

Starter Soil Vocabulary

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Soil Profile

A two-dimensional vertical section of the soil extending through all pedogenic horizons and down into the geologic material from which the soil was derived. Soil profiles are often described in pits, road cuts, stream banks, and cores or probes.

We typically describe soil profiles and the horizons comprising them. Because soil profiles are relatively small compared to the surrounding landscapes, it is critical to make enough profile observations to extrapolate the information to the hill slope and landscape scales.

Soil profile descriptions are comprised of two distinct steps: morphologic description of the material and the genetic interpretation of morphology by naming the horizons. The naming of soil horizons therefore carries morphologic and genetic information.

Soil Horizons

A layer of soil material approximately parallel to the land surface and differing from adjacent genetically related layers in physical, chemical, and/or biological properties or characteristics such as color, structure, texture.

The differentiation of material into soil horizons or 'horizonation' is a fundamental aspect of pedology.

Solum

An incomplete soil profile consisting of only pedogenic material. *The geologic material is not included*, so solum includes only the A and B horizons.

Control section

The intent in defining the soil moisture control section is to facilitate estimation of soil moisture regimes from climatic data. The upper boundary of this control section is the depth to which a dry (tension of more than 1500 kPa, but not air-dry) soil will be moistened by 2.5 cm of water within 24 hours. The lower boundary is the depth to which a dry soil will be moistened by 7.5 cm of water within 48 hours. These depths do not include the depth of moistening along any cracks or animal burrows that are open to the surface.

Pedon

A three-dimensional body of soil with lateral dimensions large enough to permit the study of horizon shapes and relations. Areal extent is typically 1 to 10m².

Alternatively, we can think of pedons as the smallest volume that can be examined in detail in the field. The pedon concept allows pedologists to more fully understand operative processes.

Epipedon

The uppermost horizon used to classify/name a soil. "Epipedon" is not synonymous with A horizon and may be thinner than the A horizon or include some portion of the E, B and/or C horizons designated in field descriptions.

Polypedon

A group of adjacent similar pedons.

The classification of all pedons comprising a polypedon are the same. Conceptually these are ideal units that are mapped in soil survey work. A parcel of contiguous pedons all of which have characteristics lying within the defined limits of a **single soil series**.

Catena

A series of distinct but co-evolving soils arrayed down a slope. Each soil type or 'pedon' differs from its neighbors, but all occur in the same climate and on the same underlying parent material. Catena are commonly made up of **multiple polypedons and soil series**.