

**Figure 6. Soil Association to Profile**

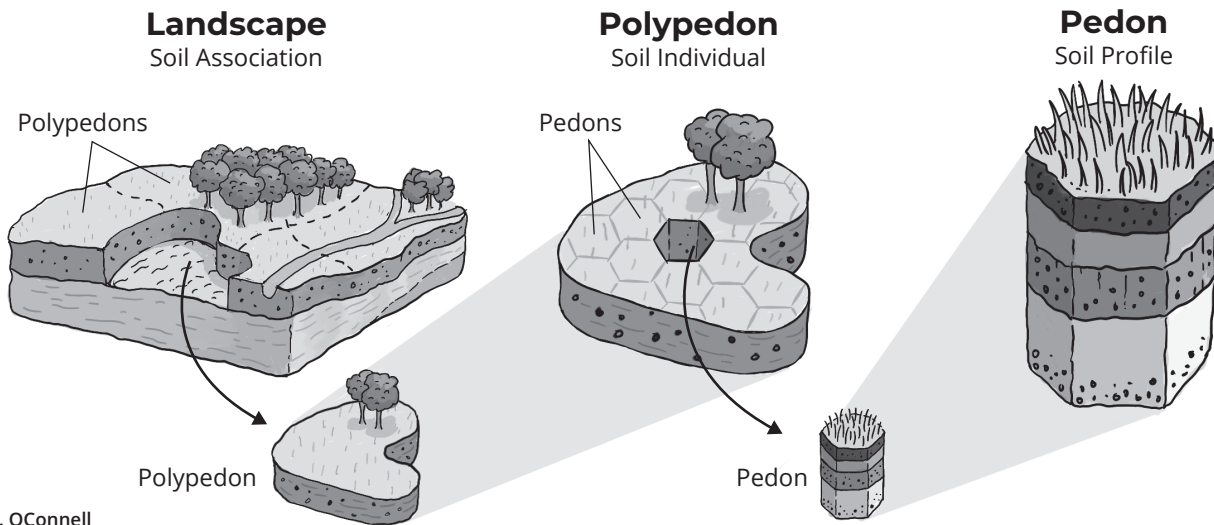


Image: J. OConnell

The differences are in slope and how much and what kind of particles larger than sand-size are in the soil.

That last slope-indicating capital letter can range from A (0-3% slope) to F (25-60%) slope which can be so steep it is a wonder that there could be any soil there. Not all areas of a map have soils, or, if they do, the soils have been greatly disturbed; those areas are designated with terminology such as Ag (alluvial or river sediments), Mg (mine dump), Sm (strip mine), and Ub (urban land).

It is important to remember that the general standard for the creation of a soil map means that the mapping unit that is shown may include dissimilar soil series as minor inclusions as long as the "total amount of dissimilar minor components generally does not exceed about 15 percent if they are limiting and 25 percent if they are non-limiting." A limiting condition is something that would affect the soil interpretation and a non-limiting condition is something that would not influence the soil interpretation. Therefore, it is important to understand the primary purpose of the soil map you are using, because this map does not include just raw data or observations, but an interpretation of the data with a possible biased purpose.

A **Soil Profile** is the basic unit for making soil observations and ideally a soil profile should extend to the depth where the parent material has not been completely altered, i.e., the C or R horizons.

It is common practice to attempt to document the soil profile to a depth of at least 2 meters or about 6 feet below grade. Therefore, soil profiles provide a 2-dimensional representation of the variations and changes in the soil at a specific location in the landscape, but they do not fully describe the 3-dimensional variation across a landscape.

A **Pedon** is large enough to contain all the properties of an individual soil and is used as the basic mapping unit in soil science. Pedons range in size from 1 to 10 square meters with a sufficient depth to include all soil horizons and parent material. This is a 3-dimensional representation of the soil body. You could think of a pedon as being a sampling point.

**Table 5. Detailed Soil Name Example**

Map Symbol:	MoB
Soil Series:	Morris
Map Unit Name:	Morris channery loam, 0 to 8 percent slopes
Taxonomic Class:	Coarse-loamy, mixed, active, mesic Aeric Fragiaquepts
Full Name:	Morris Coarse-loamy, mixed, active, mesic Aeric Fragiaquepts

**Table 6. Example of the Complete Classification of a Soil**

Order	Sub Order	Great Group	Sub Group	Family	Series
Inceptisols	Aquepts	Fragi	Aeric	Coarse-Loamy Mixed Active Mesic	Morris

U.S. Department of Agriculture, Soil Conservation Service, 1981.

When interpreting a soil name, you read it from right to left. This soil is an Inceptisols (order), Aquepts (Suborder), Great Group (Fragi- "presence of a fragipan horizon"), Subgroup (Aeric), Family (Coarse-loamy (texture – particle size classes), mixed (Mineralogy class of the particles), active (Cation exchange capacity class/activity), mesic (soil temperature regime), and Series (Morris).