



Five questions to ask about the soils

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I think that anyone who ever gave a lecture would agree that this feels like being on a stage. One has to educate the audience of course, but also keep attention and be interesting to the listeners. Authority is important but there is a certain vulnerability at all times. There is also a fine line on both sides that should not be crossed. However, the most important thing is that the audience remembers the lecture and certain points the lecturer made for at least some time, and even more that someone gets interested enough to ask for more details. This is often done by giving interesting examples and unusual comparison.

Teaching a soils course there are five main questions to be addressed, of which first four are often subordinated to the fifth being the most complex. First question is “Is the soil alive?”. The answer is yes, and that is what it differentiates from any type of sediment or rock, and it is very vulnerable to environmental change. The second question is “Where does it come from?” Rocks being a main origin of soils are often neglected in soil science and petrography in general, and weathering, as an important process for soil formation, are not given enough explaining. Petrography teaches us about rock characteristics, structure and texture and mineralogy. Understanding petrography would help in understanding the weathering processes which are crucial for soil formation and this must not be ignored. The third question is “Is it old?” Yes, it is – at least for everybody else except geologists. It is important to understand how slow the soil formation process is. The fourth question is “Does it move?” Yes, it can move and the faster it moves downhill, it less likes it. Erosion is a very important problem for soil and must be addressed. And finally, the fifth question is “What are the main characteristics of soils?” This is an opportunity to talk about physical, chemical, biological, microbiological issues. As the most elaborate question it allows the lecturer to talk mostly about the soil issues that are of main interest to the audience.

Every soil science course should involve laboratory and field classes as much as possible. Hands on experience has always been of outmost importance and one hour in the lab or in the field can substitute 3-5 hours of lecturing measuring the absorbed information by students.

So, to conclude, if one knows that something is alive, what it is made off, how old it is, what will happen to it during natural processes and also during imposed processes one would develop some respect for it and would be interested in its various characteristics and also, probably, how to save it from degradation. If that is all done while having a chance to touch it, and see it in its natural condition, the result would be even more insightful.