

Art Rocks Providence Canyon State Park – An Extreme Example of Human-Induced Erosion



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Abstract

Here we examine the art and geology of an impressive research site in Georgia. Previous and new multimedia explain the geologic controls and sediment core records of massive soil erosion at Providence Canyon State Park in Georgia. Our work utilizes virtual tour technology and features interactions between an earth scientist and an award winning landscape artist.

Storyline

The geologic processes of erosion and deposition shape the land, preserve evidence of environmental change, and often create dynamic landscapes that capture the imagination of scientists and artists alike. This study examines geologic and artistic elements of spectacular Providence Canyon State Park, also known as "Georgia's Little Grand Canyon" located in southwest Georgia. Founded in 1971 for its geologic and historic significance, this state park provides a stunning example of the extent to which human-induced soil erosion can alter landscapes. Erosion initiated by land clearing associated with settlement in the early 1800's breached blood-red, iron-rich sediments of the Clayton Formation (•60 million years old) in upland areas to expose underlying, easily eroded white to purple sands and clays of the Providence Formation (•70 million years old). Eroding cliffs have shed sediments down-slope where small streams shunt materials further down-valley creating deposits more than 20 feet thick that contain geologic record of landscape change. Geologic research by Eastern faculty and undergraduate students has used vibracoring techniques to extract sediment cores to reconstruct a history of this canyon's development. The impressive geology of Providence Canyon State Park also makes intriguing vistas with a rich palette of colors, complex forms and challenging textures for artists to capture. Award winning landscape painter, and designer of the Connecticut state quarter, Professor Andy Jones, examines this landscape with an eye to understand the relationship between its geologic heritage, former farming practices, and present complex and eroding form. Professor Jones's Plein Air and studio paintings from the site explore the interplay of light, eroded sediment, and vegetated surface in ways that connect art and science. This includes several video vignettes shot in the park that explain techniques in

landscape painting. In fact, both geologic and artistic elements of this interdisciplinary work will be featured on a collection of multimedia that includes digital video interviews at the park, interactive and panoramic environments and virtual canyon-views that enable users to explore portions of the park in a virtual sense.