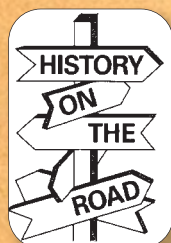


HISTORY ON THE ROAD

CATOCTIN MOUNTAIN PARK

By Thomas J. Straka and James G. Lewis

Photographs by Patricia A. Straka



Sometimes you just stumble upon forest history. We did that while driving from Antietam to Gettysburg. The road between the battlefields passes through Catoctin Mountain Park in Maryland, a recreation area managed by the National Park Service. The map shows it is really two parks: a federal park to the north, contiguous with Cunningham Falls State Park to the south. In the middle of federally controlled Catoctin Mountain Park is Camp David, the president's retreat. Of course, Camp David can't be visited, but the curious can drive by the main road that leads to it.¹ About two miles from that entrance we encountered some fascinating forest history, centered on the Charcoal Trail, which was designed to teach visitors about the early use of the surrounding forest.

At the southern end of the state park is the Catoctin Iron Furnace. Based on the simple fact that charcoal is made from wood, iron furnaces, especially older ones fueled by charcoal, often have a strong forest history connection. In all, three iron furnaces were built at the site.² The second of these, "Isabella," which was built in the 1850s and burned charcoal, is the only one still standing.³

Charcoal production began with packing wood into a conical pile, called a charcoal pit, which was covered with a thin layer of leaves and then soil to create an airtight seal. The wood was burned with minimal oxygen in a process called carbonization, which over one to two weeks of incomplete combustion resulted in a lightweight but potent fuel. "Charcoal pit," though, is a misnomer. The wood was piled above ground on a flat surface called a hearth. Although the trail in the Catoctin Mountains has no charcoal pits, it does have the remains of old hearths. Colliers, as charcoal makers were called, lived in the forest near

the charcoal pits, which required constant supervision: the smallest crack in the skin of the pit would allow in oxygen and quickly burn the wood into ash.

Demand for charcoal was responsible for the earliest large-scale industrial exploitation of Maryland's forests. Beginning in the early eighteenth century, iron was in short supply, so the state legislature encouraged the building of iron furnaces by offering 100-acre land grants to support the efforts.⁴ However, each furnace required hundreds of acres of forestland to fuel the furnaces.

From 1774 to 1873, when it converted to coal for fuel, the Catoctin Furnace used charcoal generated from wood harvested on surrounding woodlands, holdings that varied over time from about 4,600 to 11,000 acres. At its peak in the 1870s, when the owners had two furnaces running—one charcoal-fueled and the other coke-fueled—"Isabella" needed more than 300 men to cut wood and make charcoal, 100 men to operate the furnace, and an additional 100 working in the open pits of the ore and limestone banks, many of whom were immigrants.⁵ In the antebellum period, the owners had used both free and slave labor in those roles. Until the mid-1830s, when immigrants arrived, enslaved workers provided at least half the labor. Though not much is known about these individuals, their situation differed markedly from that of African Americans on plantations, so much so that during a small riot in 1838, black and white furnace workers fought side by side against residents of Mechanics-town (now Thurmont).⁶

The size of the operation explains the patchwork of charcoal hearths and charcoal hauling roads still visible two centuries years later. In addition, numerous tanneries and sawmills drew from the forests, and by 1920, the harvesting plus early-twentieth-century forest fires and chestnut blight had left a landscape with "very little timber of value."⁷ As the forest was cleared, farms sprang up on land that the federal government later

would classify as submarginal—land that would not profitably grow crops and even caused environmental problems, like soil erosion in cutover watersheds.⁸

In 1922 the state forester described the forests used for charcoal production:

The original character of the forest has been greatly changed under use and abuse, particularly as the result of frequent and destructive forest fires. Practically the entire forest area of the County has been cut-over. A considerable portion has been cut-over two or three times.... A large portion of the forests in the vicinity of Catoctin Furnace was operated for more than 100 years prior to 1890 for the production of charcoal in supplying the iron furnace at that point. The furnaces required a continuous supply of wood, which was obtained by cutting clean each year a portion of the forest, coming back again for another cutting at intervals of from 25 to 35 years. This resulted in even-aged sprout forests, coming up from the stumps, following cutting. Trees of the greatest sprouting capacity, such as chestnut and the oaks, thrive under this system, and where fires were kept out maximum wood production was maintained. It is interesting today to note the old charcoal beds and the wagon roads built for taking out the charcoal many years ago.⁹

CHARCOAL AND FOREST CONSERVATION

It was not unusual that old charcoal production areas, often called coaling grounds, became candidates for the Land Utilization Program. (Another example is Hopewell Furnace, in southeastern Pennsylvania, which appeared in the 2010 issue of this magazine.¹⁰) Catoctin had been logged for more than a century before the New Deal era. Beginning in the early 1800s, thousands of acres in western Maryland, a region rich in both iron ore and forests,

were cleared for charcoal.¹¹ In 1816 one traveler predicted “this Extensive now Barren forest” would take a couple of centuries before it might become “a tolerable handsome hill Country.”¹² A traveler in western South Carolina in 1849 offered a similarly dismal picture of the area surrounding a furnace: “For miles on either side of the iron works, the whole country has been laid waste, presenting as far as the eye can reach, the most desolate and gloomy appearance. The lands having all been bought up by the Company for the sake of fuel.”¹³

In 1884 the influential magazine *Puck* published a political cartoon that reflected a growing concern over, and understanding of, the environmental effects of the iron industry on watersheds.¹⁴ In the middle ground are burning charcoal pits. The

background strongly implies that indiscriminate logging for charcoal has left behind clearcut land, an eroded riverbank, and a downriver town underwater. The woodcutters in the foreground have logs at their feet, most likely billets just the size needed for the charcoal pits. Hovering above the two men, a female apparition labeled “Public Spirit” holds up her hand and warns, “Preserve Your Forests from Destruction and Protect Your Country from Floods and Drought.”

A decade before the New Deal, the perception of Catoctin Mountain’s forests was still one of cutover land. The state forester reported, “The woodlands of Frederick County are today producing less than half of a full timber crop, because of destructive agencies, which for more than 150 years have been operating in the forests.”

He cited “destructive cutting methods” as one of the chief concerns.¹⁵

These depictions of coaling grounds were misleading. Although the charcoal iron industry created highly visible and concentrated areas of wood harvesting that drew local denigration, criticism of its consequences for the nation’s forests was disproportionate. Historical geographer Michael Williams, in *Americans and Their Forests*, estimates that forest “clearing for iron production is only 1.3 percent of the land cleared for agriculture.” However, it was, he concedes, an industry that had an enormous visual impact.¹⁶

In this same era, in fact, the charcoal iron industry was an unheralded leader in forest conservation. The industry needed to regenerate forests near a furnace and was one of the few exploitive industries to take the long view and plan for sustainability. Some of the earliest literature on sustained-yield forestry and forest fire protection in the United States appears in the industry’s *Journal of the United States Association of Charcoal Iron Worker*, which began publication in 1881, shortly before the *Puck* illustration appeared. The journal carried news of furnaces throughout the United States and Europe in addition to scientific and economic news. Two of the founders of the American forestry movement published in it. Franklin B. Hough, appointed the first chief of the U.S. Division of Forestry (predecessor to the U.S. Forest Service) in 1881, wrote a piece on the need for a “permanent” or sustained wood supply that was necessary for the long-term operation of a charcoal iron furnace.¹⁷

A frequent contributor was Bernhard E. Fernow, the only professionally trained forester in the United States until 1890, who in 1886 became chief of the Division of Forestry. Before that, he managed a charcoal iron furnace and its 15,000 acres of woodlands from 1879 to 1883.¹⁸ Fernow published some of his earliest forestry articles in the charcoal industry’s journal. He explained the importance of sustained yield in creating a continuous supply of wood for charcoal production,¹⁹ writing about topics like the “inferior yield of charcoal due to the unprincipled character of wood-choppers,” using “beech for charcoal” production, and coppice growth for “charcoal production for iron works.”²⁰

Of course, not all charcoal furnace woodlands were managed using sustained-yield management principles and practices. After all, the Catoctin Recreational



The frame of a collier’s hut. An occupied hut would be covered with leaves and dirt to provide further shelter.

Demonstration Area was established from submarginal lands containing both denuded forests and unproductive farms. The desire for forest conservation and ecological restoration was the genesis of the park, along with preservation of an iron furnace thought to be of historical significance and the park's proximity to major population centers.²¹ It was only the intervention of New Deal federal land policy that made the park possible.

A NEW DEAL FOR OLD LANDS

By the 1930s the Catoctin Mountains were known as cutover charcoal land with scattered submarginal farms, and also as a popular recreation area a little more than an hour from both Washington and Baltimore. The two parks originated from a New Deal conservation project. Until then federal policy had encouraged settlement on undeveloped lands for the cultivation of agricultural crops, even when the farms might be on submarginal lands.²² During the 1920s the land utilization movement, which had started with the forest conservation efforts of Gifford Pinchot and Theodore Roosevelt, had expanded to include conserving and restoring farming, grazing, and wild lands.²³ The movement culminated in the creation of the New Deal's Natural Resources Planning Board. In 1934 the board recommended that the federal government purchase 75 million acres of submarginal farmland through the Land Utilization Program.²⁴ Under it the federal government initiated 250 projects between 1933 and 1946, totaling 11.3 million acres. Forty years later, it was estimated that about 40 percent of those projects ended up as forest, 28 percent as recreation areas, 20 percent as wildlife areas, and 12 percent as pasture and range. One thrust of the program was creation of recreational opportunities areas near urban populations, and 46 of the projects were recreational demonstration areas.²⁵

The old charcoal production lands near the Catoctin Furnace—90 percent cutover forestland and 10 percent submarginal agricultural land—were ideal candidates for the program. In 1935 the federal government began acquiring the land that would become Catoctin Mountain Park and Cunningham Falls State Park; in all about 130 properties from more than 50 different owners were purchased. The federal government began referring to it in correspondence as the Catoctin Recreational Demonstration Area the following year.²⁶

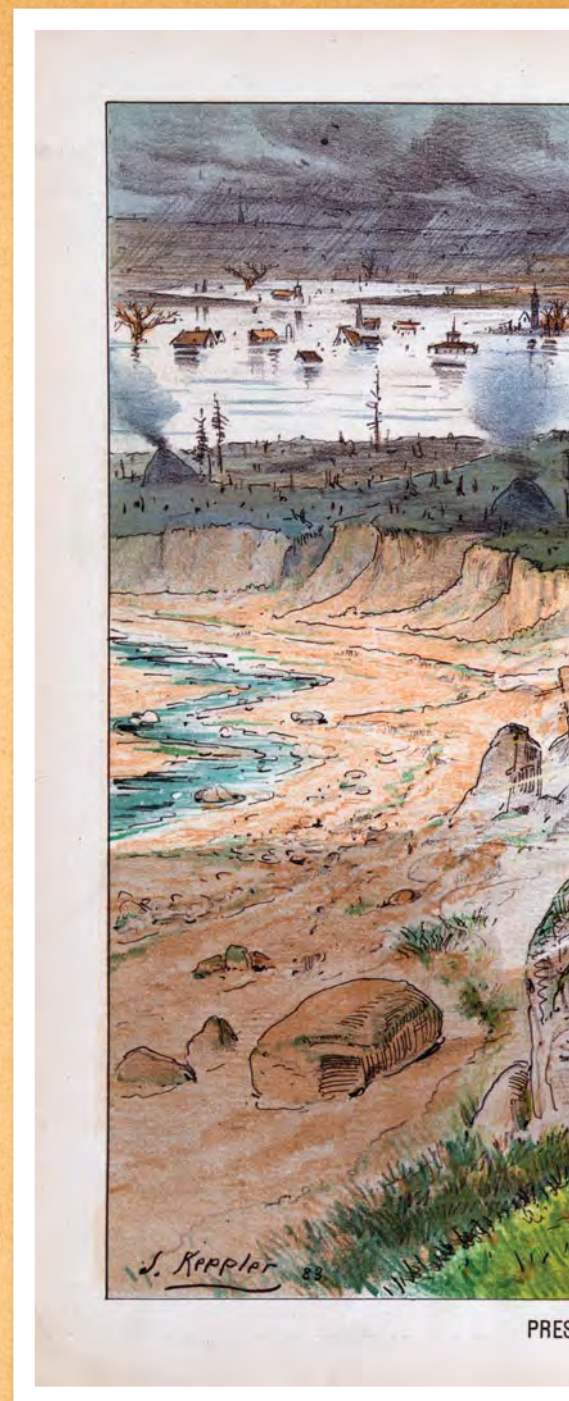
Though originally administration was delegated to the National Park Service, from the outset the idea was for the demonstration areas to become state parks (although a few others under the program became national parks).²⁷ But then in 1942, at the height of World War II, the government established the presidential retreat known today as Camp David so that the president could vacation close to Washington. When it came time to transfer the land to the state in 1954, the retreat's presence in the center of the northern half of the park posed a problem. In the end, the land north of Maryland Route 77 remained under federal control and became Catoctin Mountain Park, and the area south of the state road became Cunningham Falls State Park.²⁸ Thus, part of the forest history involves New Deal conservation policy and, to a lesser extent, national security.

ON THE CHARCOAL TRAIL

The Catoctin Mountain Park's landscape was shaped during two historical eras. The first was its support of the iron furnace from 1774 to 1903: its forests provided the wood that became the charcoal fuel. This era is interpreted along the Charcoal Trail, a half-mile loop in the northern part of Catoctin accessed from the Thurmont vista parking lot one mile north of the visitor center on Park Central Road. As previously mentioned, the park includes old sites of charcoal pits. Careful observation still yields the web of roads that led from the forest to the charcoal hearths and that eventually sent charcoal to the furnace. An even more careful observer will discover the many hearths that still dot the forest.

The second era, 1934 to 1942, is seen in the forest itself: the Charcoal Trail winds through woods that are a product of the New Deal policies of forest conservation and developing recreational demonstration areas, including Works Progress Administration and Civilian Conservation Corps programs that helped restore the forest by planting trees. (The latter also built the cabins, made of American chestnut, which one can rent.) The displays in the visitor center and the Charcoal Trail interpretative signs provide context for both historical eras. Related cultural features scattered across the park include a reconstructed sawmill on Owens Creek that represents the lumbering industry's long presence on the mountain.

The park provides a fascinating window into an early and sometimes destructive



forest-harvesting activity, plus a view of New Deal land management and conservation policies, especially ones related to the labor relief effort. Like Camp David, this forest history road trip is well hidden in plain sight. □

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PUCK.



ERVE YOUR FORESTS FROM DESTRUCTION, AND PROTECT YOUR COUNTRY FROM FLOODS AND DROUGHT.

“Preserve Your Forests from Destruction, and Protect Your Country from Floods and Drought” is one of the earliest color forest conservation political cartoons. The charcoal pits in the background reveal the true focus of the artist’s criticism.

NOTES

1. Camp David is closed to the public, and the National Park Service forbids motorists from stopping even to photograph the main road.
2. Elizabeth Yourtee Anderson, *Catoctin Furnace: Portrait of an Iron-Making Village* (Charleston, SC: History Press, 2013), 49, 61–62.
3. American Iron and Steel Association, *Directory to the Iron and Steel Works of the United States*, 14th ed. (Philadelphia: American Iron and Steel Association, 1898), 27–28; Karen Gardner, “Catoctin Mountains Rich in Iron Industry History,” *Frederick News Post*, July 11, 2001, https://www.fredericknewspost.com/archives/catoctin-mountains-rich-in-iron-industry-history/article_b19cd7ae-75de-5f0d-be30-138c77c8059b.html.
4. Jonathan S. Kays, “Maryland’s Forests: Past, Present, and Future,” Fact Sheet 627 (College Park: University of Maryland, Maryland Cooperative Extension, 1995), 2. Michael Williams estimates it took 150 acres of woodland to produce 1,000 tons of pig iron. *Americans and Their Forests: A Historical Geography* (New York: Cambridge University Press, 1989), 342–43.
5. Edmund F. Wehrle, *Catoctin Mountain Park: A Historic Resource Study* (Washington, DC: National Park Service, 2000), 93; Anderson, *Catoctin Furnace*, 52.
6. Wehrle, *Catoctin Mountain Park*, 59–60, 63–73; “African Americans,” *Catoctin Mountain Park*, Maryland, National Park Service, last modified April 10, 2015, <https://www.nps.gov/cato/>



A charcoal hearth with billets lies ready to be formed into a charcoal pit. Numerous former charcoal pits are located along the trail.



Using a pair of mules or horses, wood haulers moved half a cord on sleds like this to a charcoal hearth. They would unload the wood on both sides of the sled around the hearth, then return for another load.

learn/historyculture/africanamericans.htm. The visitor center information is to be updated in 2018 to include information about the use of slave labor at the furnace.

7. *Catoctin Clarion*, May 13, 1920, quoted in Wehrle, *Catoctin Mountain Park*, 120–22.
8. Barbara M. Kirkconnell, *Catoctin Mountain Park: An Administrative History* (Washington, DC: National Park Service, 1988), 5–6.
9. F. W. Besley, *The Forests of Frederick County* (Baltimore: Maryland State Board of Forestry, 1922), 10–11.

10. Thomas J. Straka and Wayne C. Ramer, "Hopewell Furnace National Historic Site," *Forest History Today* 16, no. 1–2 (Spring/Fall 2010): 58–62. H. H. Wooten, *The Land Utilization Program, 1934 to 1964: Origin, Development, and Present Status*, Agricultural Economics Report No. 85 (Washington, DC: USDA Economic Research Service, 1985), 55.
11. Wilma A. Dunaway, *The First American Frontier: Transition to Capitalism in Southern Appalachia, 1700–1860* (Chapel Hill: University of North Carolina Press, 1996), 280–81. Western

Maryland comprises four counties, Frederick, Washington, Allegany, and Garrett.

12. Uria Brown, "Uria Brown's Journal: Of a Journey from the City of Baltimore to the States of Pennsylvania, Virginia, Ohio and through Some Part of the State of Maryland," *Maryland Historical Magazine* 10, no. 3 (September 1915): 282.
13. Answers of F. H. Elmore, 17, *Laurensville Herald*, May 11, 1849, quoted in Ernest M. Lander Jr., "The Iron Industry in Ante-Bellum South Carolina," *Journal of Southern History* 20, no. 3 (August 1954): 354–55.
14. Michael Alexander Kahn and Richard Samuel West, *What Fools These Mortals Be: The Story of Puck, America's First and Most Influential Magazine of Color Political Cartoons* (San Diego: IDW Publishing, 2014), 11. The cartoon appeared in the January 9, 1884, issue of *Puck* and is in the Library of Congress, Prints and Photographs Division. The artist was Joseph Ferdinand Keppler, one of the founders of the magazine.
15. Besley, *Forests of Frederick County*, 21.
16. Williams, *Americans and Their Forests*, 344.
17. Franklin B. Hough, "On the Importance of Giving Timely Attention to the Growth of Woodlands for the Supply of Charcoal for Metallurgical Uses," *Journal of the United States Association of Charcoal Iron Workers* 1 (1880): 67–80.
18. Filibert Roth, "Great Teacher of Forestry Retires," *American Forestry* 26 (April 1920): 209–12.
19. Richard W. Behan, *Plundered Promise: Capitalism, Politics, and the Fate of the Federal Lands* (Washington, DC: Island Press, 2001), 100–103.
20. Bernhard E. Fernow, "The Yield of Wood and When to Cut It," *Journal of the United States Association of Charcoal Iron Workers* 3 (March 1882): 19–26; "The Beech for Charcoal," 4 (April 1883): 102–104; and "Shall Our Charcoal in Future Be Produced from Coppice Growth or Future Forest?" 6 (October 1885): 272–81.
21. Angela Sirna, "Tracing a Lineage of Social Reform Programs at Catoctin Mountain Park," *Public Historian* 38 (November 2016): 167–89; and Kirkconnell, *Catoctin Mountain Park*, 52–56.
22. L. C. Gray, "National Land Policies in Retrospect and Prospect," *Journal of Farm Economics* 13, no. 2 (April 1931): 231–45.
23. Albert Z. Guttenberg, "The Land Utilization Movement of the 1920s," *Agricultural History* 50, no. 3 (1976): 479–81.
24. Marion Clawson, *New Deal Planning: The National Resources Planning Board* (Baltimore: Johns Hopkins University Press, 1981), 111.
25. Wooten, *Land Utilization Program*, v.
26. Kirkconnell, *Catoctin Mountain Park*, 8–21; J. Early and B. Stafford, *Catoctin Mountain Park: Cultural Landscapes Inventory* (Washington, DC: National Park Service National Capital Regional Office, 2008), 2.
27. Wehrle, *Catoctin Mountain Park*, 158–61.
28. Barry Mackintosh, *The National Parks: Shaping the System* (Washington, DC: National Park Service, 1991), 56–57.