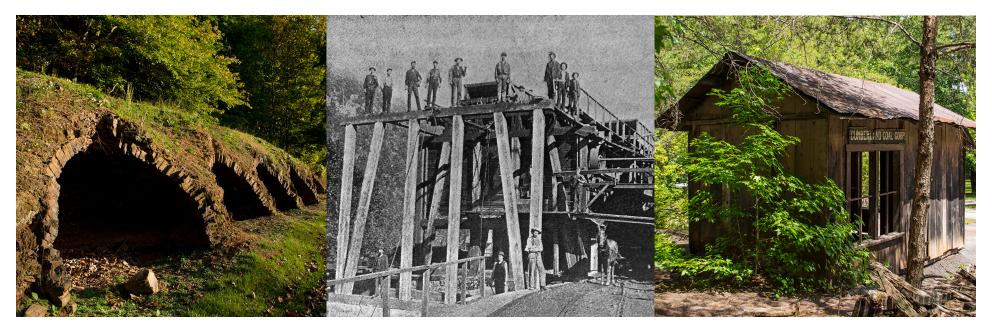
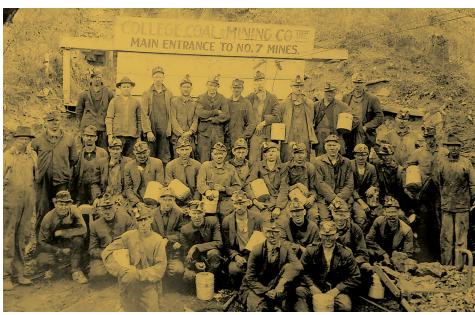
MINING TRAIL





TOURISM ASSOCIATION

MINING, QUARRYING AND METALS MANUFACTURING IN SOUTHEAST TENNESEEE



College Coal Company Miners, Bledsoe County (c. 1920)

Welcome to the Cultural Heritage Mining Trail. This driving tour of nine counties in Southeast Tennessee will introduce you to many of the historic resources associated with the various mining, quarrying, iron and copper production and metals manufacturing industries that once formed the backbone of the economy of the region. These intriguing places include coal and copper mines, coke ovens, iron works and foundries, transportation resources, even the first concrete highway constructed in Tennessee as well as the site where the rock to build the road was quarried.

The tour also includes several museums and sites that interpret the region's mining history. A few feature products made by area manufacturers. Though some of the industries have declined or ended production, others remain major employers and make important contributions to the regional economy. These places offer the opportunity to learn how mining contributed to the economic and social development of Southeast Tennessee.

Each site is open to the public. Please be aware, however, that mining and manufacturing sites can be hazardous. For your safety, please avoid mine openings. The may be subject to cave-ins, toxic gases, or undetonated explosives. Stay on designated trails at all times. Please respect private property, obey *NO TRESPASSING* signs, and monitor children at all times. We hope you enjoy your experience along the Cultural Heritage Mining Trail.

COAL

For centuries, coal has been an important source of fuel for home and industrial use. The accidental discovery of a coal deposit on the lower <u>Cumberland Plateau</u> in the mid-1840s by local farmer Benjamin Wooten and his son, Thomas, turned out to be a high-quality grade. Within a decade, the first mine was opened near Tracey City. Others quickly followed. Mine development accelerated when the Sewanee Coal Company constructed the "Mountain Goat" railroad line from Cowan, in the valley below, to Tracey City. Later, the Tennessee Coal and Railroad Company began using coke from the Sewanee coal seam in blast furnaces. Coke ovens sprang up at Grundy Lakes and operations spread to Coalmont, Laager, and Whitwell.

By the end of the 20th century, the <u>Tennessee Coal</u>, <u>Iron and Railroad Company</u> (TCI) controlled hundreds of thousands of acres filled with coal deposits in Tennessee and Alabama. They operated iron furnaces at South Pittsburgh, Cowan, Chattanooga, as well as others in Alabama. TCI also utilized state convict labor in the mines until local unrest halted the practice. In 1907, they became a division of United States Steel. Coal mining on the south Plateau continued for another ninety years. The industry was severely damaged in 1981, however, when a mining explosion in Whitwell killed eighteen workers.

On nearby Waldens Ridge, in Rhea County, the Dayton Coal & Iron Company operated extensive mines, two batteries of coke ovens, and a large iron furnace in the late nineteenth and early twentieth century. Throughout



Consolidated Coal Company, Grundy County, (1939)

the period, smaller operators produced coal from north of Pikeville all the way down the South Cumberlands to Orme in Marion County. For over a century, coal mining was the largest source of employment in Southeast Tennessee.

COKE

Coke, an essential fuel for producing high-grade iron, is made by heating coal to extreme temperatures in closed ovens to eliminate impurities are. Until the middle of the nineteenth century, coal from Tennessee mines was used predominantly by blacksmiths. In 1860, pioneering ironmaster Robert Cravens introduced the use of coke at Bluff Furnace at Chattanooga. Following the Civil War, the Tennessee Coal, Iron & Railroad Company tested coke made from Grundy County coal at an experimental furnace at Fiery Gizzard. Satisfied with the results, the company constructed batteries of beehive shaped coke ovens at Tracy City and the Lone Rock Mines

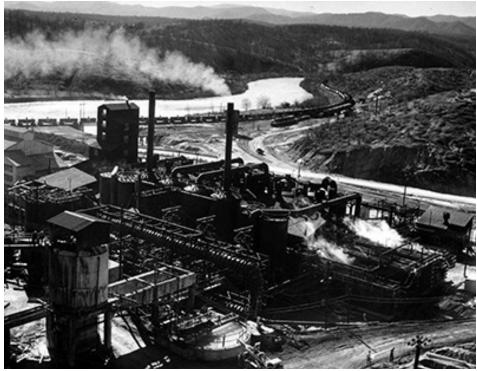
northeast of town. Other companies, including the Dayton Coal & Iron Company, the Tennessee Consolidated Coal Company at Coalmont, and the Douglas Coal and Coke Company at Dunlap, also built large batteries of ovens. While the industry was profitable, beehive coking produced heavy clouds of smoke that adversely affected vegetation and plagued nearby residents. The regional coke industry persisted into the 1920s, but was eventually closed due to more efficient iron and steel operations elsewhere.

IRON

Iron was mined in Tennessee as early as the 1790s. Much of the ore, called "bog iron," was discovered in swamps where iron deposits formed at the surface through a process of oxidation along the Highland Rim west of Nashville. The focus soon shifted to the Cumberland Plateau and elsewhere in East Tennessee when deposits of hematite were found. Most operations were fairly small. In 1870, the state produced just 34,600 tons of ore from six mines. The industry grew in subsequent years as new coke-fired blast furnaces created additional demand. In 1910, the state's peak production year, there were 46 producing mines. Ten years later, output had dropped in half due to the relatively low quality of the veins. In the Southeast Tennessee region, small mines were worked in Meigs County by the Roane Iron Company and the Dayton Coal & Iron Company, and at Cambria in McMinn County by the Chilhowee Iron Ore Company. In Marion County, mines were operated by the Tennessee Coal & Iron Company, sometimes causing unrest due to the use of convict labor. By the 1920s, iron mining all but ceased in the region. Furnaces still in operation secured ore from elsewhere, mostly Alabama.

COPPER AND ASSOCIATED INDUSTRIES

Copper from Southeast Tennessee was used by the local <u>Cherokee</u> for tools and adornments long before the industry arrived in the mid-19th century. In 1843, prospectors searching for gold discovered what would become the most significant metals mining district in the Southeast. Copper, iron, zinc, sulfur and other minerals formed the basis of the area economy for a century and a half until the last operations shut down in the 1930s. While the industry created a boom economy, it had catastrophic environmental



Tennessee Copper Mine, Copperhill, Polk County (c. 1940)

effects. Early processing, especially open roasting of copper ore, devastated the landscape. Whole forests were cut to make charcoal for the roasters. The sulfur dioxide emitted by the roasters combined with rain water - acid rain - to destroy the remaining vegetation. Topsoil quickly eroded and created the largest man-made desert in the country. New technologies introduced in the early twentieth century recaptured sulfur fumes for the production of sulfuric acid, and in the 1930s reclamation work began to restore the barren landscape. Today, reforestation continues. The Ducktown Basin Museum preserves a 300-acre segment of the great "Moonscape," a chilling example of the long-term effects of acid rain.

OTHER MINERALS

Other ores and minerals were mined in the region in lesser quantities. In Bradley County, an industrial boom began with the arrival of the first train in June 1851. The Hambrick mines in the Chatata Valley south

of Charleston, opened soon afterwards and produced zinc, lead, and manganese. These were followed in the next four decades by the mining of copper, iron ore, aluminum clay (hallasite) and barites. The Hardwick Mine south of Cleveland produced sphalerite (zinc ore), galena (lead ore) and pyrite. Most mineral mines in the county closed by 1920, although the Hambrick Mine #2 operated until 1952. Quartz and silica were mined in northern Polk County in the 1890s for use as flux for the copper smelters in the Copper Basin. Traces of the mines and a concrete diverter for the washer can be seen along the Gee Creek Trail in the Cherokee National Forest. In McMinn County, the Yates Construction Company operated two mines producing pharmaceutical-grade barite. Fire clay was dug at Cleveland in Bradley County and in parts of Hamilton County.

Even <u>bat guano</u> in caves was mined to obtain saltpeter of nitre for use in the production of gunpowder. James Orr began mining deposits in Nickajack Cave in southern Marion County in 1800 and continued until 1812. During the Civil War, Robert Cravens and later, the Confederate Nitre Bureau, resumed mining saltpeter. Cravens also mined saltpeter in Lookout Mountain Cave, located under today's popular tourist attraction Ruby Falls. Works outside the cave processed guano until the city fell to the Federal army in 1863.

STONE

While coal and iron mining was of pivotal importance to the regional economy during the nineteenth and early twentieth centuries, the quarrying of stone was also paramount to the local communities. Though on a lesser scale, that is still true today. Agricultural lime, used to increase the pH of acidic soils, is made by crushing limestone into a fine powder. Lime is also used for building purposes, such as the manufacture of Portland Cement. The process involves quarrying limestone, heating the rock in kilns to form cinker that is then crushed and mixed with calcium sulfate to help control the setup time. High-quality cement material was quarried at Richard City in southern Marion County and processed by the Dixie Portland Cement Company. Dixie operated a massive plant that at one time boasted the largest cement kilns in the world. They also acquired the Bible Sand Plant at Chattanooga and constructed a large sand and gravel plant on the city

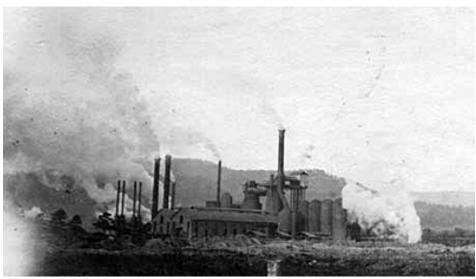
riverfront. In later years, the Richard City quarries produced ground lime used in scrubbers at the Tennessee Valley Authority's Widows Creek Fossil Fuel Plant to reduce pollutants. Today, the quarries are operated intermittently by Vulcan Materials. Bowater Southern Paper Corporation still operates a lime plant at Calhoun in McMinn County. Vulcan Materials supplies the quarried stone from Athens.

Crushed stone, used for producing concrete and stucco, in roofing materials, and for highway and railway construction, is the most valuable mineral commodity, by value, produced in the region today. Large operators, like Buzzi Unicem USA at Signal Mountain, and Vulcan Materials and the Rogers Group, Inc., both of which have numerous plants throughout the region, dominate the industry. Smaller regional companies, such as Dunlap Stone, supply crushed rock to local operators in the area. Sandstone from the cap of the Cumberland Plateau is mined in Bledsoe and Rhea counties. The sand derivative is produced in several places, notably at the "Sand Switch" plant between Monteagle and Sewanee.

IRON PRODUCTION

The roots of the iron industry in Tennessee date back to the late eighteenth century. In 1847, the Tennessee General Assembly chartered one of the region's first major industrial ventures, the East Tennessee Iron Manufacturing Company. Robert Cravens, an experienced forge, foundry and furnace operator, constructed the first blast furnace and iron production complex on a bluff just upstream from downtown Chattanooga in 1853. For six years the furnace was fueled by charcoal. In 1860, it was converted to utilize coke. The operation lasted only a few months before the hearth collapsed, but the initiative helped established Chattanooga as a major industrial center. By the late nineteenth century, the city was home to other furnaces operated by the Roane Iron Company, Cities Furnace, and the Chattanooga Iron Company.

After the Civil War, the Tennessee Coal and Rail Company looked into manufacturing iron, predominantly to stimulate use of its coal and coke. It first constructed an experimental furnace on Fiery Gizzard Creek in Grundy County to determine that its coke could be used for iron



Dayton Coal & Iron Company, Rhea County, (c. 1935)

production. Satisfied with the results, it established a furnace at Cowan, supplying it with coke from its ovens around Tracy City over the "Mountain Goat" railroad. The company rebranded itself as the Tennessee Coal, Iron & Railroad Company (TCI) in 1876 and became the region's most powerful manufacturer. They relocated to Birmingham in 1895. TCI was one of the first twelve companies listed on the Dow Jones Industrial Average. They were also of the largest exploiters of prison labor. U.S. Steel acquired TCI in 1907. Three years later they ceased the practice of using prison laborers. To the east, the Dayton Coal & Iron Company, funded by Scottish capital, erected two large furnaces at Dayton, in Rhea County. The furnaces were supplied with coal and coke from mines in what is today the Laurel-Snow State Natural Area. This major venture, one of the few totally integrated industries in the region, operated from the 1880s to the 1920s. The company was plagued by mine accidents, labor unrest, and the uneven quality of iron. Its successor, the Cumberland Coal & Iron Company, shut down operations in 1925. Coincidentally, the company closing played a role in the famous Scopes "Monkey Trial" of 1925. The manager, along with other local boosters, petitioned the ACLU to try the high profile case in order to attract attention to Dayton's resources, hoping to spur replacement investment.

In the late 1870s, the Southern States Coal, Iron & Land Company began construction of a two-stack furnace at a place they optimistically renamed South Pittsburg. The company was bought out by TCI in 1882. The furnaces attracted several foundries and associated businesses and the town became a regionally significant industrial center. The furnaces were eventually shut down when TCI moved its iron manufacturing operation to Alabama, but the heritage of the ironworks lives on in the community.

METALS MANUFACTURING

Iron production spurred associated industries. The East Tennessee Iron Manufacturing Company established foundries and a machine shop adjacent at their Bluff Furnace in the 1850s to caste railroad car wheels and produce freight cars. The works were dismantled during the Civil War. Chattanooga's furnaces supplied a number of forges, foundries and machine shops and a large rolling mill in the decades that followed. Metals manufacturing, especially pipe production and the casting of fire hydrants and other heavy pieces, was a key component of the city economy well after World War Two. Though many of the larger works have closed in recent years, iron and steel companies remain prominent in the city and employ a sizeable part of Chattanooga's workforce.

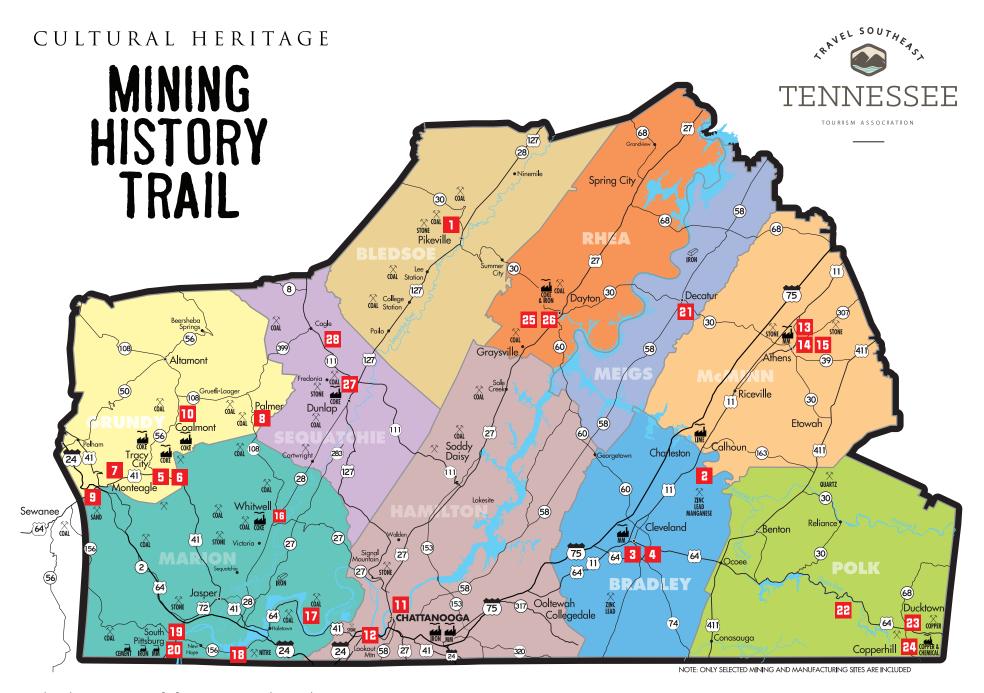
Other towns in the region were home to significant manufacturing operations, as well. Battle Creek Mines in Marion County incorporated as "South Pittsburg" in the hope it would someday rival its Pennsylvania namesake. Foundries and other works used iron produced by TCI to manufacture agricultural implements, including cast iron pipe. The town's Perry Stove Manufacturing Company was the nation's largest manufacturer of stoves in the 1880s. Harvest Stove Company became U.S. Stove. Today, South Pittsburg is still home to one of the largest foundries in North America, the Lodge Manufacturing Company, famous for its cast iron pots and pans. Products from the various industries can be seen today at the South Pittsburg Heritage Museum.

Cleveland, in Bradley County, boasted other major metals manufacturing businesses. Christopher Hardwick, once a prosperous farmer and merchant left penniless by the Civil War, rebuilt his mercantile business and helped his sons start a backyard foundry in 1879 where they built cast iron cook stoves. The Cleveland Stove Works manufactured 12 stoves daily by the late 1880s. Hardwick stoves were marketed throughout the South. The company eventually transitioned to gas and electric ranges. Over a 100-year period, Cleveland Stove Works has produced more than 9,750,000 stoves. Maytag acquired the company in 1981.

Dixie Foundry began operations in July 1917 with the firing of a cupola or melting furnace in a 60-foot-by-60-foot, tin-roofed building at the southeastern edge of Cleveland. S. B. Rymer, Sr., along with his wife, Clara LaDosky Gee, owned the foundry. Early products included skillets, corn stick pans, fireplace grates and frames, teakettles and other cast-iron items. By the mid-1920s, coal and wood ranges and coal and wood heaters were added to the line. Gas ranges were introduced in 1928. Dixie Foundry produced its first electric range in 1952. Six years later, they acquired Magic Chef, synonymous with the gas range, and two years after that changed the company name to Magic Chef. In the 1990s, they, along with the former Hardwick Stove Works were acquired by Maytag Cleveland Cooking Products.

In 1935, Brown Stove Works was founded by Grover Cleveland Brown in 1935 to produce gas ranges. Today, the firm, still family-owned, remains the only privately held range manufacturer in America. Brown Stove Works produces the high-end Five-Star Gas Range line as well as conventional gas and electric ranges. Products from these companies can be seen at the Museum Center at 5ive Points in downtown Cleveland.

Athens, located in McMinn County, was another important mining and stove manufacturing center. Among the local companies were Athens Stove Works, Athens Plow Company, and Athens Mining and Manufacturing Company. Athens Mining developed much of the northeast Athens as a model company town. The Athens Plow Company remains in operation, making highly acclaimed plows, harrows and other agricultural implements. The McMinn County Living Heritage Museum in Athens proudly exhibits examples of these local products.



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- Pikeville
 Main Street, Cumberland Avenue, Spring
 Street and surrounding streets
 Pikeville, Bledsoe County, TN 37367
- Chattanooga to Charleston Concrete
 Highway
 8746 Hiwassee Street
 Charleston, Bradley County, TN 37310
- Cleveland Railroad Depot
 165 Edwards Avenue
 Cleveland, Bradley County, TN 37312
- Museum Center at 5ive Points
 200 Inman Street, East
 Cleveland, Bradley County, TN 37311
- Grundy County Historical Society
 Heritage Center
 465 Railroad Avenue
 Tracy City, Grundy County, TN 37387
- Grundy Lakes Coke Ovens
 Lakes Road, off US 41 east of Tracy City
 Tracy City, Grundy County, TN 37387
- 7 South Cumberland State Park Visitor Center 11745 U.S. 41 Monteagle, Grundy County, TN 37356
- Grundy County Miners Museum and Heritage Center 2115 Main Street Palmer, Grundy County, TN 37365
- 9 Mountain Goat Trail PO Box 968 Monteagle, Grundy County, TN 37356
- Coalmont
 Tennessee State Route 56
 Coalmont, Grundy County, TN 37313

- On Chattanooga Riverwalk, off Riverfront Parkway beneath Walnut Street Bridge Chattanooga, Hamilton County, TN 37403
- Cravens House
 Cravens Terrace, in Point Park Unit of Chickamauga & Chattanooga National Military Park, Lookout Mountain, Hamilton County, TN 37350
- McMinn County Living Heritage Museum
 522 West Madison Avenue
 Athens, McMinn County, TN 37303
- Prof Powers Park Quarry
 East Madison Avenue (Tennessee HWY 307)
 at Slack Rd
 Athens, McMinn County, TN 37203
- McMinn Rails to Trails
 Prof Powers Park, East Madison Avenue
 at Slack Road
 Athens, McMinn County, TN 37303
- Marion County Coal Miners Museum 900A Main Street Whitwell, Marion County, TN 37397
- McNabb Mine Ruins
 Mullins Cove Road, 3.2 miles SE of Mineral Springs
 Mineral Springs, Marion County, TN 37347
- Nickajack Cave
 TN Highway 156 (Shellmound Road) at
 Maple View Public Use Area
 New Hope, McMinn County, TN
- Lodge Manufacturing Company
 204 East 5th Street
 South Pittsburg, Marion County, TN 37380

- South Pittsburg Heritage Museum
 316 Cedar Avenue
 South Pittsburg, Marion County, TN 37380
- Decatur
 120 East Memorial Drive
 Decatur, Meigs County, TN 37322
- Old Copper Road
 At Ocoee Whitewater Center, 4000 U.S. 64
 Copperhill, Polk County, TN 37317
- Ducktown Basin Museum
 212 Burra Burra Street
 Ducktown, Polk County, TN 37326
- Copperhill
 118 Ocoee Street
 Copperhill, Polk County, TN 37317
- Dayton Coal & Iron Company Coal Mines and Coke Ovens in Laurel-Snow State Natural Area, Pocket Wilderness Road Dayton, Rhea County, TN 37321
- Scopes Trial Museum
 1475 Market Street
 Dayton, Rhea County, TN 37321
- Dunlap Coke Ovens Museum

 Mountain View Road

 Dunlap, Sequatchie County, TN 37367
- Sewanee Coal Seam
 Tennessee Highway 111, 4 miles NW of
 Dunlap
 Cagle vicinity, Sequatchie County, TN 37327

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BLEDSOE COUNTY

1. Pikeville

Main Street, Cumberland Avenue, Spring Street & surrounding streets Pikeville, Bledsoe County, TN 37367

Poised at the head of the head of the Sequatchie Valley, Bledsoe County was formed in 1807. The county seat, Pikeville, was established in 1816 and became the center of coal mining in the county. The extension of the Sequatchie Valley Railroad in 1891 by the Nashville, Chattanooga, & St. Louis Railway was vital to the development of area mining. The Pikeville Branch Railroad had three stops in the county: College Station, Lee Station, and the terminus at Pikeville. In 1901, the Atpontley Coal Company began opening mines on the Sewanee Seam along the west boundary of the county near College Station utilizing a number of subsidiary operators. The coal boom was short-lived; by 1914, six mines were in various stages of operation but production had decreased significantly to just over 10,000 short tons, down from a high of 30,000 in 1908. Around 1920 Bledsoe County saw a new flurry in mine activity as three more companies opened new mines. Commercial Coal & Coke Company and Cagle Coal Company developed mines north of Pikeville while Cannon Creek Coal & Coke and College Coal & Mining Company worked new mines on the Battle Creek Seam near College Station and Lee Station. But the operations were unsuccessful and with only 2,217 short tons taken in 1921, mining in Bledsoe County was dwindling and today is only a vague memory in the minds of a few county residents.

BRADLEY COUNTY

2. Chattanooga to Charleston Concrete Highway

8746 Hiwassee Street Charleston, Bradley County, TN 37310

Located behind the Hiwassee River Heritage Center in Charleston is the most intact segment of the first concrete highway built in Tennessee. Using concrete made from stone taken in part from the quarry in Athens' Prof Powers Park (Site # 14), this was a segment of the "Chattanooga-



Lee Highway, Bradley County (2015)

to-Charleston Concrete Highway," first proposed in 1913 and completed in 1927. It was also a leg of the famous Lee Highway extending from Washington, DC to Atlanta, Georgia. This section and the segment along Charleston's Market Street are listed in the National Register of Historic Places for significance in transportation history. Be sure to visit the adjacent Heritage Center, a National Park Service interpretive site for the Trail of Tears National Historic Trail over which the Cherokee were forced from their homelands west to what is now Oklahoma. Exhibits discuss Fort Cass, the Army installation that oversaw the camps where the Cherokee were interned before they began the trek west in 1838.

3. Cleveland Railroad Depot

165 Edwards Avenue Cleveland, Bradley County, TN 37312

The county seat of Bradley County, Cleveland was the western terminus of the Copper Road (Site # 22). Here, copper ore from the mines around today's Ducktown and Copperhill was brought by wagons to the East Tennessee & Georgia RR which was completed to Cleveland from Dalton, Georgia in 1851. The line, later absorbed by the Southern Railway (now Norfolk Southern) was of pivotal importance to the mining and metals

manufacture industries; it carried not only copper ore but also goods manufactured in Cleveland's important iron foundries. The present depot was constructed in 1908 at a cost of \$17,400. After the railway ceased passenger service to Cleveland in the 1970s, the structure fell into neglect, but was restored in 2012 and again serves a transportation role as the hub for the Cleveland Urban Area Transit System operated by the Southeast Tennessee Human Resource Agency.

4. Museum Center at 5ive Points

200 Inman Street, East Cleveland, Bradley County, TN 37311

From copper mining to major industrial enterprises, Bradley County has always been a center for trade and commerce. Visitors to the Museum Center at 5ive Points can view products from each of the stove foundries, historic photos and advertising materials. Among the work on display are stoves from the Cleveland Stove Works that later became Hardwick Stoves, later makers of gas and electric ranges. Also featured are products from the Dixie Foundry which originally made skillets and other small goods before manufacturing stoves. It later acquired Magic Chef and took the latter's name for its better recognition. In the 1990s, Hardwick and Magic



Museum Center at 5ive Points, Bradley County (2015)

Chef were both acquired by Maytag and are still in production as a part of the Whirlpool Corporation. Visitors can also see products from the Brown Stove Works, a local family-owned business that now produces the highend Five Star gas ranges as well as conventional kitchen ranges. Metals manufacturing is still one of the largest employers in Bradley County, and the Museum Center at 5ive Points showcases the industry from its beginnings to the present, along with other facets of the county's history.

GRUNDY COUNTY

5. Grundy County Historical Society Heritage Center

465 Railroad Avenue Tracy City, Grundy County, TN 37387

For over sixty years, Grundy County was the center of the coal industry in the South Cumberlands, and home to the offices of the Tennessee Coal, Iron and Railroad Company which instituted state-of-the-art mining, coke production and iron manufacturing practices, turning Tracy City into the "Birthplace of the New South." Today, the Grundy County Historical Society Heritage Center interprets these pivotal industries as well as the county's native history, the development of its Chautauqua and resort communities, and its later role as a center for the emerging American Civil Rights movement. Located in the historic 1904 First National Bank Building in downtown Tracy City, the Center tells these stories through carefully curated exhibits. See mining artifacts, historical photos, and a scale railroad model showing the mining towns and the Mountain Goat rail line which served them. The library and archives of the Tennessee Coal and Iron Company are also preserved here and an archivist is available on Saturday mornings.

6. Grundy Lakes Coke Ovens

Lakes Road, off US 41 at east end of Tracy City Tracy City, Grundy County, TN 37387

It's hard to imagine that this tranquil landscape once resembled a scene out of Dante's Inferno. In the 1880s, 120 coke ovens operated by convict



Coke Ovens, Grundy Lakes, Grundy County, (c. 2010)

laborers belched out dense clouds of smoke day and night while other convicts toiled in adjacent mines. The Tennessee Coal and Iron Company built the Lone Rock Coke Ovens and opened the mines here in 1883. The company contracted with the State of Tennessee to utilize the convicts in the operations. In August 1892, Tracy City miners, who opposed the use of prison labor because they wanted the jobs, burned the stockade and sent the convicts back to Nashville on a train. Coke production ceased in the early twentieth century. In the 1930s, Civilian Conservation Corps crews helped stabilize and re-vegetate the area as a part of the Grundy State Forest, now the Grundy Lakes unit of South Cumberland State Park. Today, the Lone Rock Loop Trail showcases the brick and stone beehive ovens and the four Grundy Lakes, former mine pits which have flooded.

7. South Cumberland State Park Visitor Center

11745 U.S. 41 Monteagle, Grundy County, TN 37356

Displays of coal mining tools and artifacts and a diorama showing the cramped conditions in which miners toiled are a highlight of a visit to the South Cumberland State Park Visitor Center. Other exhibits showcase

logging, mountain arts and nature, and a large relief map depicts the entire South Cumberland Area. Park staff and volunteers from the Friends of the South Cumberland State Park provide maps and information on the park's popular hiking trails, waterfalls, backcountry campsites and scenic areas. Come see why this unique state park, a collection of numerous detached wild areas and preserves, has become one of Tennessee's most beloved outdoor playgrounds. If you have the better part of the day to spare, consider a day hike on the nearby Fiery Gizzard Trail, scene of the first iron furnace in the area; keep an eye out for primitive "dog hole" coal mines along the way to the popular waterfalls and scenic overlooks that make this challenging trail one of the state's most popular.

8. Grundy County Miners Museum and Heritage Center

2115 Main Street Palmer, Grundy County, TN 37365

In 1917, as coal resources dwindled at Tracy City, the Mountain Goat Railroad was extended to East Grundy County. The Grundy Mine Company, a subsidiary of the Tennessee Consolidated Coal Company, opened mines in the area in 1918 and the town of Palmer grew up around the mining operations. Mining continued until 1960 when disputes arose between the United Mine Workers and the mining company over labor agreements and rival unions. Today, the Grundy County Miners Museum and Heritage Center provides visitors a glimpse into the heyday of mining in Palmer and Grundy County. Photos, recounts, and artifacts tell the story of a town that grew up around an industry.

9. Mountain Goat Trail

PO Box 968 Monteagle, Grundy County, TN 37356

The route of the Mountain Goat Railroad brings to mind the famous story of "The Little Engine That Could". A true engineering feat, the railroad was built as a spur of the Nashville & Chattanooga Railway by the Sewanee Mining Company in 1853 to carry coal from its extensive mines in the South Cumberlands. One can imagine passengers carried by the train chanting in their heads, "I think you can; I think you can," as it made its vertiginous



Mountain Goat Trail, Grundy County, (2015)

climb from Cowan up onto the Cumberland Plateau along what was then one of the steepest railway grades in the world. The new accessibility afforded by the railroad prompted establishment of religious institutions on the mountain, including The University of the South, the Monteagle Assembly, Fairmount School for Young Ladies, and the DuBose Memorial Church Training School. The train ceased operation in 1981 and the rail bed is being transformed into a rails-to-trails project, once again providing a vibrant avenue for visitors to the Mountain. Today, the segment between Sewanee and Monteagle is open as a multi-use trail; eventual plans call for its extension west to Cowan and east to Tracy City, Coalmont, and Palmer.

10. Coalmont

<u>Tennessee State Route 56</u> <u>Coalmont, Grundy County, TN 37313</u>

Forty-five years after the first shipment of coal left Tracy City by rail, the Sewanee Coal, Coke, and Land Company launched new mining operations to the east around Coalmont. Laying rail was completed by March 1904 and shipments began soon after. The company constructed residences and commercial buildings in addition to mining structures and a battery of

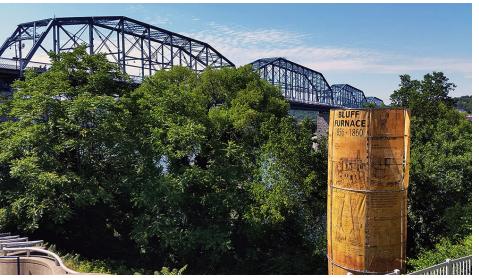
coke ovens. While Coalmont was said to boast "the best class of miners to be found at any coal mine in the state", disputes were inevitable as evidenced by a wage settlement in 1907 and a near strike in 1908. In 1908, Sewanee Fuel and Iron purchased the Coalmont operations. It constructed a striking brick building in 1908 as the company's offices and civic facilities, which were on the second floor. Coalmont Coal & Coke Company purchased the mines in 1939 which continued operating until 1944. Today, the company office building, which now houses the town's library and City Hall, may be viewed near the present day Coalmont Post Office.

HAMILTON COUNTY

11. Bluff Furnace Historical Park

On Chattanooga Riverwalk beneath Walnut Street Bridge Chattanooga, Hamilton County, TN 37403

In 1853, ironmaster Robert Cravens established the region's first heavy industry when he constructed a blast furnace on the Tennessee River bluff just upstream from downtown Chattanooga. It was first fueled by charcoal, but in May 1860 it was converted it to utilize coke, the first ironworks to do so on a large scale in the South. It operated only for six months before the



Bluff Furnace Historical Park, Hamilton County, (2015)

hearth collapsed and ruined the furnace, but it established Chattanooga as one of South's key industrial centers. The hot blast machinery was removed by Confederate forces when they evacuated the city, and the furnace base was used by Union occupiers as a lime kiln. Over time, the site was largely forgotten and reclaimed by the eroding bluffs. In 1978, archaeologists from the University of Tennessee at Chattanooga excavated the site to fully understand this pivotal industry. UTC and the local not-for-profit Mark Making developed the site as a public park in 2010. A fifty foot high steel-and-fabric replica of the original furnace stack features images telling the story of this early industry which formed the foundation for the city as an industrial powerhouse.

12. Cravens House

Cravens Terrace, in Point Park Unit of Chickamauga & Chattanooga National Military Park Lookout Mountain, Hamilton County, TN 37350

Pioneering ironmaster Robert Cravens established the first significant iron furnace in Southeast Tennessee, the Bluff Furnace (Site #11) at Chattanooga, in 1853, Two years later, he constructed a relatively opulent home on a level outcropping halfway up Lookout Mountain overlooking his ironworks and



Cravens House, Hamilton County, (2014)

the growing city. Unfortunately, while the house survived the November 1863 Civil War "Battle Above the Clouds" that resulted in the Union capture of Lookout Mountain, it was subsequently destroyed by drunken Union soldiers. Cravens rebuilt and enlarged the house after the war, and went on to revolutionize the iron industry by promoting further use of coke in the manufacture of iron. Today, it is a unit of the Chickamauga and Chattanooga National Military Park, and may be toured when staffed.

McMINN COUNTY

13. McMinn County Living Heritage Museum

<u>522 West Madison Avenue</u> Athens, McMinn County, TN 37303

Situated on the major railway corridor of the region providing easy access to iron production centers, Athens was home to several important foundries that produced stoves, agricultural implements, and other goods. The McMinn County Living Heritage Museum features examples of some of this work among its compelling exhibits. Included are stoves and other goods from the Athens Stove Company and products from the Athens Plow Works, as well as materials related to the Athens Mining and Manufacturing Company that developed a model company town in North Athens. This well-curated museum features more than 10,000 artifacts, many of which are showcased in its 30 permanent exhibits or in rotating displays. Relive more than a century of the rich, turbulent history of Southeast Tennessee at the McMinn County Living Heritage Museum in Athens, Tennessee.

14. Prof Powers Park Quarry

East Madison Avenue (Tennessee Highway 307) at Slack Rd Athens, McMinn County, TN 37203

In Prof Powers Park on the northeast edge of Athens, a flooded quarry pit is today a beautiful water feature, but in the 1920s provided stone used to make concrete for the Chattanooga to Charleston Concrete Highway (Site # 2), the first concrete highway constructed in Tennessee. Formerly Knox Park, this urban oasis has been renamed for a former Athens mayor and



Prof Powers Park Quarry, McMinn County (2015)

community leader and is being renovated as a multi-use predominantly passive park with walking trails, nature play areas, public gathering spots including an amphitheater, a dog park, even a large-scale community xylophone! It will also be a gateway to the McMinn RTT rail-to-trail project. The quarry pond will soon feature a floating aeration fountain with LED lights, a wetland area with a boardwalk, and engineered floating wetlands to help filter the water and promote the habitat.

15. McMinn Rails to Trails

Prof Powers Park, East Madison Avenue at Slack Road Athens, McMinn County, TN 37303

McMinn County was home to the first railway construction in Tennessee, the Hiwassee Railroad which was begun in 1837 just south of Athens only to cease building two years later. A decade later the East Tennessee and

Georgia Railroad resumed construction of the line and in 1851, Athens was connected by a steel ribbon to Dalton, Georgia and then to Knoxville four years later. The town quickly benefited from the line, and new businesses sprang up to take advantage of lower freight costs. Athens quickly became a significant iron manufacturing center with foundries producing stoves, plows, and other items. In the 1880s, a branch line was constructed to Tellico Plains, home to the Tellico Iron Works and extensive iron ore deposits. Later absorbed into the Louisville & Nashville Railroad and its successor, CSX, the line could not compete with the Southern Railroad's more direct route down the Valley through Athens, and in 2009, CSX petitioned to abandon the 4.3 segment between Athens and Englewood. McMinn County purchased the section for conversion to a multi-use trail, with the City of Athens undertaking its maintenance with support from the Friends of the Trail. Still under development, this trail will allow users to follow the route that brought iron ore and iron from Tellico Plains, and shipped the work of Athens' foundries across the nation.

MARION COUNTY

16. Marion County Coal Miners Museum

900A Main Street Whitwell, Marion County, TN 37397

High quality coal was discovered in Marion County in the 1850s. The first mine was located on Mount Etna (Aetna) east of today's Haletown in 1852; others were opened in the southwest corner of the county at Battle Creek in the late 1850s. In the 1880s, the Tennessee Coal, Iron & Railroad Company established a major mining operation at Cheekville (renamed Whitwell in 1887) in the northern part of the county and dominated the local economy. The Sequatchie Valley Railroad, purchased by the Nashville, Chattanooga & St. Louis Railway in the 1870s, was extended from Jasper to Whitwell in 1887 and carried coal to blast furnaces at South Pittsburg and other industries in the region. Whitwell soon became known as the "Coal City of the Sequatchie Valley." The mines here also boasted a battery of coke ovens, coal washers, tipples, and loaders. Miners raised their families in the community and traded largely at company stores (often paying with

scrip or tokens displayed at the museum). Coal production continued into the late twentieth century despite occasional labor unrest, culminating in the shooting of a United Mine Workers organizer in 1963. Mining was already declining on the night of December 8, 1981, when a massive methane explosion in Mine No. 21 took the life of seventeen miners and a company supervisor. Mining in the area ended in 1997. Today, the Marion County Coal Miners Museum brings to life the industry that was once the backbone of the county economy. Through an incredible collection of historical mining artifacts, photographs, and mine maps, it tells the stories of the backbreaking work of the miners. A sobering display commemorates the 18 miners lost in the 1981 explosion. Retired coal miners, who staff the museum, add a personal touch by sharing their account of work in the mines.

17. McNabb Mine Ruins

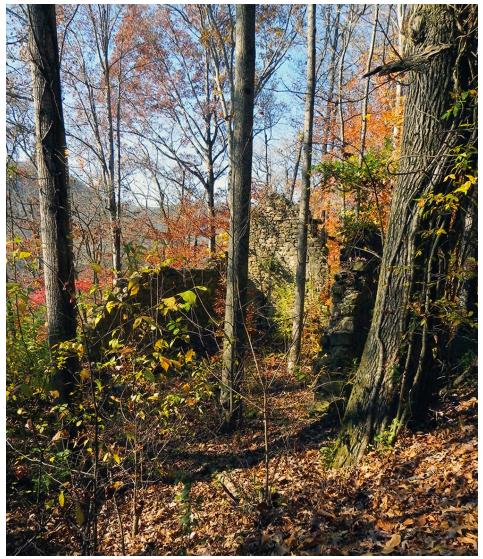
Mullins Cove Road, 3.2 miles SE of Mineral Springs, Marion County, TN 37347

In the early 1880s, David McNabb came down the Tennessee River from upper East Tennessee and established a coal mining operation at the southern end of Walden's Ridge, deep within the Tennessee River Gorge. The works were fairly extensive, and included mines and tipples, an incline, coke ovens a company store and worker housing. The small community of Shakerag, which featured a two-story hotel and a church, grew up around the mines, but was abandoned after they permanently shut down in 1905. Today, the site is located in the Prentice Cooper State Forest, and the stone ruins of a number of the mine and community buildings and the trace of the incline plane can be seen from Mullins Cove Road that winds through the north side of the Tennessee River Gorge.

18. Nickajack Cave

TN Highway 156 (Shellmound Road) at Maple View Public Use Area New Hope, McMinn County, TN

Cave saltpeter (potassium nitrate) was a critical ingredient in manufacturing gunpowder for both military and domestic use throughout the 1800s. It was leached from crystalized bat guano, a major natural source readily



McNabb Mines Ruins, Marion County (2014)

available in southeast Tennessee caves. Numerous caverns in southeast Tennessee were exploited for the substance; unfortunately the mining process disrupted cave ecosystems and sometimes destroyed important archeological sites. Nickajack Cave, formerly called "Tecallassee," was a well-known landmark to the native peoples and was used by the "Chickamauga" warrior faction of disaffected Cherokees and their allies

led by Tsiyu Gansini, or "Dragging Canoe." Nickajack, a settlement around the cave, was one of the Five Lower Settlements and was destroyed in the 1794 Nickajack Expedition. Beginning in 1800, James Orr mined saltpeter from the cave with permission from the Cherokee; operations continued until 1812. Robert Cravens began mining the cave again during the Civil War but turned production over to the Confederate Nitre Bureau. After the war, Nickajack Cave was operated as a commercial attraction. Steamboats would bring visitors down from Chattanooga and take them to the cave mouth. Afterwards, they would return to Chattanooga on the railroad from Shellmound. In the 1940s, Leo Lambert, developer of the popular Ruby Falls attraction on Lookout Mountain, ran it as "Nickajack Caverns". Today, the entrance is partially flooded due to the 1967 impoundment of Nickajack Lake and gated to protect the federally endangered Gray Bat (Myotis grisescens), which inhabits the cave in large numbers. An observation deck at the Maple View Public Use Area allows visitors to watch the flight of 100,000 or more bats emerging at dusk from April to mid-October.

19. Lodge Manufacturing Company

<u>204 East 5th Street</u> <u>South Pittsburg, Marion County, TN 37380</u>

South Pittsburg, Tennessee was just beginning to take root when the Southern States Coal, Iron, & Land Company, a British syndicate formed in 1875 to take advantage of the burgeoning Tennessee iron industry, suffered the untimely loss of its top leadership. James Bowron, Jr., who migrated to Tennessee in the summer of 1877, assumed leadership of the project. He recommended selling the company to the Tennessee Coal, Iron, and Railroad Company, but the directors instructed him to continue development; an initial furnace went into blast in 1879, five years after the company arrived in South Pittsburg. Revenues were much less than anticipated due to the cost of transporting the iron to markets; lacking the financial resources to continue, the floundering Southern States finally sold their holdings to TCI in 1882. By 1886, TCI was operating two 100-ton pig iron furnaces utilizing coke for fuel. They were managed by Joseph Lodge, a Pennsylvanian who came to South Pittsburg after working in railroad construction in Peru. TCI also operated a foundry which had a capacity

of two towns per day of polished articles. In the 1880s, TCI shifted capital and emphasis to its operations at Bessemer, Alabama. Rather than relocate, in 1896 Lodge established his own company, the Blacklock Foundry. After it burned in 1910, he reestablished his company as Lodge Manufacturing Company and built the current foundry. Today one of the largest foundries in North America, Lodge produces a range of cast iron cookware and bakeware, including skillets, griddles, and Dutch ovens. The nearby Lodge Factory Store sells the entire range of Lodge products and selected accessories that complement their lines. Lodge is one of the major sponsors of the National Cornbread Festival held each April in South Pittsburg, and the foundry is opened for tours during the event.

20. South Pittsburg Heritage Museum

316 Cedar Avenue South Pittsburg, Marion County, TN 37380



South Pittsburg Heritage Museum (2015)

The South Pittsburg Heritage Museum tells the stories of this pivotal iron making and limestone cement production center. Located in the historic downtown district, it interprets the pre-Civil War "Battle Creek" community, discovery of coal in the 1860s, construction of large-scale blast furnaces, foundries, and stove works in the late nineteenth and early

twentieth centuries, and daily life in the area. Among items in the collection are castings and manufactures from area plants and foundries including cast iron water and sewer pipes, kitchenware, and ornamental items. Other displays discuss the iron industry labor strife that culminated in the 1927 "Christmas Night Shootout" that left six dead on the city streets. Also interpreted is the nearby community of Richard City (now annexed into South Pittsburg) and the Dixie Portland Cement Company there, home for a time of the largest cement kilns in the world.

MEIGS COUNTY

21. Meigs County

120 East Memorial Drive Decatur, Meigs County, TN 37322

This small county bordering the Tennessee River on the east was home to a few small iron mines that exploited the veins of red fossil iron ore on the ridges in the northeast part of the county, an extension of the Whiteoak Mountain hematite veins that ran north from Hamilton County to Roane County. In the early 1880s, the Red Cloud Mine employed seven men and mined about 7,000 tons of ore annually, transporting it over a tram to the Tennessee River nearby, from which it was shipped to iron works in Chattanooga and South Pittsburg. In the early twentieth century, about sixty workers were employed at mines operated by the Roane Iron Company and the Dayton Coal & Iron Company. The ore was shipped by barge to the company furnaces at Rockwood or Dayton; this required transportation by wagons to the river, then unloading at the furnace ports into rail cars, making transportation expensive. Meigs County is the only county in Tennessee in which not a single foot of railroad was ever constructed, and the lack of efficient transportation made mining uneconomical and it soon shut down. Some experimentation was made into the quarry of rock for hydraulic cement and of building marble and fire clay, but again, the lack of affordable transport precluded these industries from developing. Information on the mines can be found in the historical collections at the Meigs County Library. While in town, visit the Meigs County Historical Society to learn more about this isolated but beautiful county.

POLK COUNTY

22. Old Copper Road

At Ocoee Whitewater Center, 4000 U.S. 64 Copperhill, Polk County, TN 37317

Prospectors searching for gold discovered rich veins of copper ore in 1843 in what is now known as the Ducktown Basin. Getting the ore or refined copper to market, however, was problematic. There were no roads connecting the area to Georgia or Tennessee cities. In 1851, mining interests began construction of a road to connect the Copper Basin with the new railroad terminus at Cleveland, Tennessee. Much of the work was carried out by Cherokee laborers who managed to evade the mass relocation associated with the Trail of Tears. In many places, the road had to be blasted out of the steep rocky terrain; evidence of this can be seen in the many vertical bore holes found in rock along the trail. In other areas, the road was built up on fill shoveled in from "borrow pits" along the route. The "Copper Road" was completed in 1853. Ore was brought down the



Old Copper Road Trail, Polk County (2015)

road in heavy carts drawn by mule teams consisting of from two to four mules; the trip to Cleveland and back took two days each way. Use of the road ended when railroads were constructed in the Copper Basin in the 1890s. In the 1930s, the present U.S. 64 was constructed over much of the old road. A 2.4-mile section at the Ocoee Whitewater Center has been preserved by the U.S. Forest Service and rehabilitated to reflect its historic appearance, including three period style wooden stringer bridges and a replica 1841 Howe truss span to show the type of construction needed to bear the weight of the two-ton carts.

23. Ducktown Basin Museum

212 Burra Burra Street
Ducktown, Polk County, TN 37326

Discover the compelling stories of copper mining and associated processing industries at this National Register-listed state historic site. The Ducktown Basin Museum preserves and interprets the Tennessee Copper Company's Burra Burra Mine, the best preserved of the mining operations, and many of its associated shops and buildings. Museum exhibits, located in the former mine superintendent's house, present the story of mining, smelting,



Burra Burra Mine, Polk County (2015)

and other operations throughout the entire Copper Basin, and discuss the dramatic environmental changes that resulted from the industry as well as efforts to restore the landscape. Look down into the massive mine pit and view a 300-acre segment of the famed "moonscape" that resulted from pollution from early copper roasting operations. Museum staff and volunteers are happy to share their anecdotes and accounts from life in Tennessee's most significant industrial landscape.

24. Copperhill

118 Ocoee Street Copperhill, Polk County, TN 37317

The Copper Basin's center of copper refining and associated sulfuric acid production, Copperhill, formerly McKays, is located on the Georgia border adjacent to its twin city of McKaysville. In the late nineteenth and through much of the twentieth century, smelters, calciners and refinement and processing operations dominated the city. The plants have closed and most of the infrastructure has been scrapped, but some of the huge works can still be seen along the highway leading north to Ducktown. An interpretive panel erected by the Tennessee Overhill Heritage Association on Ocoee Avenue tells the story of the town and its historic associations with the industries. Today, Copperhill is a popular tourist attraction, with many visitors arriving over the Blue Ridge Scenic Railroad, and others drawn to the area for whitewater rafting and paddling on the Ocoee River or hiking and mountain biking in the adjacent Cherokee National Forest.

RHEA COUNTY

25. Dayton Coal & Iron Company Coal Mines and Coke Ovens *Laurel-Snow State Natural Area, Pocket Wilderness Road Dayton, Rhea County, TN 37321*

Financed largely by Scottish capital, the Dayton Coal & Iron Company operated a major blast furnace at Dayton, served by a series of deep mines located above Dayton in the gorge of Richland Creek and its tributaries. By the early 1890s, it was extracting more than 200,000 long tons of coal

annually, and operated 323 ovens in two batteries just below the mines. From there, the coke was transported to the furnace at Dayton. Finished iron was transported from company docks down the Tennessee River. DCI was a major concern and one of the few integrated firms to operate mines, coke production facilities and a furnace, but was plagued by mining accidents (explosions at the company's Richland and Nelson mines in 1895 and 1901 killed fifty mine workers), labor unrest and low market prices, and development of larger operations at Chattanooga and Birmingham made it even more difficult to compete. In the 1920s, DCI's successor, the Cumberland Coal & Iron Company, shut down operations, and in the 1930s the furnace at Dayton was scrapped. While the furnace is gone, mine openings, railway grades, and ruins of hundreds of the coke ovens may still be seen along the trails in the Laurel- Snow State Natural Area just outside of Dayton.

26. Scopes Trial Museum

1475 Market Street

Dayton, Rhea County, TN 37321

The 1925 Scopes Trial that debated the legality of the teaching of evolution in Tennessee schools electrified the nation, but it also had its roots in the decline of the coal and iron industry in Dayton. George Rappleyea, local manager of the Cumberland Coal & Iron Company which was shutting down its coal and ironmaking operations, had read that the American Civil Liberties Union had offered to test the new state law that prohibited the teaching of evolution. He showed the article to druggist and Rhea County School Board chairman Frank Earle Robinson, suggesting that Dayton host such a trial in order to draw attention to the city's economic potential. With other civic boosters and local attorneys on board, they solicited a Dayton high school science and math teacher, John T. Scopes, to admit he had taught evolution (though Scopes told them he couldn't remember if he had). Scopes was charged, and the trail was held that summer. Members of the prosecution invited three-time presidential candidate and former Secretary of State William Jennings Bryan to join their team. In response, famous trial lawyer Clarence Darrow volunteered his services to the defense. The resulting trial that summer attracted nationwide attention and was covered in the world press. Scopes was convicted and fined \$100,



Scopes Trial Museum, Rhea County (2015)

though his conviction was later overturned on a technicality. Today, the Scopes Trial Museum in the basement of the National Register listed 1891 Rhea County Courthouse tells the story of Tennessee's most famous trial (including its associations with the coal and iron industry); visitors can also see the restored courtroom upstairs where the trial took place.

SEQUATCHIE COUNTY

27. Dunlap Coke Ovens Museum

Mountain View Road Dunlap, Sequatchie County, TN 37367

Around 1900, Douglas Coal and Coke Company purchased 14,000 acres of land in the Dunlap vicinity with plans to mine coal and convert it into industrial coke the use by the region's burgeoning iron industry. To process coal mined on nearby Fredonia Mountain, the Douglas Company built extensive batteries of brick and stone beehive ovens, supplying them by



Dison Slope Mine, Sequatchie County (2014)

bringing coal down the mountain on an incline railway. After Douglas bankrupted in 1904, Chattanooga Iron and Coal Company purchased the ovens and continued producing coke until 1927. In the 1980s and 1990s, the Sequatchie Valley Historical Association acquired the coke ovens ruins and established Dunlap Coke Ovens Park. Today, the museum, located in the reconstructed company commissary, houses the largest collection of historic coal mining photographs in the state of Tennessee. The park preserves Dunlap's cultural resources and educates visitors on the importance of coal to the region.

28. Sewanee Coal Seam

Tennessee Highway 111, 4 miles NW of Dunlap Cagle vicinity, Sequatchie County, TN 37327

Climbing west out of the Sequatchie Valley, Tennessee Highway 111 cuts through a portion of the Sewanee coal seam about four miles above Dunlap on Cagle Mountain. The seam is about 36" thick at this point, though it appears larger as crumbled shale has collected on the slope just below. This

was the most important lode mined by the region's industries. The seam produced high-quality coal suitable for conversion into metallurgical coke. It is not mined today. The surrounding shale contains high levels of iron pyrite, which, when exposed to moisture, produces acidic mine drainage, and releases from abandoned mines continue to pollute waterways in the region. Just above the coal layer, the road cuts through the sandstone caprock that covers the Cumberland Plateau.