Letter To The Editor

On the Art of Mapping Soils

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I just reread Berman Hudson’s fine article on concepts of mapping and interpretations in the Fall 1990 issue of this publication (Hudson, 1990). I have noticed a follow-up article and a letter (Shellentrager, 1990; Byrd, 1991). Berman Hudson seems to have struck a nerve or two.

His statement on page 71, “The obsession with map unit variability and taxonomic purity are the result of conceptual not technical deficiencies,” summarizes my thoughts. As Berman implies on page 69, the field soil scientists and the novice users seem to have much less difficulty in using and justifying the continued use of published soil surveys than do the University Ph.D.’s and the GS-13 and up soil scientists.

One of my concerns is that the new generation of field soil scientists will know all about statistics and computers, pit examinations and such, but little about soils-landscapes and landforms. They can read computer programming language but can’t read a landscape or aerial photograph. I suppose the days of walking across a landscape with only a probe and mapboard are gone. The plane table mapping of the 1930s is gone and good riddance, but somehow the addition of statistical justification seems a major departure, not another better tool as was the aerial photo.

If our young soils scientists don’t learn to tentatively classify a soil-landscape in their mind, check their hypothesis with a probe and illustrate this as a map, then the art of soil mapping is lost. The science of soil mapping will remain because given enough time, enough probing, a big enough scale, and a knowledge of soil taxonomy, any average college soil judger can produce a taxonomically correct soil map.

The art of producing a soil map mainly involves knowing what to leave out as well as what to put down. An artful soil mapper will have in mind the map user when he decides what to leave out. A scientific mapper will try to put it all down and justify every line statistically and will wind up with a legend as thick as a phone book. Then a correlator will have to prune away at the legend using whatever whims are the current rage in those circles. The better correlators will prune away using an artful approach if they intend to help the survey users. There’s plenty of science in soil science and soil mapping, but let’s not crowd out the “art of soil mapping.”

“The older surveys are better than the newer ones.” I repeat a saying I’ve heard many times. They’re not as taxonomically correct and the base map is out-of-date, but the mapper had a user in mind. Usually this was a farmer or farm planner and the first criterion was the land capability class,

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