

STRATA (STRATUM)

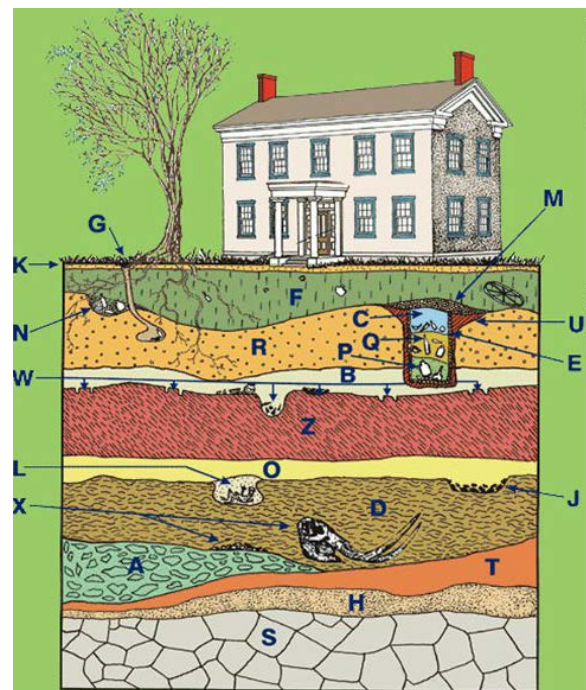
Strata is the plural form of *stratum*, both often abbreviated as simply “strat.” The word itself relates to the geological term *stratigraphy*, which I’m sure you’ve seen displayed in museums. A *stratum* is a “layer of material, naturally or artificially formed, often one of a number of parallel layers one upon another” (White 2008). Other disciplines also use this word to refer to similar ideas, such as the construct of a stratified class system used by anthropologists and sociologists to describe levels of social organization. Also, medical jargon uses *strata* to describe some layers of tissue, like skin.

For our purposes, *strata* are an important part of the provenience of artifacts. Recording the stratum a particular item is found in can not only tell you the relative depth, but also describe the context of the soil around the artifact. Stratigraphy of a site may not be evident while digging. Different strata can be indicated by differences in soil color, soil texture, or simply the artifacts within it. Sometimes the significance of a stratum is not understood at first, but becomes clearer as the excavation continues.

The organization of *strata* can be used in relative dating. This method contrasts with absolute dating, the kind provided by chemical testing like radiocarbon dating. Relative dating uses the Law of Superposition which dictates the simple notion that the deeper something is buried, the older it must be. This is generally true with some very important exceptions that relate to *strata*. For instance, one stratum can intrude into another. Often the intruding stratum is culturally created such as a post hole or a burial. Sometimes they are created

naturally such as animal borrows and root tracts. These phenomena create stains in the soil and are actually artifacts themselves, though they cannot be collected and taken to the lab. These “non-removable” artifacts are known as features.

Features can have a distinct soil color, texture, and contains just like *strata*. Some features, for instance a trash pit, or midden, can have *strata* within the feature as well. Careful recording of every stratum, level, and feature is important to understanding the processes that created the site and how it might have changed over time.



When recording *strata*, it is conventional to label them sequentially as you encounter them and using Roman numerals. For instance, the first layer of soil is usually labeled “Stratum I.” As you dig, you may notice a change in color, or suddenly the soft ground is very compact and hard to dig, or perhaps you found nothing and then you come upon a layer of lithic debris. This would be “Stratum II.” Best practices say that once a stratum is identified (including

numbering and describing), then no matter where that stratum is encountered within the site, it should keep the same number. This means that if you have a layer of an artifact-heavy deposit engulfed within a stratum of a certain soil, it is possible to excavate through Stratum II, then Stratum III, and then back to Stratum II. Now you understand why it's so important to write everything down; This stuff can get confusing!

Speaking of writing things down! Paperwork usually includes a form for each stratum. Sometimes this can also be for each *level* (which are arbitrary layers of soil, usually measured in 10 centimeters. At Fort Daniel, we excavate in 10 cm levels within a natural stratigraphy. Levels are simply a way to maintain control of the vertical increments and it's common to use both levels and strata at once). At the end of each layer it is typical to fully document what artifacts were found and describe the soil. You can take photographs and make drawings of the floor of the unit. This is also a good time to take soil samples for later analysis.

Each time you start a new unit, a new level, a new stratum, a new feature, you start a new provenience. And with a new provenience comes a new artifact collection bag, paperwork, and eventually bag number in the lab. It's important to remember to isolate the artifacts found and to remember to change the slight difference in provenience in order to maintain spatial control. That is why we dig so slowly and carefully.

When a unit is excavated to a sufficient depth (this varies greatly), you can see the stratigraphy as layers of soil in the wall of the unit. We call this a *profile*. These, too, are recorded with their own paperwork and photography. With all the information taken from the recording of the level floors (vertical) and the profile walls (horizontal), you can map the entire site in virtual 3D. In fact, if you have the high-tech stuff, you literally can map it in 3D.

