WHAT IS A SOIL?

Soil has at least the three following meanings to soil scientists in the U.S. today: 1) Perhaps the most common scientific definition of soil is as the collection of natural bodies in the upper part of the earth's crust. These have been differentiated into horizons that differ from each other and the primary or underlying materials. Soil in this sense is believed to be the result of the interaction of organisms and climate, in various topographic situations, on the primary materials during the time that they have been exposed near the land surface. Recently I proposed "soil" for this concept (Soils and Fertilizers, XXII:1-8, 1959). 2) Soil to some pedologists refers to natural landscapes. This includes in addition to soil a representative segment of the factors of soil formation: organisms, climate, relief, primary materials and the age of the land surfaces. Jenny has referred to this as the "soil system" and he has recently presented a helpful formalistic method for analysis of such a system (Ecology 39:5-16, 1958). 3) The soil commonly referred to in soil survey reports, discussions of soil classification, and shown in the legends of soil maps is not a natural entity. It usually includes only the upper portion of the soil. In some shallow or very youthful soils, it may include the soil plus a portion of the underlying material. Its lower limit is determined by the time, money and implements available for mapping of areas for various purposes. Soil in this sense is a very practical concept. This is the concept of soil for which no other distinctive designation has yet been proposed by soil scientists.

Should these different concepts of soils have distinctive names? If so, is soil a satisfactory handle for the first concept or would solum be preferable? The undersigned will be glad to summarize and report on the reactions of readers to these questions in a future issue. Address--


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