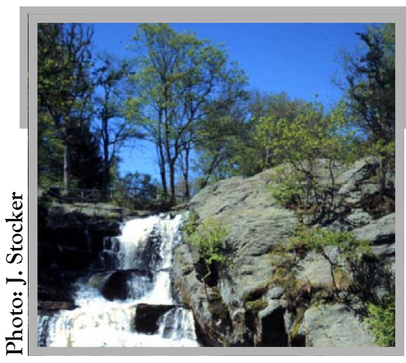

Photo: J. Stocker

GEOLOGY

African origin rock. Photo: W. Goodfriend

Geology is critical to watershed quality, and can affect resources from hydrology, to biodiversity, to the cultural landscape. In the Eightmile, a combination of an exceptional bedrock assemblage, an atypical local topography and exemplary evidence of glacial action creates a distinct local representation of the geology of Connecticut.

Exceptional Assemblage of Bedrock—The exceptional variation in the Eightmile's bedrock assemblage has its origin in the closing of the Iapetos Ocean 480 to 250 million years ago. Eleven bedrock units representing the remnants of the Iapetos Ocean were crushed together with units once part of western Morocco (North Africa). Heating and metamorphosis then formed what is now the bedrock foundation of the Eightmile River Watershed.

Atypical Local Topography—Stream erosion and glacial power has sculpted New England into a rolling, north-south topography. In the Eightmile, anomalous east-west bedrock alignments are cut by valleys that mirror the regional north-south pattern. The result is a "blocky" local topography uncharacteristic of Connecticut and the region as a whole.

Glacial Evidence Remains—The Eightmile's valleys are filled with deposits left during the last glacial retreat. Five former ice positions are marked by ice-contact stratified drift deposits that lie in the valley between Hamburg Cove and Route 82. In addition, passive ice features, such as Eskers and Kettles, occur in several locations including Lyme's Pleasant Valley Preserve.