

Chapter 52

All Geomorphological Hypotheses Fail

No scientist is content with an unsolved mystery. The origin of planation surfaces has remained a mystery for around 200 years, from near the beginning when geology became a science.¹

All uniformitarian geomorphological hypotheses explaining the generally flat, cobble- and boulder-capped planation surfaces fall considerably short, each having its own weaknesses:

The difficulty that now confronts the student [all who study geomorphology] is that, though there are plenty of hypotheses of geomorphic evolution, there is not one that would not be rejected by any majority vote for all competent minds. This situation is in itself remarkable in a respectable department of science in the latter half of the 20th Century (brackets mine).²

Crickmay went on to say that many inspiring ideas led to error with time:

A century and a half of literature bearing on scenery and its meaning shows primarily the inspired innovations that carried understanding forward; followed in every case by diversion from sound thinking into inaccuracy and error.³

Thomas and Summerfield expressed the same sentiment over the failure to explain planation surfaces:

Understanding the long-term denudation of landscapes remains speculative, despite attempts to find bridges between theories and the evidence which supports them. The existence of planation surfaces is asserted by a host of writers, yet few attempt any serious explanation of their development ... It is perplexing that after a century of argument and observation of the continents, *no generally accepted mechanism for planation has been forthcoming* (emphasis mine).⁴

Small concurs; surprisingly little is known about the origin of landforms:

Any serious student of geomorphology will quickly realize what is actually known with certainty about landforms and their origin is surprisingly small, despite the vast amount of research, testified to by innumerable books, articles and reports, which has been done during the last fifty or so years.⁵

Davis' audacious prediction that landforms would be readily explained during the twentieth century was not fulfilled. The question is why? Davis thought scientists understood the processes that led to their creation, but now it is clear they do not.⁶ This leads us, and some of them, to seriously reconsider the foundation of geomorphology, uniformitarianism.

¹ Twidale, C.R., 1998. Antiquity of landforms: an 'extremely unlikely' concept vindicated. *Australian Journal of Earth Sciences* 45:661.

² Crickmay, C.H., 1974. *The Work of the River: A Critical Study of the Central Aspects of Geomorphology*, American Elsevier Publishing Co., New York, NY, p. 192.

³ Crickmay, Ref. 2, p. 201.

⁴ Thomas, M.F. and M.A. Summerfield, 1987. Long-term landform development: key themes and research problems. In Gardiner V. (editor), *International Geomorphology 1986*, Proceedings of the 1st International Conference on Geomorphology, Part II, pp. 936-937.

⁵ Small, R.J., 1978. *The Study of Landforms: A Textbook of Geomorphology*, second edition, Cambridge University Press, London, U.K., p. 13.

⁶ Baker, V.R. and C.R. Twidale, 1991. The reenchantment of geomorphology. *Geomorphology* 4:81.

The modern hypotheses of landform development have incorporate rapid uplift, plate tectonics, and radiometric dating into what is called landform “evolution.”^{7,8} But, these ideas are very general and do not seem to address any specific mechanisms that would form flat, eroded land. Geomorphologists have generally quit trying to deduce their origin and instead have retreated into what is called, *process geomorphology*, which studies small time and space variables tor processes hat operate in the present. They hope that after enough data is accumulated from these detailed studies, it will somehow disclose a general theory that explains the origin of landforms.

Ahnert noted that new approaches with new methods are required to understand planation surfaces (his peneplains): “There are still many aspects of peneplains to be explained. Perhaps some entirely new approaches with new methods are needed.”⁹ Other geomorphologists and I fully agree a *new* approach is needed. This book is being developed to point to the feasibility of accepting the Genesis Flood as the “new” approach. But before we can delve into the Genesis Flood, we need to develop how inselbergs relate to planation surfaces.

⁷ Summerfield, M.A. 1991. *Global Geomorphology*, Longman Scientific & Technical, New York, NY, pp. 475–477.

⁸ Summerfield, M.A., 2000. Geomorphology and global tectonics: introduction. In, Summerfield, M.A. (editor), *Geomorphology and Global Tectonics*, John Wiley & Sons, New York, NY, pp. 3–12.

⁹ Ahnert, F., 1998. *Introduction to Geomorphology*, Arnold, London, U.K., p. 229.