scientific arguments against the evolutionary viewpoint are neglected. Coffin should not assume that all readers will be convinced creationists whose only concerns are the details of the flood and a 6,000-year chronology!

Roth has contributed an excellent chapter on the limitations of the scientific method. The points he makes are worthy of careful consideration by all who would worship uncritically at this shrine which we scientists have erected to our gods. Unfortunately, no comparable chapter on the limitations of the theological method is included. Coffin assumes that all his readers will accept conservative Adventist theological interpretations as a basis for scientific information. The book would have been greatly strengthened and its effectiveness for a much wider range of readers markedly increased if a careful and thorough analysis and defense of its theological presuppositions had been included, particularly in terms of their use as basis for scientific conclusions. At the very least, in view of the many unanswered problems that revolve around the 6,000-year date for creation of organic materials, a more extended discussion than that on pages 271-272 would have been helpful.

All in all, this volume is a significant advance over its predecessors and fills a real need. Some areas, unfortunately, do not make the most of the available arguments. Better solutions are not available, understandably but still regrettably, for the many problems honestly raised. Clearly, a major effort by Adventist scholars at the Geoscience Institute and elsewhere is required to bring illumination to the church in these areas.

Perhaps interested scholars, ranging from conservative to liberal, should arrange a symposium. Free but restrained and respectful discussion by such a group could be most helpful. Subsequent publication of the symposium might at least partially meet some of the needs left unfilled by Coffin's volume, which is clearly inadequate for the problems confronting Adventist graduate students in the biological and geological sciences in the universities of the land. Analysis of the symposium at meetings of the Adventist Forums might stimulate further thought and experimentation by members. Coffin's attempt to bring together many new viewpoints and interpretations of old truths is surely a welcome inaugural for further efforts in this direction.

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To Live or To Die?

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POPULATION, EVOLUTION, AND BIRTH CONTROL: A COLLAGE OF CONTROVERSIAL IDEAS

Assembled by Garrett Hardin

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\$6.00 cloth \$2.95 paper

Are we justified in doing good when the foreseeable consequence is evil? This inversion of the usual question of means-and-end is suggested by A. V. Hill as the present ethical dilemma of science, and it makes for some disquieting meditation when its full implications are realized.

Consider the experience of Gerald Winfield, who was a medical missionary in China for many years. He wrote later of being haunted by the dying cries of a tubercular beggar to whom he had several times given money. He had felt ashamed to do so, "ashamed because I know that I was powerless to give enough to do anything more than prolong the slow pain of his dying — yet ashamed not to make some gesture of sympathy."