

# REACTIONS

*Readers are invited to submit their reactions to the articles in our journal. Please address contributions to: ORIGINS, Geoscience Research Institute, 11060 Campus St., Loma Linda, California 92350 USA.*

## **RE: CHADWICK: PRECAMBRIAN POLLEN IN THE GRAND CANYON — A REEXAMINATION (ORIGINS 8:7-12)**

[Chadwick's article] is largely devoted to questioning the accuracy of our joint work on pollen and spores from the Grand Canyon, besides the work I performed in conjunction with Dr. Gerhard Kremp, a German palynologist who was head of the Botany Department at the University of Arizona at the time I was taking work there in geology.

As I see it most of the Chadwick criticism is invalid, and shows a misunderstanding of the work I did at the University of Arizona under the guidance of one of the world's leading palynologists. Perhaps the general public was unaware of the reason I was chosen by Dr. Kremp to help in this Grand Canyon study. I was taking a class in botany from him. He needed someone to help him in a study of the Petrified Forest. Dr. Kremp had many students to choose from for that project. He selected me. On the basis of the work I did in the Petrified Forest, I was selected to aid in a similar study in the Grand Canyon. The point is if this work was done in a sloppy manner, as the article in *Origins* infers, then equal blame would rest on the shoulders of Dr. Kremp, and incidentally would cast doubt on the value of most published work in palynology.

Dr. Kremp took his class to the Canyon to take rock samples to process in the University specially equipped laboratory, where contamination is nothing to worry about. The inference in the *Origins* article was that the sampling was done in a careless manner. Actually Dr. Kremp did the sampling himself by cutting back into fresh, unfractured rock. The rock samples were sealed in sterile plastic bags. Dr. Kremp took them in person to the laboratory, where they were thoroughly washed before grinding and being placed in sterile tubes for processing. We used an improved technique that Dr. Kremp invented, which in part explains why I was able to get results where others failed who used less efficient techniques. The *Origins* article infers that in the main our results came from presently growing plants. The University has a library of spore samples from presently growing plant life, and our results don't match. Furthermore the red stain comes from having been embedded so long in red rocks. All air entering the laboratory was filtered.

The Loma Linda scientists gathered rock samples with one of Walter Lang's trips to the canyon. As I recall, I helped them in taking samples which they took to Loma Linda. I waited for months to hear from them, but finally they called to come over and help them set up a laboratory for processing the samples. I spent a week there. Finally they sent me slides of the spores they collected. Their results pretty much paralleled mine. I felt happy that we were working together, for the job was too big for one or two.

Then something happened to send the whole deal in reverse, as indicated in [Chadwick's] article. We do get plenty of backlash but in the main it comes from evolutionists or those who employ long ages. The fact that in the main the Tucson results show about the same type of angiosperms and gymnosperms from top to bottom of the Canyon suggest creation rather than evolution. The top Kaibab rocks contain the same type of brachiopods as the bottom Cambrian rocks; also, we find angiosperms

and gymnosperms most of the way through the canyon, suggesting a fast deposition at the time of the flood, rather than a slow evolutionary deposition, as my book "CANYONS OF CANYONS" explains in detail.

Morgan, et al., tried to duplicate my work at the University laboratory, but without success. After I examined his slides, the reason was self-evident. He had used an obsolete technique, and the slides were so clouded with silica that nothing was visible.

The charge of the poor quality of the photos in my paper is a new one to me. My coworkers in the Tucson laboratory thought my photos were good. The mention of some 10,000 feet of Proterozoic rock below the Cambrian emphasizes the long ages concept. Strange indeed that a few miles to the west, where the main trail descends, this Proterozoic formation does not show up.

Reference is made in *Origins* to the Salt Range of Punjab, India where a similar stratigraphic anomaly exists. This is taken at face value without first-hand study, while the attempt in *Origins* is to demolish the University of Arizona work in the Grand Canyon.

*In passing we might mention a similar anomaly to that of the Grand Canyon. I had a personal letter from the scientist who did a similar piece of work in Venezuela some years ago. His work was challenged by three groups of scientists, but were unable to make their challenge stick. And if the Grand Canyon work is to stand, why are there no more cases coming to light with similar results? The answer is plain, too few creationists available for this type of study, and evolutionists are not the least bit interested. If they were, why have not the University of Arizona tried to either corroborate or defuse my work?*

How could we find 10,000 feet of Precambrian sedimentary rock strata a mere ten or twelve miles east of the Bright Angel trail where we find no outcrop at all of Precambrian sediments? Actually my spore samples from the Cambrian and Precambrian pretty well matched. And why do evolutionists ridicule any mention of a biblical flood? Just because the flood would so mix the fossils that any semblance of evolutionary order would be impossible. That is why we find so many jumbled stratigraphic sequences, such as in Glacier Park, etc.

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I have read with great interest and little enthusiasm the article by Dr. Chadwick on the matter of the Precambrian pollen grains and Mr. Burdick. I say with little enthusiasm, because of the facts which made the *Origins* article necessary.

I became a bit involved in this matter of pollen grains being present in too early a strata some years ago. At the time, a Mr. Waisgerber (Feb. 1973 *Geotimes*) had challenged geologists to check out the material in a *CRSQ* [*Creation Research Society Quarterly*] article in 1966 3(1) entitled "Microflora in the Grand Canyon." Drs. Allen Solomon and Ralph Morgan took up the challenge and reported their findings in the June 1973 *Geotimes*. The pertinent quotes from the report were as follows:

*Burdick asked one of us to accompany him to the canyon, collect at Burdick's direction, and to extract those collections, in order to prove or disprove his thesis. The trip could not be made at that time, so Burdick found someone else to do the collecting and upon his return asked to have the samples extracted for pollen with safeguards against contamination. The extractions were done as requested. The results were total palynological sterility; i.e., no pollen grains or land plant spores of any kind were seen.*

The implication was that the spurious results were due to contamination, and the reported pollen grains were current ones. I felt that this matter called for an answer at least of some sort. Hence I addressed the following letter to the *Geotimes* editors:

*Having taken due note of the letter entitled "Challenge Taken Up" in Geotimes of June 1973, pp. 9-10, I find it necessary to draw some items to your attention. The matter under discussion is the thesis that some plant forms are far too modern for the strata in which they are found. It follows that this can be interpreted as evidence favoring a creation origin over against an evolutionary origin of life. This was the thrust of Burdick's article, the evidence of which was questioned.*

*However, Burdick's information is not needed for support of the thesis since Axelrod (Evolution, 13:264-275) and Leclerq (Evolution, 10:109-113) over 15 years ago had already reported the finding in Cambrian rlx of the microspores of vascular plants as well as tracheids possessing bordered pits. Neither are these isolated instances, since several workers in India, Australia, and the U.S.S.R. have reported these findings. At this point I would ask, "How is it that after more than 15 years this information is still buried?"*

*Was it this information along with others that caused E. J. Corner to state in his essay entitled "Evolution" (which appeared as chapter 3 in MacLeod and Cobley, Contemporary Botanical Thought), "Much evidence can be adduced in favor of evolution ... from biology, biogeography, and paleontology, but I still think that to the unprejudiced, the fossil record of the plants is in favor of special creation."*

*For discussion and references, see Rusch, W. H., "The Revelation of Palynology," CRSQ 5(3):103-105.*

I addressed carbon copies of my *Geotimes* letter to the two gentlemen, Solomon and Morgan, who had questioned Burdick's evidence. Interestingly enough, neither ever replied in any way. At the time, I wondered why *Geotimes* editors saw fit to eliminate the last two paragraphs of my letter when they printed it in *Geotimes*, September 1973! At that same time, I also sent copies to Mr. Burdick of all the material, both the original letters as well as all the responses, without ever receiving any response as I recall.

I suspect that since this Burdick pollen grain material has been used in "creation vs evolution" lectures and articles in recent times, the Chadwick article became really a necessity. It is unfortunate that poor technique apparently invalidated Burdick's findings. But certainly the findings of Axelrod and Leclerq leave the major thesis intact. Of recent times, the use of this material as it appeared in my article, has caused evolutionists to raise the question of contamination in the findings of both Axelrod and Leclerq in an attempt to minimize the effect. It would seem a reasonable question, particularly on the basis of the Burdick experience if it were just a matter of pollen grains. But it certainly would seem to be the height of naivete for any reputable scientist to seriously question the evidence of the tracheids on the basis that they are contaminants. Do those individuals seriously wish to postulate that tracheids with bordered pits are flying around loose in the atmosphere as possible contaminants? Oh come now.

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