

WATERFALLS AND TRAVERTINE IN THE TUNICA HILLS MISSISSIPPI

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ABSTRACT

Waterfalls of significant size flowing over ledges of indurated silts and clays occur on Clark Creek in the southwestern part of Wilkinson County, Mississippi in the Tunica Hills. Travertine deposits are associated with these falls and other segments of steeper gradient in the upper reaches of the stream. Clark Creek flows through outcropping rocks of Pascagoula and Hattiesburg clays and silts of Miocene age. These deposits are located structurally over the south Mississippi uplift, which is still a positive feature. The steep gradients of the stream result from the incised valley of the modern Mississippi River at this location.

The location of these falls and travertine deposits were mapped by Martinez in 1952. He attributed the origin of the travertine in Clark Creek to be due to the high content of calcium carbonate in the water of the creek which had its source in the thick section of looses dissected by the headwaters of the stream.

The falls range from 15 feet to 18 feet in height and occur where the stream cuts very indurated silty clays. They may owe their origin in part of possibly nearly entirely to the occurrence of travertine at their top surfaces. Travertine may have formed early in the development of the falls at nick points in the stream. Consequent aeration of the water has caused travertine deposition and formation of a caprock for the waterfalls.