

Dynamic Soil Properties --- Continuous Change Resulting from a Continuum of Causal Factors. (S05-monger221439-Oral)

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Abstract:

A soil profile is a cumulative image. It gains energy, it loses energy. It gains matter, it loses matter. Within a soil, matter is transformed and matter is translocated. A soil on a fan-terrace of an arid mountain, for example, owes its characteristics to antecedent factors like tectonic uplift, erosion, and bioclimatically controlled landscape stability. In a stable landscape position, a soil can accumulate pedogenic carbonate and clay for millions of years. Although these types of dynamic soil processes are interesting from a basic scientific point of view, carbon sequestration, landscape ecology, and soil quality are examples of issues that require us to think about dynamic soil processes from a utilitarian point of view.

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