Chapter 49

Planation Surfaces: Summary and Implications

Summary

The surveys in Parts VIII and IX show planation surfaces are common on all continents as Lester King summarized in the 1960s.[1] Others as well have also noted that they are found around the world:

> Many American and continental colleagues still regard marine erosion as a traditionally British explanation for upland plains, *which are now known to be a world-wide phenomenon*… (emphasis mine).[2]

Twidale accepted the general scheme of geomorphologist Lester King that remnants of planation surfaces are part of the scenery of all continents and are generally found at three levels.[3,4] Planation surfaces are sometimes high in the terrain (Figure 49.1)[5]and can be amazingly flat. This is considered a geophysical impossibility by some geologists.[6] King summarizes: "A planation of extraordinary smoothness developed over enormous areas in *all* the continents (emphasis in original)."[7]

Moreover, the order of the geological history relating to planation surfaces is similar over the entire earth, as Ollier and Pain have pointed out (see Figure A1.1).[8] It begins with vast sedimentation that over time was cemented into sedimentary rock. The rock layers were then deformed by numerous folds and faults, often when the sediment was still soft to allow bending without breaking. Second, the rough, deformed terrain that consisted of various types of rocks of varying hardness, was planed into a flat surface. Tilted sedimentary rocks and granite were commonly beveled to the same grade. Third, often a thin layer of mostly rounded rocks blanketed the planation surfaces.[9] Fourth and last, the surfaces underwent differential vertical tectonics and severe erosion that whittling the surface down enough to leave only remnants, some of which are still quite large. During uplift, erosion was frequently channelized and resulted in considerable vertical dissection. The expansive African Surface among many others is one example of this process (see Chapter 42).

Some planation surfaces are dated to well over 100 million years old, despite the fact that current erosion rates should have destroyed the surface within a few million years at most (see

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[1] King, L.C., 1967. *The Morphology of the Earth—A Study and Synthesis of World Scenery*, Hafner Publishing Company, New York, NY.
[2] Brown, E.H., 1960. *The Relief and Drainage of Wales: A Study in Geomorphological Development*, University of Wales Press, Cardiff, U.K., p. 36.
[3] Twidale, C.R., 1998. Antiquity of landforms: an 'extremely unlikely' concept vindicated. *Australian Journal of Earth Sciences* 45:657–668.
[4] Twidale, C.R., 2003. Canons revisited and reviewed: Lester King's views of landscape evolution considered 50 years later. *GSA Bulletin* 115:1,155–1,172.
[5] Twidale, Ref. 3, p. 660.
[6] Phillips, J.D., 2002. Erosion, isostatic response, and the missing peneplains. *Geomorphology* 45:226.
[7] King, L.C., 1983. *Wandering Continents and Spreading Sea Floors on an Expanding Earth*, John Wiley and Sons, New York, NY, p. 188.
[8] Ollier C. and C. Pain, 2000. *The Origin of Mountains*, Routledge, London, U.K., pp. 3–4.
[9] Crickmay, C. H., 1972. Discovering a meaning in scenery. *Geological Magazine* 109:173.

Chapter 35). Physical evidence of erosion indicates the uniformitarian dates are highly inflated.[10]

Figure 49.1. Canisteo River Valley from Pinnacle State Park, New York (wikipedia). The distant ridge at the same elevation represent the remnants of a planation surface that was uplifted to form the Allegheny Plateau.

Implications

Although there is an accepted historical sequence for the formation of planation surfaces, geomorphologists have debated their number and age. Collectively they admit planation surfaces are easy to recognize. One of the problems with attempting to explain their origin is they are *not* forming today, except on a very small scale and only when a raging river breaches its banks, eroding the rock flat along its bank. So, planation surfaces defy the uniformitarian principle (see Chapter 34). But uniformitarian scientists are not without explanations, as will be discussed in the next part.

If we were to use the raging river as an analogy and extrapolate to the size of planation surfaces, we would have to postulate a dynamic "river" hundreds of miles wide. The water needs to move extremely fast in order to plane a rough, folded and faulted terrain (including mountains) down to a flat surface. This sounds very much like the Genesis Flood discussed more in Part XII.

[10] Oard, M.J., 2000. Antiquity of landforms: objective evidence that dating methods are wrong. *Journal of Creation* 14(1):35–39.