

Since that time a good number of geologists have studied this contact and have identified various kinds of erosional features there. McKee and Gutschick carried out a very extensive and careful research of the nature and depositional conditions of the entire Redwall Limestone formation. They describe the erosional basal contact of the formation which we have just mentioned, and also include eight to-scale diagrams of some of the very distinct types of erosional structures which they observed (McKee and Gutschick, 1969, p. 15-17, 24, 614-619, and 625-628). Their study also revealed similar, distinct features of erosion at a higher level in the Formation between the Thunder Springs Member and the Moony Falls Member which rests upon it. (A "member" is a subdivision of a "formation." There are 4 main members which make up the Redwall Limestone deposit.) McKee and Gutschick (1969, p. 49-52) describe this erosional unconformity and give seven to-scale diagrams of the ancient erosional structures at this level in the Redwall Limestone which have been uncovered in Kanab Canyon, Marble Canyon, Havasu Canyon, and at other sites. (The reader should understand that the uncovering of the ancient erosional features has been accomplished by modern erosional processes.)

The extensively eroded surface at the top of the Redwall Formation is even more spectacular than those which we have just been considering, and was more extensively studied and described by McKee and Gutschick, as well as by other geologists. The karst-topography cavities and channels of this eroded surface, which we mentioned above, extend far back away from the Canyon itself. Just as with the other erosion surfaces at the lower levels, more cavities become exposed as the Canyon is progressively worn farther back into its banks. (The Redwall Formation extends for over 175 miles from north to south and for more than 275 miles from east to west, being known from many drilling records and seismic surveys.)

It is evident that the original period of erosion of the top of the Redwall Formation was at least several thousand years in length, as some of the solution cavities which formed in the already-well-cemented limestone are large and complex. Another clear evidence that this was a long period is the abrupt blocky knolls which were left standing on the ancient limestone landscape and later buried by the addition of the Supai Formation. These knolls or small mesas are periodically exposed as the Canyon wall widens. They are up to 40 feet in height and are composed of limestone which, at the time, was more resistant to weathering than that which was around it, and thus withstood the erosion process.

After the erosion of the ancient landscape had progressed to the ^{karst-blocky-knoll} stage, conditions for sediment deposition (rather than erosion) were restored, and the remaining 2,000 feet (plus) of rock layers were added. During the early stages of this later deposition the solution cavities of the Redwall Formation were filled in with non-marine, clastic sediments of the Supai Formation which was being deposited above the Redwall, and the blocky knolls were buried by the same. There is a good description of these cavities and knolls in McKee and Gutschick (1969, p. 74-85 and 563-564). They have included several to-scale diagrams of the ancient erosional features which have been found uncovered at various locations at the top of the Redwall Limestone (p. 78-81). Also included are photographs of some of these, taken in the field, on p. 94-95. There is a simplified, but fairly inclusive, summary of their findings concerning this erosion surface and the other characteristics of the Redwall Limestone in Wonderly (1977, p. 140-145). The young-earth creationists' omission of information concerning the erosion surfaces of this well-known formation has misled large numbers of people into thinking that all of