

Modeling Rare Plant Communities in Jocassee Gorges State Park

Name Obliterated, Affiliation Obliterated, Location Obliterated

Purpose

- Determine the correlation between landform data collected on a microscale (field data) and landform information derived from a 30 meter digital elevation model (DEM).
- Model rare communities (rich cove forest, pine oak heath, spray cliff) in Gorges State Park.

Material and Methods

- Compared elevation, slope and aspect data collected in Gorges State Park (Summer 1999) against a 30 meter DEM, 10 meter DEM derived using bilinear resampling and 10 meter DEM using cubic convolution resampling.
- Determine elevation, slope, aspect, curvature and distance from hydrology consistencies between rich cove, pine-oak heath and spray cliff sample points.
- Model the rare communities based on landform consistencies.

Results

Figure 1. Average Elevation, Slope and Aspect Differences Between Field Data and DEMs

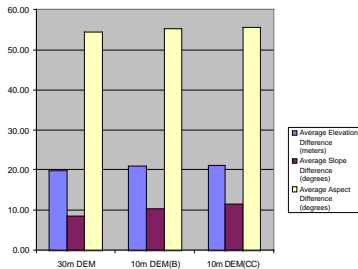


Figure 2. Distribution of Spray Cliffs, Rich Cove, Forests and Pine-Oak Heath

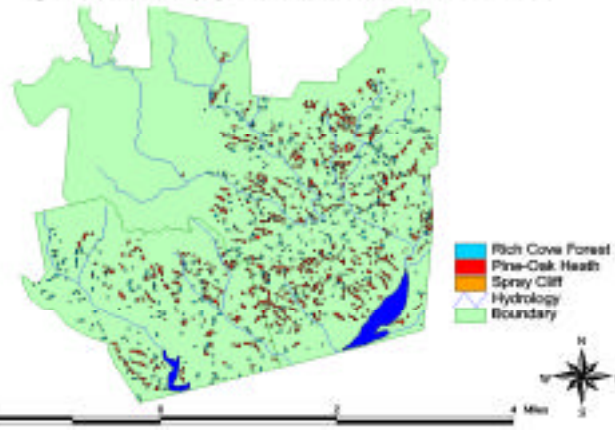
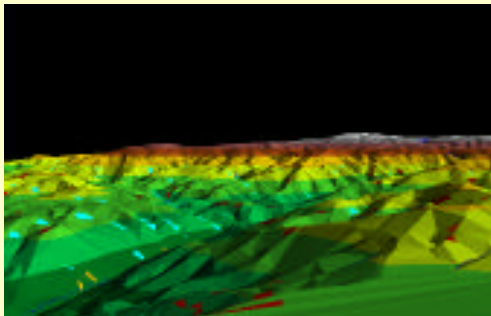


Figure 3. 3 dimensional view of Gorges State Park



Conclusions and Recommendations

- There is very little correlation between the landform field data and the DEM derived data.
- The resampled 10 meter DEMs didn't model the field data as well as the 30 meter DEM.
- Detailed soils and geology information would be helpful in modeling the entire landscape.
- A field accuracy assessment is needed to determine the accuracy of the model.