

A CRITIQUE OF THE ARTICLE, "MISSISSIPPIAN AND CAMBRIAN STRATA INTERBEDDING: 200 MILLION YEARS HIATUS IN QUESTION," BY WILLIAM WAISGERBER, GEORGE F. HOWE, AND EMMETT L. WILLIAMS; Creation Research Society Quarterly, v. 23, no. 4 (March, 1987), p. 160-167.

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Several levels of unconformity have been recognized by geologists in the Grand Canyon during the present century. (An unconformity is a level or point in a local stratigraphic column which has a definite contrast of strata or which contains erosional features showing that the deposition of the sequence of strata was interrupted by a long period of time.) In the C. R. S. article under consideration Waisgerber et al. have attempted to show that the long-recognized unconformity at the base of the Redwall Limestone formation in the Canyon does not exist.

1. The authors begin by describing their study of the alternating layers of limestone and micaceous shale (p. 161) which are present at the North Kaibab Trail site which they examined in the field and compared with published descriptions of the area. At this North Kaibab Trail site the base of the Redwall Limestone formation of the Mississippian rock system rests on what has been identified as the Muav Limestone formation of the Cambrian rock system, and is seen in the exposed face of the rock layers, but the exact level of the junction between the two formations has long been in question in this particular locality. This is at least partly because there are, in this locality, some strata of micaceous shale interbedded with limestone layers. Waisgerber et al. focus their attention on these alternating layers in the earlier part of the paper and assert that they represent an interfingering or interbedding of Cambrian and Mississippian strata (p. 161). They then devote a considerable space to the fact that they could not find any preserved erosional features at the contact with the Muav strata at this site.

If there were a true interfingering of Cambrian and Mississippian strata here, then we would have to admit that there is no unconformity at this site. Waisgerber et al. assume that it is impossible that any of the micaceous shale strata were formed during the Mississippian Period, and that it is likewise impossible that any layers of limestone which closely resemble the Redwall Limestone could have been formed during Cambrian times. Neither of these assumptions is true. Actually, identification of the period to which these particular strata belong is difficult, and there is disagreement among geologists concerning their identification. The authors allude to this difficulty on p. 166, col. 1..

Another fact which needs to be kept in mind is that limestone strata which were formed in one geologic period are often very similar to those of an earlier or later period. Likewise, micaceous shale layers of one geologic period can closely resemble those of a different period.

So, it could well be that geologists have been calling certain of these questionable strata at this site "Cambrian" when in reality they were formed in the Mississippian Period, or vice versa. Also, Waisgerber et al. give no indication in their paper that they had any way of knowing exactly which strata in this sequence at the North Kaibab Trail site have been precisely identified as either Mississippian or Cambrian. (There are of course no labels on them, and identification has to be made with the aid of detailed laboratory studies; e. g., by comparing the microscopic-size biogenic components.) Even if earlier geologists in