Hocking Hills State Park

GEOLOGIC HISTORY

In order to truly understand what makes Hocking Hills so unique it is required to look back at the formation of the “hills” which began towards the end of the Paleozoic Era around 359-318 million years ago during the Mississippian period. Ohio was once covered by a warm shallow sea and through tectonic plate activity this sea was drained during the formation of the Appalachian mountain chain. The upheaval of the land slowly began to drain the ocean. As this sea drained from the tops and sides of the mountains it also began a massive erosion of the craggy peaks that once made up the Appalachians. All of this silt, sand and rock eventually washed into what is now southeastern Ohio and began to settle in the flatter calmer waters of the area. This slow layering rose and compacted forming into what is now the sandstone hills of the region. Over time the mountains cut-off this area from the sea and it drained to form the rolling hill country of southeastern Ohio. Due to the soft and porous nature of the sandstone the local rivers, streams and creeks have been eroding the hill country ever since to form the spectacular sandstone gorges and recess caves found throughout the park. Due to the height of the hills the glaciers that invaded Ohio never quite managed to cover this portion of Ohio however their icy effect can be seen and felt throughout the park’s flora and fauna. As the Pleistocene epoch ice progressed through Ohio the glaciers made it to within 6 miles of what is now the northern reaches of the park but never truly penetrated the area. However, the northern species escaping the glaciers icy effect did come here. In time the climate changed, warmed and the glaciers once again receded north taking many northern clime species with them. However, the cool moist
environment left in the gorges has set up a unique micro-climate system supporting an unusual array of more northern climate species. This of course has set up a geologic wonderland of rock formations, waterfalls, caves and unusual species for visitors to explore. A partial list of common geologic terms for the area:

- **Black Hand sandstone** – A sedimentary conglomerate of layered rock given its name due to a series of large black hands painted on the cliff walls by Native Americans that lived in the area marking their way to Flint Ridge.
- **Recess Cave** – large hollowed opening water carved in the softer middle layers of the cliff walls.
- **Honey Comb Weathering** - Water seeping directly through the porous sandstone weathers small loose pockets of sand and gravel leaving behind rings that resemble a bee’s honeycomb.
- **Cross bedding** – Diagonal layers of sediment deposits easily seen on cliff faces in many areas of the park. Most layering occurred horizontally but when stream directions changed, diagonal layers of deposits occurred during formation.
- **Slump Blocks** – Large blocks of rocks found on valley floors that have broken or slid from their original position.

**SIGNIFICANT AREAS and SPECIES**

Hocking Hills State Park is known throughout Ohio for its exclusive habitats, micro-regions and many distinctive species. The sandstone gorge areas in the park surrounded by the Appalachian forest host several rare and endangered species of plants and animals. Key species along with their locations need to be confirmed and documented. Due to the effect of the Wisconsin glacier many of the cold weather species down in the gorge have very specific requirements. Likewise many warm weather Appalachian species of plants or animals call the Hills of Hocking their home. Specific habitat locations and requirements of these species need to be documented and/or confirmed. Through continued observation and data sampling techniques the overall health can be assessed and maintained. Any external factors such as water sources, temperature fluctuations
or general land use practices should be monitored to maintain the sustainability of the species and their habitat requirements. Through a series of compiled species list, maps and habitat requirement data an ongoing conservation plan for these significant habitats and individual species can be maintained.