IN SEARCH OF WESTERN PENNSYLVANIA’S STONE IRON FURNACES

By Richard Parks
Pennsylvania's iron industry started before the Revolutionary War, east of the Allegheny mountains, when local needs exceeded the amount of cheap iron that could be imported from Europe. The industry spread across the Alleghenies as the country itself expanded westward. Pennsylvania was the largest producer of iron in those days, and Western Pennsylvania boasted a considerable number of iron furnace communities due to the abundant supplies of iron ore and limestone, as well as timber for making charcoal for fuel. As timber supplies dwindled, abundant anthracite and bituminous coal resources resulted in modification of the furnaces. By about 1850, stone furnaces were replaced by larger iron-clad blast furnaces, primarily located in large cities such as Pittsburgh and Youngstown. Their use of local ores diminished as the less expensive Mesabi Range ores came east of the Great Lakes via railroad. In the end, the small stone iron furnaces couldn't compete, lost profitability, and died out.

At one time, however, Western Pennsylvania had over 180 iron-making communities. Around 135 or so have remains visible today. A good portion, about 123 as of 2005, have GPS coordinates established, and most others have estimated coordinates from map scaling. Directions to reach these sites are available on the website home.earthlink.net/~r2parks/. Click on "Iron Furnaces"; select a county to read historical information, then click on "Furnace Locations" for detailed directions.

The seminal publication concerning old stone furnaces in this region is Myron Sharp and William Thomas' A Guide to the Old Stone Blast Furnaces in Western Pennsylvania. It was published in 1966 by the Historical Society of Western Pennsylvania. Since the 1960s, however, Pennsylvania's road numbering structure has changed, so much so that many of their route numbers are now obsolete.


Old stone iron furnaces were made of fire brick with a cut stone or field stone outer layer and were about 30 feet high. They were not made of iron, but rather were used to reduce iron ore to pig iron, bar iron, or castings. Furnaces were built throughout the eastern United States from the late 1600s to the 1800s. They were the source of American-produced iron vital to the nation's expansion, the fighting of early wars, the supply of iron castings and wrought iron work of all sorts, and the beginning of the steel industry.

Porterfield (aka Glen or Mill Creek) Furnace, situated along Mill Creek in Rockland Township, was built around 1837 by Joseph Porterfield. At that time, 40 hands worked the operation. Charles Shippen bought the furnace and operated it until it was abandoned about 1851. Around 1959, either an ice gorge or high water on Mill Creek undermined one corner, and its outer wall collapsed. Because of this, visitors can obtain a better understanding of a furnace's interior. There is a great view of the inner stack, and the cast house foundation and wheel pit walls are visible.

These furnaces were usually built below a hillside so that a ramp could be erected to the furnace top to dump in the charge consisting of iron ore, charcoal (or coke), and a little limestone for flux. Ample forests were needed to create the charcoal, limestone, and of course, iron ore, which is common throughout the east. In fact, it often appears...
in veins next to limestone. Iron was readily visible in outcroppings or easily located and dug out with bars and pickaxes. No special mining experience was necessary, though due to the natural mix of other elements, a blast furnace was needed to separate the iron from impurities. Water was also necessary to power the bellows (or tubs) needed to force air into the furnace to create the required heat to melt the ore. So the placement of an iron furnace was usually stimulated by the location of these, especially ore deposits, rather than a furnace being built and then ore searched for.

During the stone furnaces’ heyday, there were no railroads and few, if any, roads—only wagon trails leading to and from the locations. When a furnace was built, a community also would likely develop in these remote, difficult-to-reach locations. It is nearly impossible to imagine how these massive, heavy structures were erected. One example is **Anderson (aka Phipps) Furnace**. It resides along the east bank of Scrubgrass Creek, Clinton Township. Phipps Mills stood a mile above Kennerdell, and was an active place for a quarter of a century. In 1824, John Anderson built the first furnace in the township. He was an experienced ironmaster from Juniata County.

In 1835, Anderson sold the property to David Phipps, who carried on the operation for several more years. He manufactured iron for the Pittsburgh market and stoves, pots, pans, and kettles for the local market. By 1837, Phipps and Clapp were the owners and had 20 hands working. Phipps banked, or closed, the furnace around 1847. He eventually operated woolen mills and a flour, saw, and oil mill at the town of Kennerdell. At that time the town was known as Phipps Mills, and the operations were water-powered.

Later the Kennerdell family (for whom the town was eventually named) took over, changed the mills to steam power, and made woolen material for the uniforms of the Venango Grays, the county’s first Civil War volunteer unit. Today, the stack is in poor condition but readily visible; a tall chimney of the ironmaster’s house is also visible.

A typical iron furnace town consisted of up to 100 workers: 15-20 iron furnace workers to keep the furnace operating around the clock; woodsmen to cut and haul the timber; charcoal makers; miners to mine and haul iron ore, limestone, and later on, coal to make coke; farmers to grow food for the community; and others related to the operation, such as forge operators, iron transporters, and grist mill operators.

Isaac Meason built an early furnace in Fayette County, Dunbar Borough, and a community quickly grew. He added multiple Union furnaces along with Center Furnace and Mt. Vernon. The town of Dunbar was at one time the primary producer of quality iron in the U.S. and may have had as many as nine furnaces, not all stone, as well as forges and mills in its complex. Later served by railroads, Dunbar continued operations into the Depression years. Today, it is a sleepy little town with virtually no industry and only the remains of three furnaces: Union #1 (1801), Center, and Mt. Vernon. The Bullskin Township Historical Society is working to preserve Mt. Vernon. Isaac Meason’s Dunbar mansion still exists, although its future is uncertain.

**Wharton Furnace**, also in Fayette County, is well-preserved in a small park on Cheney (Chaney) Run in Wharton Township. Built in 1839 and operated sporadically until 1873, it made, among other things, cannonballs for the Union Army during the Civil War. During the Summer of 1962, the furnace was repaired and the area cleared for a small park. The
The construction of Western Pennsylvania’s old stone iron furnaces started in 1787 at Alliance Furnace in Fayette County, and continued up into the northwest portion of the state until about 1850 or so, most of them were blown out by the 1880s. The demise of these furnaces came about for many reasons. First, the depletion of forests and good grade ore deposits caused some to close or switch to coke. Advanced
technology, with larger iron or steel clad furnaces being developed in larger communities such as Pittsburgh, reduced the profitability of the smaller operations. The discovery of oil at Tionesta and the expanding coal mining operations shifted much of the labor pool over to oil and coal mining industries. Finally, the opening of Minnesota’s Mesabi Range and Great Lakes ore transport doomed smaller operations. Demand for steel rails (and therefore iron ore) was so great after the Civil War that in 1896, John D. Rockefeller developed the Mesabi, its ore stretching 110 miles long, 3 miles wide, and near-enough to the surface to be literally scooped up. Andrew Carnegie negotiated a long-term contract, giving him a good deal on the ore’s cost that he undercut all competitors. When others could no longer beat him, they joined him, buying Carnegie’s mills and forming the United States Steel Corporation on April 1, 1901.

Iron furnace sites are often in remote and beautiful country, along streams, by waterfalls, in rugged terrain with heavy underbrush, but there are ways to get to most of them. There are not too many complete stone furnaces standing; most are in various states of disrepair or about gone. However, all of the visible sites have something of interest, maybe a slag pile or a mill race or a wheel pit, some old stone foundations, some bee hive coke ovens, or an old charcoal house remains.

Searching out old stone furnaces is a fascinating way to get good exercise and see history in a new light. There are only a few ardent furnace hunting buffs out there, but there is always room for more.

Richard Parks, 83, discovered the joy of hiking and searching for iron furnaces about 1977, while living in Oil City. Now retired and out of state, he has made return trips since 2003 to update furnace locations and directions using GPS technology, posting the data on his web site home.earthlink.net/~r2parkl. He credits a network of like-minded furnace hunters for assisting him greatly.

Bibliography

Biographical and Historical Cyclopedia of Indiana and Armstrong Counties (1891).
History of Butler County, (Brown, R. C. & Co. publishers, 1895).
Caldwell, J. A., Caldwell’s Illustrated Historical Combination Atlas of Clarion Co. (1887).
Dundon, Daniel, Iron Furnace Adventures, personal scrapbook with pictures and text.
History of Clarion County, (unknown compiler, c. 1978).
Penndot, County General Highway Maps.
Pennsylvania Genealogical Society Journal (no date).
Rupp, I. D., History of Pennsylvania, (1847).
Smith, Robert, History of Armstrong County, (Waterman-Watkins 1883).
United States Department of Interior Geological Survey 7.5° quadrangle Topo maps, vintage 1960 and later.
Venango County Bicentennial Commission, Exploring Venango County (1976).

Correspondence and Assistance

Berger, John, New Wilmington, Pa., Fremont Furnace.
Blauser, Richard, Parker, Pa. history, directions & info about Maple Furnace.
Burrows, Paul A., Cabot, Pa., Winfield Furnace and West Winfield town.
Dalrymple, Gary, Allison Park, Pa., Jane Furnace.
Dundon, Dan and Chris, Erie, Pa., about furnaces in Erie, Armstrong, Venango, Clarion and Westmoreland counties, and search support.
Edenborn, Hank, Pittsburgh, Pa., about furnaces in Butler, Clarion, Forest, Lawrence and Venango counties.
Garletts Gary, Dunbar, Pa., Union Furnaces.
Geary, Clyde, Champion, Pa., Mt. Hope Furnace.
Hall, Christy Hunter, Mercer County Historical Society, Iron City Furnace.
Harnett, Edward and James, Hadley, Pa., Mineral Ridge Furnace.
Hershberger, Doris, Huston Twp. Blair County, Rebecca Furnace.
Horn, Patricia A., San Diego, Ca., search support for iron furnace searches.
Hornbarger, Robert, Clearville, Pa., additional Bedford County sites.
Hutchinson, Lawrence, Cairnbrook, Pa., Shade Furnace.
Jones, Cathy, Curator Cambria Co. Historical Soc., Bens Creek Furnace.
Markey, Steven, about Karthaus Furnace in Clearfield County.
Markiel, John, various contacts, discussions, data, and directions.
Miller, Dan and Huck, Polk, Pa., Reno Furnace.
Mouck, Karl, Sandy Lake, Pa. about furnaces in Mercer and Venango counties, and search support.
Pilot, Stan, Johnstown Pa., Old Cambria Furnace.
Ramsey, William, Rimersburg, Pa., Wildcat Furnace.
Shumaker, Cromer, New Bethlehem, Pa., Mahoning Furnace.
Skeleski, Irene, New Castle, Pa., Wilroy Furnace.
Slick, Gerald P. Roaring Spring, Pa., Bloomfield Furnace Farm.
Straffin, Ian, Meadville, Pa., about furnaces in Clearfield, Mercer, Venango and Westmoreland counties, and search support.
Stedina, Jill, Assistant Borough Manager, Zelienople, Pa., Bassenheim Furnace.
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Butler County

Winfield Furnace

Follow U.S. 422 east about 7.5 miles from its intersection with PA 68 northeast of Butler. Turn south (right) on McGrady Road, 40° 50.877'N - 79° 44.683'W. This merges with SR 1019, which takes you to West Winfield. At about 4.6 miles you will come to a bridge over Rough Run. A bulk cement loading plant is on the left, 40° 47.710'N - 79° 41.787'W.

Continue about another 0.1 mile to a split left. Take this left split about another 0.2 miles to a sharp left then a sharp right. Park on the left between the two curves, 40° 47.524'N - 79° 41.659'W. Look left and notice rubble piles and a concrete pad from the old railroad depot. Beyond this is a level area below the hillside to the left and above the creek. This is the abandoned railroad right of way. Walk this level area about 1-1/2 city blocks and watch for the furnace against the hillside on the left.

The exterior of the furnace is in good shape, with about 13 rows of stone intact, and there are three large openings that can be entered and a view up the stack obtained. There is slag near the creek.

**GPS Location:** 40° 47.663'N - 79° 41.701'W

Cambria County

Eliza (aka Ritter) Furnace

Go east from Armagh on U.S. 22 from its junction with PA 56, N40° 27.34’ W079° 01.94’. Drive east 3.2 miles to SR 2013 Wehrum Road, N40° 26.60’ W078° 58.42’. Turn north on SR 2013 Wehrum Road for at least 4.8 miles to the Rexis Access area near the intersection with SR 3045, N40° 29.10’ W078° 55.27’. You may park at the Rexis Access area on your right and walk east across the creek, about 200 yards, toward Vintondale, or drive across the creek and park near the Ghost Town trailhead. You will see the furnace on the left next to the hill and close to the creek.

**GPS Location:** N40° 29.053’ W078° 55.329’

Fayette County

Fayette (aka Bucks Run) Furnace

To reach Fayette from the junction of PA 711 and PA 391 in Normalville, N39° 59.956’ W079° 26.886’. Go 0.2 miles south to PA 653 N39° 59.728’ W079° 26.779’. Go east (left) on PA 653 until you cross the bridge over Indian Creek. At the east end of the bridge in the junction with Fritts Road (SR 1003), N39° 59.624’ W079° 25.929’, go left one mile. When Pritts Road (SR 1003) turns left and another road goes straight ahead, N39° 59.508’ W079° 24.839’, continue straight ahead, on Rogers Road, about 0.3 miles to the creek. This is Bucks Run. Park here, N39° 59.512’ W079° 24.477’. The furnace is about 100 feet to the right of the road and on the bank of the creek.

**GPS Location:** N39° 59.515’ W079° 24.400’

Wharton Furnace

Go about 6 miles east from Uniontown on U.S. 40 to the Summit Resort on the right. Continue about 0.6 miles beyond the Summit and angle up to the right on Wharton Furnace Road, N 39° 50.840’ W079° 38.699’. Continue on Wharton Furnace Road about 1.9 miles and look for the furnace in a small park on the righthand side. You can drive in and park near the furnace. The ruins of the wheel pit and millrace are also present.

**GPS Location:** N 39° 49.545’ W079° 38.275’

Venango County

Anderson (aka Phipps) Furnace

There are three routes to Anderson Furnace:

1. Go south on PA 308 through Bullion to Kennerdell Road. Turn left and proceed between 1.5 and 2 miles to a road on the right, 41° 14.156’N - 79° 52.371’W, (four-wheel drive recommended). Follow this road down near the creek where it meets an old lease road running parallel to the creek. Park here, 41° 13.769’N - 79° 51.706’W. Walk upstream to the furnace along this old road.

2. From Kennerdell, on the Allegheny River, drive across the bridge on SR 3008. Continue 2.3 miles from the bridge to the junction with SR 3005. Turn left onto SR 3005; cross Scrubgrass Creek. Proceed 0.2 miles to a left curve. At this point, Phipps Road (T380) (a dirt road) bears off to the right. Take Phipps Road right 0.6 miles to a bridge. Park here before crossing the bridge. A stone cottage is on the right. Proceed through the yard of this cottage and down to a foot bridge across a small run. Cross this bridge and go upstream to a new suspension bridge at Scrubgrass Creek. On the way you will pass the old suspension bridge, which is broken down. Cross this new bridge, 41° 13.748’N - 79° 51.802’W, and turn right. Proceed on an old lease road downstream to the furnace, a distance of about 0.13 miles.

3. A variation of #2, and preferred, is to park beyond the far end of the bridge on Phipps Road opposite a driveway on the right. Walk up the driveway, bear right across an abandoned sawmill property, and head down the hill. Go upstream to the suspension bridge across Scrubgrass Creek, 41° 13.748’N - 79° 51.802’W. Proceed as above.

**GPS Location:** 41° 13.756’N - 79° 51.775’W