

Geology of the Kyrock and Nolin River Gorge Region, Edmonson County, Kentucky, Kenneth W. Kuehn and Michael T. May, Western Kentucky University, Department of Geography and Geology, Bowling Green, KY 42101, kenneth.kuehn@wku.edu

The Commonwealth of Kentucky contains a number of significant geologic sites, and the area surrounding the old asphalt rock mining community of Kyrock is no exception. This region, located near the western edge of Mammoth Cave National Park on the Dripping Springs Escarpment, affords excellent exposures of Mississippian (Chesterian) and basal Pennsylvanian (Morrowan) strata in the context of asphalt impregnated siliciclastics and both paleo and modern karst features. The best exposures are along the Nolin River at the Nolin Reservoir Dam where up to 60 meters of relief along the Mississippian-Pennsylvanian sequence boundary or unconformable surface can be noted. Geologic investigations have been numerous in the area over the past century and a half, and tar sands have been well known since the 19th century. There is a renewed interest in the 21st century for exploring for heavy oil resources and a concomitant interest in preserving karst resources and biota near the national park. This area is a distinguished geologic site because of the rich heritage associated with bitumen-rich strata and exploitation of these, and it is one of the few places where such great relief is traceable along a globally significant sequence boundary in the United States. It is a location where students of sequence stratigraphy can truly appreciate the sedimentologic complexity associated with tectonic, geomorphic, and climatic influences on the development of a sequence stratigraphic surface and its subsequent incised valley fill depositional sequence.