READING GUIDE*

Soil Taxonomy

see Buol et al. (2011), Chapter 7, p. 210-232

OBJECTIVE: *To understand the structure of* Soil Taxonomy*, to know the criteria used to define various categories and taxa within* Soil Taxonomy*, and to know the unique nomenclature used to name soil taxa.*

1. What are the 12 soil orders recognized in *Soil Taxonomy*? **What are the key characteristics of each order?**
2. According to the key to soil orders, what is the sequence in which the different soil orders are "keyed out"? Why is it important to systematically follow the keys to *Soil Taxonomy* hen attempting to name the taxa of an unknown soil?
3. What do each of the following formative elements used to distinguish suborders and/or great groups signify when used in a soil taxonomic name? alb, aqu(i), clac(i), camb, cry(o), dystr(o), endo, epi, eutr(o), fluv, fragi, haplo, kandi, orth, pale, psamm(o), quartzi, ud(i), umbr(i), ust(i), xer(o)
4. What are the four types of subgroups recognized in *Soil Taxonomy*? What is the significance of each of these types? Be specific. Give examples of each.
5. What do each of the following formative elements used to distinguish subgroups signify when used in a soil taxonomic name? Abruptic, Aeric, Aquic, Cumulic, Dystric, Eutric, Fluventic, Fragic, Haplic, Lithic, Mollic, Thaptic, Typic, Vermic, Vertic
6. What two purposes are served by family taxa? What is the intended use of the family category?
7. In general, what type of criteria are used to define family categories? Specifically, what different property classes are recognized in *Soil Taxonomy*?
8. What is the *particle-size control section*? What depths are used to define the particle-size control section of a soil?
9. What does the use of the modifier *skeletal* imply when used with the family particle size class name? What does the use of the term *fragmental* imply when used as the family particle size class name?
10. **What is the range in clay percent values present in a soil in the fine-loamy family particle size class?**
11. What does a family particle size class of *sandy over fine-loamy* indicate?
12. How are family mineralogical classes defined?
13. What do each of the following family mineralogical classes signify? kaolinitic, vermiculitic, siliceous, micaceous, mixed
14. How are family cation exchange activity classes defined? What are the family cation exchange activity classes, from highest apparent CEC to lowest?
15. Why is a family particle size class not used with Psamments? Why is a family mineralogical class not used with Quartzipsamments? **Why is a family cation exchange activity class not used with Kandiudults (and similar soils)? Be specific.**
16. What does being a in the *shallow* family indicate about a soil?
17. What is a soil series (according to the current definition)?
18. **What is the difference between a *taxonomic unit* and a *map unit*?**
19. What are *competing series*?

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* *Questions in plain type represent basic facts and concepts. Questions in **bold** type are those that are answered in the text but require more careful consideration. The Synthesis questions at the end help you apply the facts and concepts to a relevant issue.*