Idaho Xerochrepts, a Change of Pace

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Franklin County is in the southeastern corner of Idaho in the famous Cache Valley. The valley was well known to the legendary mountain men of the early 1800’s. For a decade and a half, men like Jim Bridger, Jedediah Smith and Tom Fitzpatrick traded pelts, swapped stories and competed in games with local Indians at rendezvous held in the valley. Vegetation was lush then and still is lush but dry today. Green fields of prosperous dairy farms, irrigated vegetable crops grown for local canneries and wheat farms dot the countryside.

In northern Franklin County, there is a historically unique area of clayey redbed soils. After years of trial and error cultivation, local farmers are producing consistent high yields of dryland wheat on the hills named “Poverty Flats”. Local farmers named this area in the 1920’s and 30’s when technology was not advanced and heavy soils were hard to farm. Now powerful tractors and minimal tillage allow farmers to till these soils in a short period in early fall which avoids problems associated with the clayey soils. This area receives 16 to 17 inches of precipitation a year, mainly in winter as snow. Slopes from 2 to 40% are farmed with specialized equipment.

After reviewing available literature, our soil survey crew concluded that the geology and soils of the Cache Valley are quite complex. This complexity is obvious in the surrounding mountains. Over millions of years, invading waters from the north and west deposited thousands of feet of conglomerates, shale, limestone and quartzitic materials. During the Triassic (Mesozoic epoch), the Higham grit and red Wood shale tongue of the Ankaroch were deposited in localized areas of southeastern Idaho.

Later in the Triassic, other sediments were laid on top of these redbeds. More water flowed in from the north, laying down sandy sediments. Warping of these materials caused large land masses to emerge east and west of this area. More mountain building processes occurred which folded, faulted and exposed the ancient sea beds forming large anticlines and synclines.

A final molding took place during the Pleistocene, when pluvial Lake Bonneville inundated the Cache Valley. When the lakes retreated and erosion proceeded, the various redbeds and sediments were again exposed.

Lake Bonneville, once nearly the size of Lake Michigan (an estimated 19,780 square miles), was fed by mountain glaciers and streams until it

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