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GEOLOGIC MAP OF THE TEAGUE QUADRANGLE, TENNESSEE—/

By William S. Parks

Qa1

Alluvium

Quartz sand, silt, and clay, medium-light-gray, olive-gray, light-gray, and light-olive-gray, generally poorly sorted, poorly stratified, in large part locally derived. The alluvium consists predominantly of fine sand, silt, and clay in the upper part and of fine to very coarse sand in the lower part. The maximum thickness is estimated to be about 30 feet beneath the flood plain of Clover Creek in the southwestern part of the quadrangle.

The Tennessee Division of Geology and the U.S. Geological Survey have cooperated in the preparation of this map, and the stratigraphic nomenclature and age determinations follow the usage of the Tennessee Division of Geology.

Q1f

Fluvial deposits

Quartz sand, silty and clayey in part, yellowish-gray to grayish-orange to yellowish-orange (weathers moderate reddish orange to light brown to moderate reddish brown), fine to very coarse grained, generally poorly sorted, poorly stratified to locally crossbedded, locally contains scattered granules and pebbles of quartz and quartzite or small pieces of ferruginous sandstone, locally contains some fragments, balls, and pebbles of clay which give weathered outcrops a mottled appearance; and silt, sandy in part, yellowish-gray to grayish-orange to moderate-yellowish-brown, bedding generally indistinct or absent, commonly grades into silty sand below. The fluvial deposits are high-level remnants of the alluvium of present streams or ancient drainage systems, and they cover the Claiborne and Wilcox Formations in extensive areas. The silt forms a cap on the sand and resembles wind-blown ^{material.} ~~loess~~. The silt on the hills and ridge tops probably is weathered loess, but much of it on the lower slopes shows some evidence of having been reworked. Only the thicker, more continuous fluvial deposits were mapped. The maximum thickness is estimated to be about 60 feet, but thicknesses greater than about 40 feet may be uncommon.

Tc

Claiborne Formation

Quartz sand, clean to silty and clayey, very pale orange to yellowish-gray to very light gray (weathers grayish orange to yellowish orange to moderate reddish orange to light brown to moderate reddish brown), very fine to very coarse grained, poorly to well-sorted, very thin to thick-bedded, lenticularly bedded, locally crossbedded, locally micaceous, locally contains scattered granules and pebbles of quartz and quartzite, locally contains large muscovite mica flakes one-eighth inch or so in longest dimension; and clay, commonly silty and sandy, medium-gray to light-gray or brownish-gray to pale-brown, (weathers very light gray to white or light brownish gray to grayish orange pink--stained in part yellowish gray, grayish orange, yellowish orange, and light brown), occurs as irregular lenses at various stratigraphic levels or as fragments, balls, and pebbles in the sand. Lenses or beds of lignite or lignitic clay occur locally. Probably as much as 250 feet of the lower part of the Claiborne is preserved beneath the high hills and ridges in the central part of the quadrangle. However, because of the extensive cover of fluvial deposits, no more than 40 to 50 feet is exposed at any one place.

Tw

Wilcox Formation

Quartz sand, silty and clayey in part, medium-light-gray to yellowish-gray to pinkish-gray to very light gray-- locally stained yellowish orange, pale red, moderate red, and grayish red purple (weathers grayish orange to moderate reddish orange to light brown to moderate reddish brown), very fine to very coarse grained, poorly to well-sorted, very thin to thick-bedded, locally crossbedded, locally micaceous; and silt, sandy and clayey, medium-gray to olive-gray to light-gray (weathers light olive gray to very light gray--locally stained yellowish gray, grayish orange, pale red, and yellowish orange), laminated to medium-bedded; and clay, commonly silty and sandy, medium-gray to brownish-gray to olive-gray (weathers light gray to light olive gray to yellowish gray to very light gray), laminated to medium-bedded, locally lignitic, locally contains plant fossils. The Wilcox is a heterogeneous unit in which the sediments are variously interbedded and interlensed, and no sequence of lithologies is laterally persistent for any great distance. Distinctive lithologies present locally include clay-ball conglomerate and "sawdust sand." The Wilcox may range from 150 to 200 feet thick in the subsurface of the quadrangle, but only the upper 40 feet is exposed in the southeastern part.