

# Interactive Geoheritage Maps from the Kentucky Geological Survey



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America's Geoheritage Workshop II

Distinguished Speakers Webinar Program, Fall 2020

Geoheritage and State Geological Surveys

# Kentucky is rich in geoheritage

- Mammoth Cave National Park
- Daniel Boone National Forest
  - Red River Gorge Geological Area
  - Remnants of 19<sup>th</sup> century iron furnaces
- Big South Fork National Recreation Area
  - Historic Blue Heron mining community
- Camp Nelson National Monument
- Big Bone Lick (vertebrate paleontology)
- Pine Mountain (structural geology)
- Natural arches (geomorphology)



# We use two different kinds of interactive maps at KGS

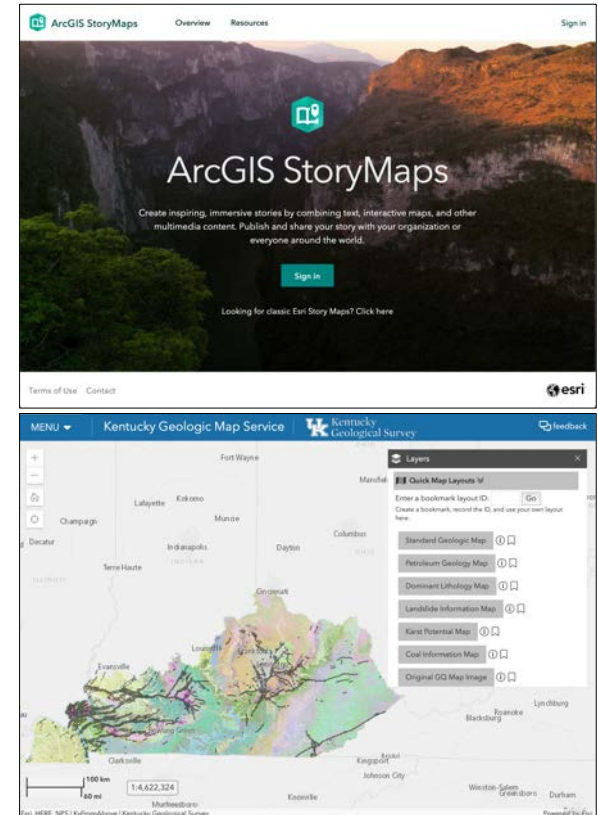
## ESRI or ArcGIS Story Maps

- Easy to use creative platform with templates
- Can be visually appealing...like a coffee table book
- Limited options for users
- Good for telling your story your way
- Proprietary format

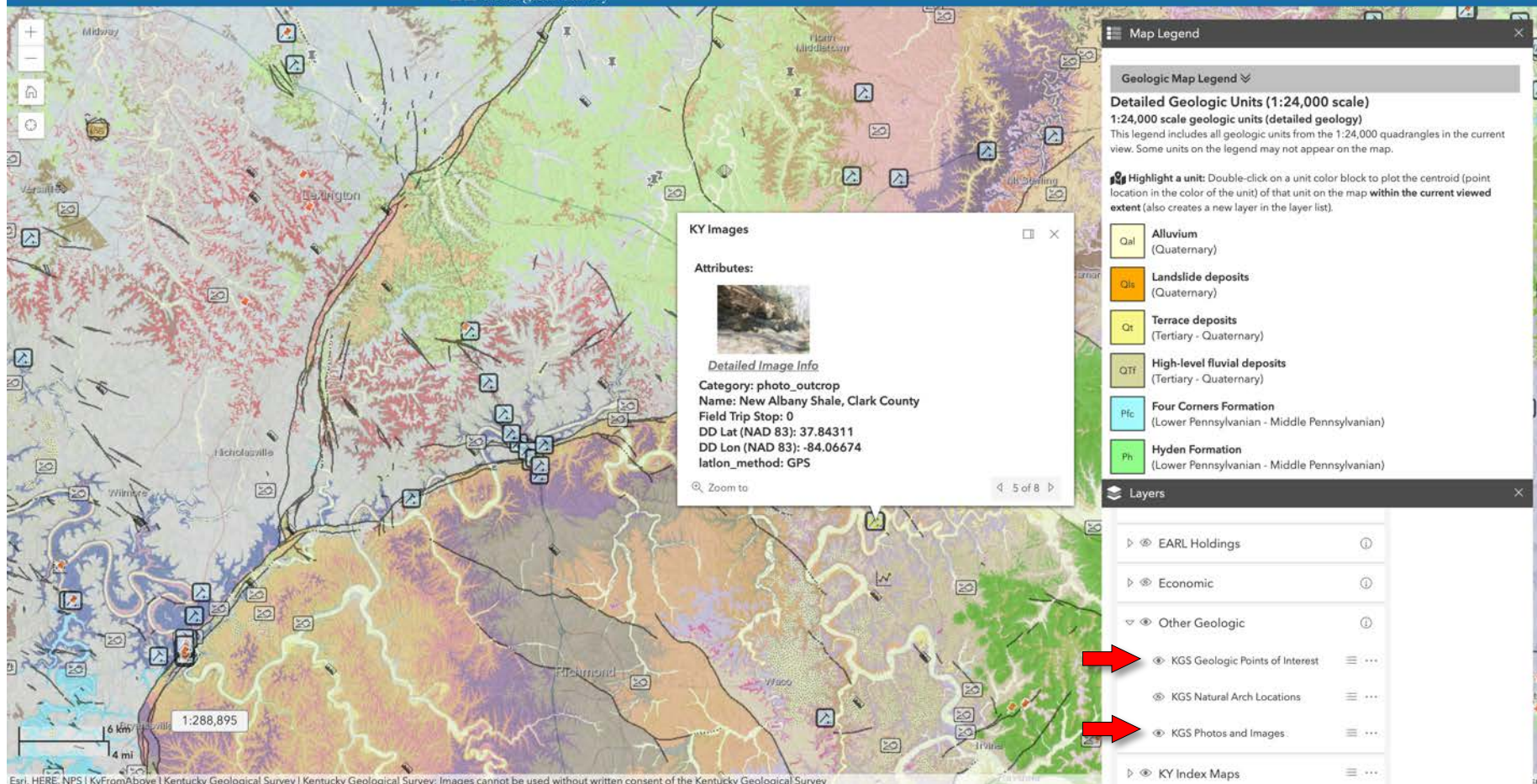
## Web Map Services

- Requires more GIS expertise to implement
- Access to underlying information
- Allows more user customization
- Lets users make their maps their way
- Open source and proprietary options

**Both require internet or cellular data access!**

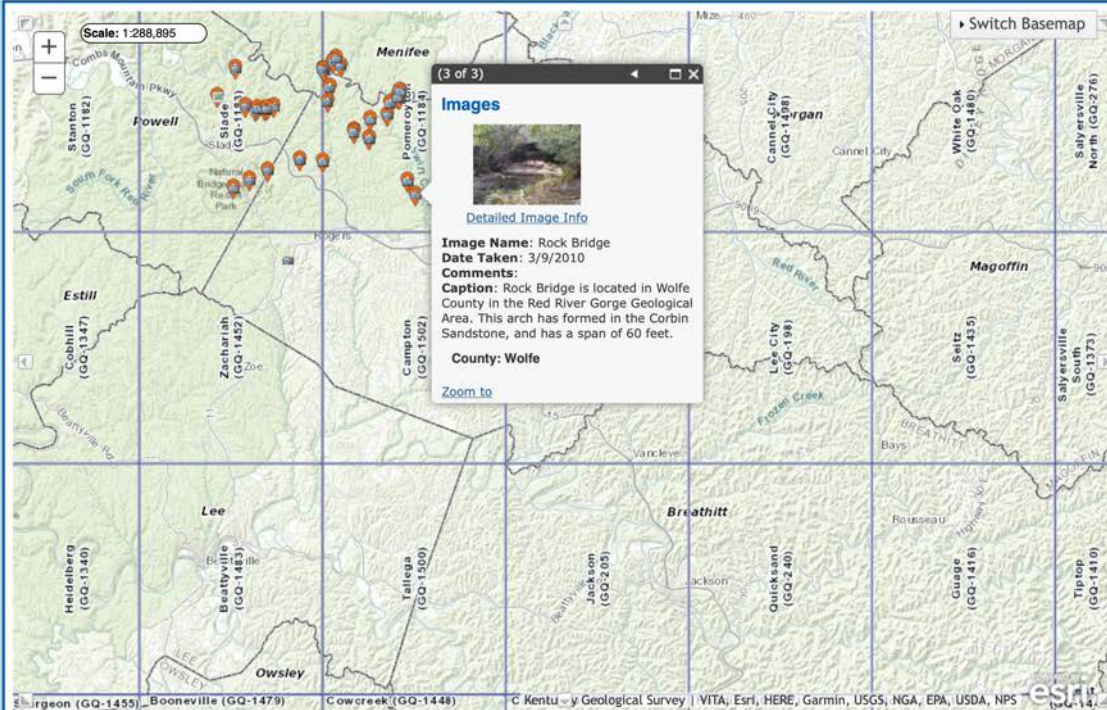






### Legend

If you are aware of any natural arches that are on public lands and have easy access that do not appear on this website, or know of any natural arch locations, public or private, regardless of access





Camp Nelson National Monument  
Cove Spring Park, Frankfort  
Parklands of Floyd's Fork, Louisville  
Geologic Tour of Boone County, NKY  
Kentucky Natural Arch Locations\*  
KGS Berea Consortium  
KGS Meteorite Collection

The Kentucky Geological Survey is developing geologically oriented story map tours for geologically interesting areas around the Commonwealth. To view one of these story maps, click on



[View larger map](#)

KGS geologic story map gallery. Also available through the [KGS ArcGIS Online website](#).



Camp Nelson National Monu...



Cove Spring Park: Frankfort,...



Geologic Tour for Parklands ...



Geologic Tour of Boone Coun...



Kentucky Natural Arch Locati...



KGS Berea Consortium Project



KGS Meteorite Collection Da...

A wide-angle photograph of a green field with a wooden fence and a barn in the background. The field is lush green and occupies the foreground and middle ground. A wooden fence runs across the middle ground, separating the field from a line of trees in the background. A barn is visible in the distance, partially obscured by trees. The sky is overcast with soft clouds. The overall scene is peaceful and rural.

# Camp Nelson National Monument

A Geologic Story

Kentucky Geological Survey | October 4, 2020

# Camp Nelson

- Union Army supply depot established 1863 after a nearby less optimally located depot was raided
- Kentucky River Palisades—formed by Pleistocene incision of the river into Ordovician limestone 1.5 million years ago—acted as a natural fortification
- Karst topography helped to further hide camp operations from view
- Major recruiting and training center for thousands of Black enlistees—including many escaping slavery—towards the end of the war
- Also became a refuge for families of enlistees
- Location of Camp Nelson National Cemetery
- Declared a National Monument in 2018





①

## Palisades as a Fortress

The Palisades were formed when the Kentucky River cut deeply into the thick limestone layers after a Pleistocene ice age disrupted regional river systems approximately 1.5 million years ago.

## An Ideal Location

In 1863, Army engineers identified a high plateau at Camp Nelson, overlooking the Kentucky River, surrounded on three sides by steep cliffs of the Kentucky River Palisades.

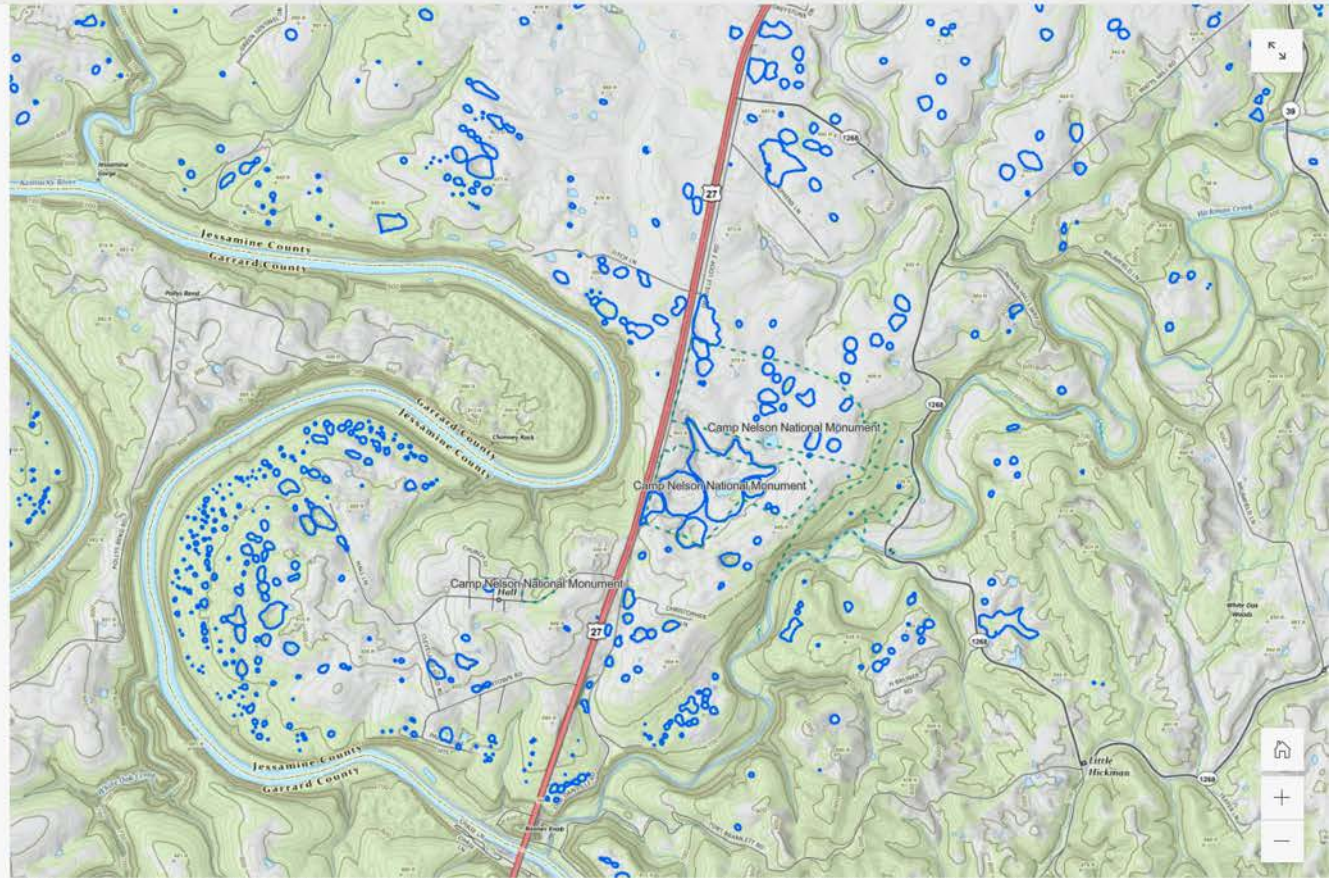
Zoom and pan on this 3D map scene to explore this hillshade map (from [KYFromAbove](#)) of the area overlaid with the transparent 1866 Camp Nelson map (provided by Steven McBride, former director of interpretation, Camp Nelson Civil War Heritage Park).

Use your mouse (or fingers if on a mobile device) to manipulate the map and view the relationship of the camp to the entrenched Kentucky River and Hickman Creek Valleys.





Steep cliffs along the Kentucky River Palisades isolated the post from external attack, and a large sinkhole shielded the depot warehouses from outside observation. The national monument is delineated by the green dotted lines on the map, and the blue outlines are surface depressions that were mapped by KGS geologists as sinkholes.



USGS The National Map: National Boundaries Dataset, 3DEP Elevation Program, Geographic Names Information System, National Hydrography Dataset, National Land Cover Database, National Structures... Powered by Esri

# Visit KGS on the web to learn more!

