



George Nelson Coffey's 1912 Soil Map of the USA

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George Nelson Coffey produced the first national soil map of the USA that was based primarily on soil properties rather than geology (parent materials) or physiography in 1912. The map was published in USDA Bureau of Soils Bulletin 85 at a scale of 1:7 million. The map had five “Divisions” at the highest level of classification that were based on soil properties; these were 1) Arid or unleached soils, low in humus, 2) Dark-colored Prairie or semileached soils rich in humus, 3) Light-colored Timbered or leached soils low in humus, 4) Dark-colored Swamp or leached soils high in organic matter, and 5) Organic or muck and peat soils. There were eight “Subdivisions” at the next level that were based on geology, these were a) soils from crystalline rocks, b) soils from sandstones and shales, c) soils from limestones, d) soils from ice-laid materials, e) soils from unconsolidated water-laid material, f) soils from aeolian material, g) soils from gravity-laid material, and h) alluvial soils. The Subdivisions only applied to the first three Divisions; there were no Subdivisions of Divisions 4 and 5. On Coffey’s map Divisions 1-3 were depicted by colors, while Divisions 4 and 5 were shown by letters as their total area was too small to represent as colored areas at the utilized map scale. Subdivisions were mapped using letters.

Division 1 soils were shown roughly east of the Mississippi River and along the mountains of the west, while Division 2 and 3 soils were shown primarily west of the Mississippi River. This roughly corresponded to the Pedalfers and Pedocals that Marbut would map in 1935. When compared to modern Soil Taxonomy, Coffey’s Division 1 roughly corresponds to Alfisols and Ultisols, Division 2 to Mollisols, and Division 3 to Aridisols and Entisols. His Divisions 4 and 5 roughly correspond to modern Histosols. Although Coffey’s map was never officially adopted by the US Soil Survey, it was significant in that it was the first major attempt to introduce Russian soil genesis ideas to American soil scientists.