READING GUIDE*

Soil Morphology III: Site Characteristics

Soil Survey Division Staff (1993), Chapter 3, p. 59-80 (p. 1-17)

OBJECTIVE: *To understand the various site characteristics that are documented when describing soils, and to recognize the significance of these properties.*

Profiles and Pedons

1. Define and explain the relationships between the following: *soil*, *profile*, *horizon*, *solum*, *sequum*.
2. How should a soil be exposed and prepared prior to completing a pedon description?
3. For measuring horizon depths, what is considered the *soil surface*? How does an O horizon affect this?

Site Characteristics: Relief, Vegetation, and Parent Materials

4. Define and explain the relationships between the following: *land surface configuration*, *landform*, *relief*.
5. What is *soil slope*? What four attributes are used to describe a slope? Why is each important?
6. Describe the two components of land surface shape. How do the different combinations of contour shape and slope shape (perpendicular to contours) influence water movement and soil properties?
7. **How might microrelief patterns influence soil variability and land use in areas where it exists?**
8. How is vegetation information used during soil survey investigations? Describe examples of each.
9. What is *parent material*? What is the fundamental difference between residual and transported parent material? What evidence may be used to determine if the soil over bedrock is formed in residuum?
10. Explain the differences among igneous, metamorphic, and sedimentary rocks?
11. What is *saprolite*?
12. What is *alluvium*? (How is it transported/deposited? Where is it found? What are its properties?)
13. **What is the difference between the floodplain and the terrace of a river?**
14. What are *lacustrine deposits* and *marine sediments*? (How are they transported/deposited? Where are they found? What are their properties?)
15. What is *loess*? (How is it transported/deposited? Where is it found? What are its properties?)
16. Why can *dust* be an important factor affecting soils? **Explain.**
17. What is *glacial till*? (How is it transported/deposited? Where is it found? What are its properties?)
18. What is *colluvium*? (How is it transported/deposited? Where is it found? What are its properties?)
19. In general, where do *organic deposits* develop?
20. What is the difference between *peat* and *muck*? What is the difference between *fibric*, *hemic*, and *sapric*?
21. What is a *discontinuity*? How are discontinuities identified in a soil profile?

SYNTHESIS:

22. Where should each of the following parent materials be found in West Virginia: residuum, colluvium, alluvium, lacustrine deposits, organic deposits? Explain your answer.
23. In terms of land use, what are the pros and cons of using or developing alluvial soils? Lacustrine deposits? Organic deposits?

* *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.*