

## EVIDENCE AGAINST EVOLUTION FOUND IN A GEOLOGY TEXT

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*This study arose out of a series of letters from a geologist who is evidently a theistic evolutionist. In them, he placed great faith in the index-fossil system of dating stratified rocks. Accordingly, I decided to find out just what a modern historical geology book has to say about the basis for dating the various formations from the Cambrian on up to the Pleistocene. I found "Evolution of the Earth"<sup>1</sup> one of the clearest and most straightforward in defining the problems involved in dating each formation; also it has a remarkably fine series of illustrations. I should recommend the book to any Creationist who wishes to become acquainted with modern geological concepts, and to understand just what phenomena must be explained by a really adequate Flood geology theory of the stratified rock formation.*

*It will be understood that in criticizing the usual evolutionary doctrines, I am not attacking "Evolution of the Earth" or its authors. I am pointing out weaknesses in the usual theory, which are in fact admitted in the book.*

After giving a detailed history of how "Strata Smith" worked out the succession of strata in England, followed by Baron Cuvier in France, the authors give a remarkably clear statement of how correlation of rock formations is accomplished by comparison with the succession of strata found in Wales. Thus they say on page 66: "We have distinguished the Cambrian System of rocks from the Cambrian Period of time. The rocks of this system in Wales where they were first studied and named, provide a world standard for comparison or correlation of rocks anywhere else, which, on the basis of similar fossils, are judged to have formed during that same first period of the Paleozoic Era." Then after discussing intraformational discontinuities, the following most interesting statement is made: "It follows that if elsewhere a more complete sequence of Cambrian rocks were found with fewer and smaller discontinuities and more fossils, it would provide a better world standard of reference than does that of Wales. While that is true, the original European System standards are now so firmly established by long usage that such changes have not been made." Thus as they point out: "When Charles Walcott, a geological pioneer in western America, identified thick strata in southeast California as Cambrian, he was performing a correlation with Wales based upon index fossil assemblages. Such correlations have an implicit *assumption* that similar evolutionary stages of development were reached essentially simultaneously by particular organisms in all parts of the world." After pointing out that environmental differences in space also must be assessed as factors affecting the distribution of fossils, they conclude that: "It is never possible to be absolutely sure that the very first and last appearances have been discovered, therefore the total temporal range of an index species is constantly subject to revision." (pg. 67) Also "the index fossil *par excellence* is one which lived more or less independent of the bottom environment where sediments form. Obviously floating or swimming forms would so qualify. Fortunately, there are several such groups that also evolved rapidly and therefore serve well for correlation even between different sedimentary facies." (pg. 68) Geologically "evolved rapidly" simply means that the species is limited to only a narrow portion of the succession of stratified rocks, such as the Protoperia found only at the very base of the

Cambrian system. Having then built up a world wide sequence, evolution is supposed to be the explanation of why these various assemblages of plant and animal fossils are found in this particular order of occurrence.

As will be shown from quotations taken from this book, a total sequence is not found anywhere in the world. Also any particular "era" of stratified rock may be found lying directly on the basement complex, and also every "age" of rock is also lying at the surface, the later-deposited strata having been presumably eroded away! Finally, there are innumerable places where the fossils are in the wrong order, and these are explained as being due to overthrusts or thrust faulting. Yet as shown in my article on the Glarus overthrust <sup>2</sup>there is no physical evidence of such overthrusting in most cases.

Until the twentieth century there still lingered a faith among geologists that the stratigraphic record was naturally divided by world rhythms of mountain building, and transgressive-regressive cycles conforming neatly with the system boundaries. This, the authors point out, reflected a century old influence of Hutton's and Lyell's cyclic view of the earth; and it provided a convenient rationale for a universal time scale. But, they point out, modern stratigraphic studies have shown this scheme to be a fraud in its simple form; mountain building and unconformities have not been so perfectly uniform either in age or magnitude over large regions.

On page 97 they admit that "Today it is impossible to accept the simple linear extrapolations back in time of present rates of practically any process." Also they concede that: "Today decay of unstable nuclear species is the only terrestrial process that we dare to consider statistically constant through time. This of course is an assumption, but based on sound physical reasoning (page 99) . . . It was assumed, of course, that all the stable daughter isotopes present had formed only from the parent isotope in a particular mineral crystal." My own reaction is how do we know that some so called derived leads or "daughter isotopes" were not there to begin with, a necessary result of the creative process. Thus in Figure 8.17, page 159, the isotopic dates of the Cordilleran vary from 0.0 to .3 billion years! Though many of the Prepaleozoic rocks are highly metamorphosed "others are almost as youthful looking as many Cenozoic ones." (page 146) They are often exposed right at the surface of the earth and in many parts of the world are virtually identical with the Paleozoic ones! As the authors say: "In general the lowest stratigraphic ap-

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pearance of Cambrian index fossils has defined this boundary, but no human being was around to paint a stripe on the rocks for us; so in continuous or conformable sequences of strata, what assurance is there that Cambrian index fossils appear in a position synchronous with their lowest position in Sedgwick's Welsh appearance?" How very true this is; but does not the same reasoning make one question the logic of assuming that Carboniferous or even "younger" strata could not have been deposited simultaneously with the Cambrian in other parts of the world? Most certainly they are also found lying directly on so called Prepaleozoic rocks.

In Chapter 9 it is pointed out that unusually high rounding values of sand grains suggest a long history of wind transport. Yet most, as shown by marine fossils, were deposited in the sea. How can these facts be reconciled, ask the authors. "The present does not provide a complete key to the past, for we cannot find good samples today of all phenomena found in the ancient world." (page 210) Cambrian rocks are often at the surface as shown in figure 9.26, page 211, all subsequent strata presumably eroded away. To explain the extensive limestone strata it is claimed that large continuous areas of shallow water or seas existed in late Cambrian times, thus allowing the limestone deposits. These presumably came from macerated shell debris, yet much limestone has no shell debris at all. Agitation of the water causes the loss of carbon dioxide, saturated condition of the calcium ions, and so precipitation of calcium carbonate on all convenient surfaces. Also filamentous algae could not have received adequate sunlight for photosynthesis in water much deeper than 100 to 150 meters, the maximum depth indicated for the Cambrian-Ordovician epeiric seas. Certainly nothing of this sort is found now.

A most interesting statement is made on page 219 to the effect that much if not most of the sediments were formed by infrequent, short-lived violent events rather than average conditions. Some very fine limey muds are forming behind the Florida Keys reef, but the water is less than 3 meters deep, so only roughly similar to the conditions of early Ordovician rock formation. On page 229 the late Ordovician sea is represented as being one of the most complete floods experienced by any continent, resulting in a tremendous uniform shallow sea, the like of which is non-existent today.

On page 241 a most interesting statement is made: "In turn the difference between their fossil assemblages make it difficult to correlate between the facies on the basis of index fossils; this illustrates the limitation of facies fossils as discussed in chapter 4. The correlation problem is complicated further by the fact that the strata have been severely folded and faulted." Here it is recognized in a limited way that index fossils sometimes give erroneous ages. On page 245 some spectacularly ill-assorted conglomerates are described. They are in the northern Appalachians and limestone fragments from mixed Cambrian and early Ordovician formations occur helter skelter as local deposits within Ordovician black shales; some of the blocks are many meters long and occur in scattered localities. An attempt is made to explain this by postulating submarine

avalanches. But why should an avalanche happen to bring lower Cambrian deposits into such a mixture with the presumably upper Ordovician strata? On page 250 the great volume of Ordovician sediments is accounted for by postulating elevation in one part and resulting sediments deposited in another subsiding part. Surely some fanciful concepts are needed to explain the unusual arrangement of the strata.

We are asked to imagine shallow epeiric seas oscillating over the system due to world-wide sea level changes many times. This is because a beach exemplifies dynamic equilibrium or steady state, for energy is constantly being expanded in the system, and sand is constantly in motion, yet the beach does not change in form significantly through long ages of time (except for severe storms, which temporarily upset the equilibrium). Accordingly shallow epeiric seas must be postulated to explain all extensive stratified rocks. This is a phenomenon quite unlike anything now observable.

On page 283 it is shown that younger Devonian strata rest unconformably upon a variety of older rocks, including even Prepaleozoic ones. Another sea level change is postulated, and practically all of the craton and even parts of the mobile belts eroded to produce profound changes in the continent. Practically all of the early Devonian and Silurian strata were eroded and completely removed. Accordingly the upper Devonian rests on Ordovician and Cambrian rocks.

On page 290 discordant dates of 300-150 million years were obtained from biotite mica and 700-1100 years from zircon of the same rock. A complicated attempt is made to explain this by multiple heating and deformation. On page 293 in figure 11.41 a map is shown with discordant dates ranging from 350 to 850 million years! Complex assumptions of remelting are used to "explain" them. They are found in the Hudson Highlands area.

On page 295 tree trunks found in the upper Devonian are described. They are supposed to have floated westward from the Catskill area and then been deposited in black muds (not shale). The authors state that "These black shales represent a puzzle" (page 297) "The most probable suggestion is that the sea was so clogged by floating marine vegetation (like the present Sargasso region of the mid-Atlantic) that mixing and oxygenation of the bottom was inhibited." It would seem to me that this type of thing is exactly what one would expect in some places during the beginning phase of a world-wide flood.

Subtropical conditions are postulated in north America, Europe, Siberia and Australia. The climate was much more mild and homogeneous than today. "If so the present is not a very good key to the past in terms of climate." (Conclusion on page 298 to the first paragraph.)

In the early Carboniferous and Permian times much of the craton was raised above sea level. In a geologically short time from the middle Paleozoic what had been a paradise for denizens of the deep was to become one for luxuriant swamp forests, lurking reptiles, and giant insects. Most certainly a remarkable amount of evolution in a relatively short time is postulated in order to account for these remarkable new creatures.

On page 311 the strata deposited over the craton and innermost parts of the mobile belt are described as showing a *repetitive* pattern present in varying degrees in late Paleozoic strata in other continents. "At least 50 late Paleozoic cycles are known" and "It is apparent that these were rapid oscillations, occurring in a wholly different time scale than earlier Paleozoic transgressions and regressions." My own reaction is that this is exactly what one would expect on a world wide flood basis as relatively shallow waters ebbed and flowed across the continents. Only the time scale of the phenomena is of course immensely different in orthodox as compared to Flood geology concepts.

It is surprising how much thrust faulting is appealed to as the explanation of the wrong order of the fossils. Thus the entire Marathon-Quachila is described as having been deformed by northward thrust faulting, as determined by the fossils being in the wrong order in this large sector. On page 330-331 the observation is made that shallow nearly flat thrust surfaces within superficial rocks are known in many belts. They are explained by the idea that they simply slide over deep level metamorphic and igneous basement like rocks in the same manner as a rug may slide and wrinkle over a rigid floor. This is the gravity tectonic concept and the authors comment that "many of these matters are incompletely understood by even the most advanced specialists."

Also on page 366 the Cretaceous strata are shown resting unconformably on a variety of older rocks! The same was true of the middle Jurassic as shown on map 13.18, page 362. How could Cuvier or "strata" Smith ever get any sequence out of this? Again in the early Cenozoic a series of complex *low angle* thrust faults carried immense slabs of rock eastward over one another along a zone extending from Mexico to Northwestern Canada. Figure 13.30 shows Silurian strata thrust over Triassic, yet there is very little evidence physically of this thrusting.

A surprising number of transgressions and regressions of the sea are postulated in this era also and it is observed that "while transgression appeared in one area, regression may have prevailed only 100 miles away." Surely this is the sort of thing one would expect in a world-wide flood situation. The sudden extinction of the dinosaurs is still a mystery as regards its cause. It is most interesting that there are no connecting links in the family tree of the dinosaurs as shown in figure 13.50 on page 394.

### Books Published

(Continued from page 229)

\$4.95, postpaid and prepaid, from Creation Research Society Books, 5093 Williamsport Drive, Norcross, Georgia 30071. Please make checks payable to Creation Research Society Books.

### Reprint

*A Decade of Creationist Research*, by Duane T. Gish. Reprinted from the *Quarterly* for June, 1975. 16 pp., 75 cents postpaid, 50 cents each for orders of 100. Order from the College Bookstore of Concordia College, 4090 Geddes Road, Ann Arbor, Michigan 48105.

In figure 14.38, page 424, only Jurassic to Quaternary strata are shown lying on the mantle. There are thousands of such places where only a few "ages" of rock formations lie on the basement mantle. Much ingenious maneuvering is necessary to explain the lack of successive or previously deposited sediments as the case may be. On page 431 it is noted that angiosperm flowering plants in all their vast variety occurred or "evolved" only since early Cenozoic time! The parallel evolution of the needed insects for cross pollination occurred at the same time. This amazing burst of evolutionary activity is entirely unexplained. Why not simply admit that while the swamp-loving types of plants grew in one area, flowering angiosperm types of plants grew in another area ecologically designed for them.

Finally we have again vast areas thrust over strata supposedly much "younger" in age. Thus in northern Scotland Caledonian (Eocambrian) is thrust over unmetamorphosed flat-lying lower Paleozoic sandstone and limestone. Also figure 16.22, page 495 shows Jurassic and Cretaceous shales carried north over Tertiary Flysch. In figure 16.5 on page 482 an immense number of thrust faults are shown. In South America, the most severe structural disturbances, including eastward thrust faulting toward the craton, were delayed until Miocene and Pliocene times. Most of the great uplift of the mountains occurred in late Cenozoic times. Yet we find plants such as certain woolly-leaved *Calceolaria* species highly adapted to the Andes mountain environment.

The above is only a sampling of the many fascinating subjects covered by the authors of this remarkably interesting book. After carefully reading it I have come to the conclusion that if anything Henry M. Morris and John C. Whitcomb<sup>3</sup> have understated the problems "orthodox" geologists face in trying to explain the many wrong order formations, unconformities and disconformities. Probably the total area in which fossils are in the right order is far less than where they are found in the wrong order, or where the "younger" strata containing them rest directly upon the basement complex.

### References

- <sup>1</sup> Dott, Robert H., and Roger L. Batten, 1971. *Evolution of the Earth*. McGraw-Hill.
- <sup>2</sup> Lammerts, Walter E., 1972. The Glarus overthrust. *Creation Research Society Quarterly* 8(4):251-255.
- <sup>3</sup> Whitcomb, John C., and Henry M. Morris, 1962. *The Genesis Flood*. Presbyterian and Reformed Publishing Co. For a detailed discussion of overthrusting see especially pages 180-211.

### Evolutionistic Defense

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### References

- <sup>1</sup> Armstrong, H. L., 1978. Thermodynamics, energy matter, and form. *Creation Research Society Quarterly* 15 (2): 119-121, and (3): 167-168 and 175.
- <sup>2</sup> Humphreys, D. Russell, 1978. Using the second law more effectively. *Creation Research Society Quarterly* 14 (4): 209-210.
- <sup>3</sup> Williams, Emmett L., 1966. Entropy and the solid state. *Creation Research Society Quarterly* 3 (3):18-24.
- <sup>4</sup> Williams, Emmett L., 1971. Resistance of living organisms to the second law of thermodynamics: irreversible processes, open systems, creation, and evolution. *Creation Research Society Quarterly* 8 (2): 117-126.
- <sup>5</sup> Zemansky, Mark W., 1943. *Heat and thermodynamics*. Second edition. McGraw-Hill. P. 73; for an application see pp. 121 and 122.