



T H E M E S S E N G E R

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The Chesterfield Historical Society of Virginia, P.O. Box 40, Chesterfield Courthouse, Virginia 23832

THE FIRST AMERICAN BLAST FURNACE

Prelude

Tucked away in a forgotten space lies one of Chesterfield's most historic sites and first industry -- the Falling Creek Ironworks. It was a site that promised the early colonials a solid return on investment. Many sought to extract its iron so that it could be shipped back to England where it could be molded into new products for military or civilian purposes. Over the decades many people have documented and searched for the brief historical facts and remnants of what was America's first iron furnace. Today, what remains, is a historical marker and an old stone bridge located off Route 1 in the Bellwood area of Chesterfield County. The story of the ironworks is one of triumph and tragedy. It is the classic confrontation of the colonialist versus the native American.

the Virginia Company

The demand for the metal was increasing in England and the ravenous wood-burning English furnaces were, it was thought, in danger of destroying the country's forests. It seemed natural, no doubt, to look to Virginia for some aid and relief since "from thence we may have Iron and Copper also in great quantitie, about which the expense and waste of woode....will be no hurt, but great service to that country."¹

Forests and wood products were a source of concern to the English of that day. Supplies from the lands of "Poland & Muscovy," a chief source, were proving uncertain and increasingly costly, particularly since their "eternall warres are like the Antipathy of the Dragon & Elephants."² Virginia was but a natural relief with abundant ore and forests aplenty. And so the matter was pursued.

The colonists had not developed a strategy to deal with the need to expand into new territories while still appeasing the Indian's concerns to preserve their hunting grounds and life style. The situation was perilous at times and often only succeeded by deception and duplicity. The result was mistrust on both sides. In 1609 the London Company promulgated a new plan. The trouble, it decided, lay not with the Indians at large but with their leaders; by controlling them the colony could control their followers. Before Gates could implement the new policy, the Indians - abetted by famine and the settlers' ineptitude - almost exterminated the colony. During the horrendous winter of 1609-1610, Powhatan, by direct assaults and withholding food, contributed appreciably to the ghastly mortality of the

"starving time."³ Hostilities lasted until 1614, when Dale used in a combination of strength and cunning to extort a treaty from Powhatan.

In 1619 the Company sent 150 persons to Virginia "to set up three iron works" in view of the fact of "prooffe having been made of the extraordinary goodness of that iron." This was further manifestation of the continuing interest in Virginia resources, particularly iron. This apparently led to the establishment at Falling Creek of the first regular ironworks within the Colony.

These workmen, equipped "with all Materials and other provisions thereunto belonging," were under the direction, care, and charge of a Captain Bluett (Blewet) with whom the Company had contracted. His death, along with that of the "principall officers and cheife men," created some confusion.

QUARTERLY MEETING NOTICE

The spring meeting of the Society will be held on Sunday afternoon, April 26th, at 2:30 p.m. at the "Yellow House", the home of Margaret and Jack Burgess, 3001 West Hundred Road in Chester. Their property was the site of the Battle of the Yellow House, also known as the Battle of Chester Station, during the Civil War.

Steve Cormier, history teacher at Bird High School and a member of our Board of Directors, will deliver an address on the battle which was fought there. The Chester Station Camp, Sons of Confederate Veterans, will lay a wreath at the monument which commemorates the event.

In addition, two important portraits will be unveiled during the afternoon, those of Archibald Cary and John Winston Jones. An added bonus for us is that Margaret and Jack have kindly invited us to tour their home and their family's museum.

As you can see, we have a full and interesting program planned, so we hope all of you can attend!

Please remember to bring your own lawn chair!

In May, 1621, realizing that a replacement for Bluett was needed, the Company entered into an agreement with John Berkeley, "sometimes of Beverstone Castle in the County of Gloucester (a gentleman of honourable familie)," as "Master & over-seer" of the works at the site "called The falling Creeke." He agreed to take himself, his son Maurice, three servants from his "private family" and twenty workmen.⁴

The Company appointed a committee to negotiate with Berkeley and his son Maurice, who also wished to go to the Colony.⁵ Consultation followed and in the end Berkeley declared his willingness "to goe upon the same conditions, as Mr. Blewett, lately deceased.....exceptinge some fewe perticulars."

It was reported a year later that "the iron workes goeth forward vearly well." Another contemporary commented on the works and spoke of "having already received a good prooffe thereof by iron sent from there." This might have been small comfort for the 4,000 pounds which had been spent already.

Berkeley, it seems, was well qualified to take over this work being "a Gentleman of an honourable Familie" and well endorsed. He, the hereditary owner of Beverstone Castle in Gloucestershire, had sold his ancestral home in 1597, very probably to enter the iron business, and "most certainly had (had) long industrial experience."⁶ He was named to Council membership in the colony and went on to function as a councilor judging by his signature on Company correspondence.⁷ Berkeley received the enthusiastic support of the Falling Creek colony as evidenced by the following quotation.

"The people remaining of the Iron workes, we desire may be committed unto the charge of mr. Maurice Barkley to be employed (since we cannot hope that the worke should go forward) in such manner as may be most beneficial to themselves, and us, until such time as we may againe renew that business, so many times unfortunately attempted, and yett so absolute (ly) necessaire as we shall have not quiett until wee see it perfected; to which purpose wee desire there may be the first opportunity be sent us a particular list of the names and professions of the men, as also a noat of the tooles, and materialles wanting for the executing of the worke."⁸

On August 12, 1621, the Company informed the Governor and Council that an "excellent Shipwright" and some thirty or forty carpenters and boatwrights would be sent to Virginia.

In his Dissolution of the Virginia Company, Wesley Frank Craven has concluded that "Among all the projects planned and undertaken in the first two years of Sandys' control, that most favored and receiving the greatest attention was an attempt at the development of a successful iron industry. This looked not only to the provision of tools and all

necessary hardware equipment for the colony, but to the production of iron products for exportation to England."⁹ The reasons for its emphasis in Virginia were the same as a decade earlier. The domestic industry in England was said to be on the decline because of a fuel shortage. The use of coal in the smelting process was still more than a century away in the mother country.

It was to the Falling Creek site that Berkeley took his men. It was described at the time as "The falling Creeke" and said "to be so fitting for that purpose, as if Nature had applyed her selfe to the wish and direction of the Workmen; where also were great stones hardly scene else where in Virginia, lying on the place, as though they had beene brought thither to advance the erection of those Workes." It seems significant, too, that this was the area where it was later (May 1625) duly reported that one John Blower had previously "surrendered for the use of the Iron works" his 100 patented acres. This is the only such notation in the records of the time.¹⁰

Berkeley went right to work on arrival in Virginia and in a matter of months things were evidently in good order: "Master Berkeleys letters assure us, that there is not a more fit place for Iron-workes then in Virginia, both for wood, water, mines, and stone; and that by Whitsontide (Spring 1622) next, we may rely upon Iron made by him."¹¹ The words "made by him" are significant since iron made at Falling Creek by others had been sent to England as early as August or September, 1620.¹²

It was asserted in 1621 that the ironworks were "the greatest hope and expectation of the colonies."¹³ The word that reached the House of Commons on May 13 was "That they have already erected in Virginia 3. or 4. Iron Works which cost the Company 4,000 pounds" and that there was "No better Iron in the world."¹⁴

So far as is known the special report by Governor George Sandys and John Berkeley on progress that was mentioned early in 1622 has not survived.¹⁵ Part of the word, however, was that Maurice Berkeley was helping as an overseer "of a salte woorke" and had demonstrated "very good skill therein." Obviously the Virginia Council was rather proud of the "care" which had been taken in the matter of the "Irone Woorkes."¹⁶ Berkeley's efforts added another 1,000 pounds to the investment in the works, an investment which not totalled 5,000 pounds.¹⁷

This information regarding production under Berkeley, had come in letters from George Sandys, and from Berkeley himself, which also contained requests for additional provision for "him and his people." The Company approved the request accepting the offer for repayment "out of the first fruite of their labors."¹⁸ Robert Beverley's report of Berkeley's production estimate is even stronger. Beverley indicates that the prediction was "to finish the Work, and have plentiful Provision of Iron for them by the next East." This seems to mean that the furnaces were working well and in order. The objective was not production but increased production.¹⁹ Apparently the Falling Creek settlement

was a growing community enjoying even the advantages of medical care.

Native Americans

If the initial Virginia policy had been personified by John Smith, who bullied the Indians but rarely attacked them, and if the more belligerent approach of 1610 - 1614 found its symbol in Thomas Dale or Samuel Argall. Virginia's new emphasis on humanitarianism between 1614 and 1622 was best embodied in George Thorpe. "That worthy religious Gentleman, ...sometimes one of his Majesties Pensioners," had social standing, political influence, and an unusual degree of public conscience. Smith's success was insured by the feebleness of Powhatan's efforts to dislodge the colony. Reluctantly the chief accepted the English presence, especially since the colony remained small and rent by dissension.

And in the spring of 1622 the Reverend Patrick Copeland, a London minister and rector-designate of the Indian college, made racial harmony a theme of his sermon to the London Company. Among "the Wonderful workes of the Lord." Copeland reminded his audience, was "a happie league of Peace and Amitie fondly concluded and faithfully kept, betweene the English and the Natives, that the feare of killing each other is now vanished away."

Copeland misjudged the situation in Virginia. What appeared to be a new era of peace and cooperation masked underlying tensions that boded ill for Indian-English amity. Those tensions came partly from the settler's pejorative attitude toward Indian culture, partly from their increasing pressure on Indian lands, and partly from changes within Powhatan's tribe. More serious than the Englishman's reluctance to intermarry with natives was his unwillingness to leave them as they were. During the early years the colonists had seized Indian corn, exacted tribute, and wherever possible forced Indian submission to English authority. The colonists admitted as much. In 1621 a Virginian minister saw no prospects of converting the Indians "till their Priests and Ancients have their "throats cut." ²⁰

Smith allowed no Indian recalcitrance. On one occasion he seized Opechancanough, leader of the Pamunkey tribe and half-brother of Powhatan, by the hair. "You promised to fraught my Ship (with corn) ere I departed, and so you shall, or I meane to load her with your dead carkases." ²¹ A few weeks later, Smith grappled with another chief, dragged him into a nearby river, and almost drowned him. He spared the Indian, however, when "having drawne his faucheion to cut off his head, seeing how pitifully he begged his life, he led him prisoner to lames Towne, and put him in chaynes." ²² Such tactics prevented open warfare. They did not promote cordiality or conversion.

The Rolfe-Pocahontas marriage did not, of course, establish a pattern of ethnic fusion. Almost a century later, historian Robert Beverley expressed regret at the early Virginians' failure to intermarry with the Indians. The peace that Chief Powhatan shaped lasted another five years. His brother,

Opechancanough, was now the leader of the Powhatan Confederacy. He recognized a disturbing pattern in Indian-white relations. The period of ostensible concord also saw, the rise of a new and irreconcilable issue.

Powhatan too, had shifted his strategy from time to time: from cautious friendship to warfare to reluctant acquiescence. His tribe made further alterations between 1614 and 1622. When Powhatan died in 1618 (the year after Pocahontas succumbed to disease in London), tribal leadership passed to Powhatan's younger and bolder half-brothers. His immediate successor, Itopan, survived only briefly; Opechancanough followed, and although he promised that "the Skye should sooner falle" than peace with the English be broken, ²³ his subsequent actions revealed a profound distrust of the English and a readiness to fight if their encroachment and effrontery became unbearable.

Tobacco, now popular in Europe (see "Arawak"), was a lucrative cash crop. Boatload after boatload of settlers arrived along the ports of the Chesapeake Bay to cultivate it. Tobacco depleted the soil, necessitating new fields every several years. As a result, the English needed more and more land. But they usually ignored the rights of the native peoples, tricking them into signing away huge tracts. The settlers would then move in and carve the land into plantations, cutting down trees and killing or driving away the game. In the process, Indian hunting grounds were ruined. A centuries-old way of life was destroyed.

Opechancanough wanted to break this pattern. He plotted a strike against the settlers to drive them from Powhatan country. But he wavered in his purpose. He remembered the peace established by his brother and niece. He wondered if his warriors could really defeat the now-numerous colonists. The arrest and execution of a brave by the name of Nematanou for the alleged murder of a white trader made up his mind once and for all. Opechancanough ordered a surprise attack.

On the morning of March 22, 1622, scores of Indians came to the settlers' homes to trade or converse, "yea in some places sat downe at breakfast." Suddenly the visitors seized their hosts' weapons, or drew knives concealed in their own clothing, and attached every white man, woman, and child they could reach. Friendship proved no shield. The Indians slew George Thorpe along with the rest, and "with such spight and scorne abused his dead corps as is unfitting to be heard with civill eares." ²⁴ Hundreds of warriors swept out of the forest and through the colony's tobacco fields, killing every colonist in sight - all in all, 347 men, women, and children. ²⁵

Without warning the great Virginia Indian massacre struck. Devastation spread over much of the colony and nowhere did it hit harder than in the ironmaking community on Falling Creek. The destruction was complete and the project was ended in sudden death and wreckage. A total of 27 persons were killed. "At Captaine Berckleys Plantation seated at Falling Creeke, some 66 miles from James-Citie in Virginia." The dead included John Berkeley, himself, 21 other men, two wives, and three children. ²⁶ It is said that

only two small children, "one Boy only and a Girl," survived and these because they fled and hid in the thickets along the creek.²⁷ The ironworks were demolished, the machinery broken, and the tools dispersed. It is said that, not yet content, the Indians dumped much of the wreckage into the river.²⁸

Few events in early American History match the drama or significance of the Virginia massacre of 1622. It cost the fledgling colony the lives of almost 350 settlers; it contributed to a subsequent famine and epidemic that killed another five or six hundred; it hastened the collapse of the Virginia Company of London; and it brought on a ruthless counterattack against the Indians, in which scores of settlers and hundreds of Indians perished. It also wrought a major shift in English policy.²⁹

Instead, there emerged a policy of unrestrained enmity and almost total separation that reflected a persistent but often repressed contempt for the American natives. Governor Francis Wyatt put the matter bluntly. "Our first worke is expulsion of the Salvages..." he wrote soon after the massacre, "for it is infinitely better to have no heathen among us, who at best were but as thorns in our sides, then to be at peace and league with them."³⁰

When the full import of the massacre was felt, however, the hopeful note was lost. The Company letter of August 1, 1622, to the governor and Council in Virginia carried a new tone.

Despite the sudden reversal of fortunes, late in 1622 it was deemed "Absolutely necessary for the good of the Colony to replant...the Iron Works," as well as the other settlements and plantations in the area - Henrico, Charles City, the College Lands and such.³¹ Insofar as the iron project is concerned, this contemplated reactivation was to no avail. The end had come. Maurice Berkeley, who took over his father's responsibilities, waited in vain for the new tools and reinforcements. He was employed in other work and gave up the project permanently, being released and set free from the Company's service by Court action on November 19, 1623.³²

Aftermath

The four year iron project (1619 - 1622) was now at an end. Its contemporary evaluation is much beclouded. Bitter controversy revolving around the entire Virginia Company operation led, in the end, to a dissolution of the Company itself in 1624. A Company report summarized the project thusly; "Duringe these 4 last years there hath been expended in settinge upp of Iron Workes (the Oare whereof is there in great plenty and excellent) above Five Thousand poundes; which worke beinge brought in a manner to perfection was greatly interrupted by the late Massacre."³³ It is obvious that the ironworks was destroyed before financial success was achieved and that production was not sustained for any considerable period. The records indicate, however, and a study of the site and remains have confirmed that despite trials and tribulations, an integrated ironworks was erected on Falling Creek, perhaps in 1619, and that it was producing in 1620 and probably at other times. It very likely was in

production and fully operational at the time the Indians struck on March 22, 1622.

The termination of the Falling Creek project seemingly put an end to serious and sustained ironmaking activity in Virginia for almost a century, even though the virtues such an industry were often stressed together with natural potential of the colony.

Other attempts were to follow those of Cary along Falling Creek. About 1628 new propositions were advanced for setting up ironworks in Virginia. It was felt that the King, Charles I, should undertake the support, it being "so great a charge." One was by Alexander Clary in 1621. He came to Chesterfield, bought land, built a home and worked his holdings. He extracted some ore from nearby deposits, but when there was no profit he gave it up and went back to farming, leaving, it is reported, some of the necessary excavations as "a mute reminder of a futile hope." A revival of interest in Chesterfield ore came again in 1637 "when a vein was found in Salle's old coal pits, but while hopes were great, nothing tangible came from this discovery either."³⁴

Perhaps Sir John Harvey's interest in iron was but a continuation of this effort. He reported in a letter home on April 15, 1630, that despite his journey to Virginia and his sickness that he was pursuing the matter of "divers staple commodities." He had "already, notwithstanding, his weakness, made a journey to the iron works, which the Indians have demolished."³⁵ A month and a half later he reported that he had sent to Sir John Wolstenholme "some of our iron oare in two parcells, the one of the lower part of the River, the other the upper parte, with relation of the state of the iron work begun before the massacre."³⁶ His comment on the Falling Creek site was favorable. He reported a large bed of stone and outcroppings of iron ore as well as ample water power and timber. He also pointed out, on February 20, 1633, that "Skilful persons should be transported to set the iron works on foot."³⁷

The eventual peace agreement of 1632 established separate domains for Englishmen and Indians. A very few natives, converts to Christianity or totally subservient to Anglo-American culture were thereafter permitted to live within the colonial perimeter; for the vast majority of the Indians, however, the events of 1622 meant permanent exclusion from the areas controlled by the intruders. All prospects of an integrated society had vanished.

The next plan for the Falling Creek site seems to have been of a private, rather than a public, nature by a man who had acquired holdings in the area. He was Sir John Zouch of Derbyshire, a man long interested in colonial enterprises. Through his mother, Lady Mary Berkeley, he was a kinsman of John Berkeley. He was a member of the Virginia Company in 1621-1623.

The Virginia land to which Zouch had title was upriver the Falling Creek area. Eventually this acreage seems to have escheated to the Crown and to have been resented by one Abel Gower who in turn sold it to William Byrd,³⁸ the first of three famous bearers of the name in Virginia.

It was Byrd's turn now to be interested in the Falling Creek iron production potential. In 1693 a note was made of his "intention" to carry on the "ironworks" which had been introduced "on Falling Creek in the time of the Company."³⁹

He turned his attention to it near the turn of the century though little came of it.

The next chapter in the story of Falling Creek iron seemed to have been written by Archibald Cary who came into possession of the tract on the death of his father Henry Cary in 1749. On it he built his famous "Amphill," a mile above Falling Creek. On the Creek he reported to have built a "new iron works," a simple installation in which he made bar iron from "pigs" produced along the Rappahannock and Potomac rivers and in Maryland. Profits were light, however, and he gave up the forge converting his pond, it is said, to the use of a grist mill. In the late nineteenth century this mill, which remained in use for many years and was then owned by H. Carrington Watkins and known as the "Amphill Mill," was about sixty yards from the then identifiable site of the first ironworks on the western bank of the creek. The Cary forge site was then (1876), clearly identified as on the east side of the creek and east of the mill.⁴⁰

R. A. Brock visited the Falling Creek area late in the nineteenth century, in 1876, and possibly at other times. He reported the creek then as "an insignificant rivulet" above the grist mill there. Some twenty yards below, however, it widened out into "a handsome little lake," and a quarter mile beyond it emptied into the James. On the western bank some sixty yards from the mill and "nearing the river," he picked up "pieces of furnace cinder, presumptive relics of the iron works of 1622." The bluff adjacent and incumbent has, it is evident, from repeated washings of the soil, nearly covered the exact original site." There were remains (slag, cinder, and fine charcoal) in the quantity at the later Cary forge but these were at another site and across the Creek.

⁴¹ Historian Philip Alexander Bruce, also tells of slag having been found at the site in the nineteenth century and of samples having been placed in the custody of the Virginia Historical Society.

Even in 1925 Mr. Bensley realized something of the significance of his findings and, through his efforts, a group of three prominent Richmonders were encouraged to visit the site. On September 12, 1956, the only surviving member of this group of three was Mr. LeRoy E. Brown, Jr.,⁴² who on request, was willing to affirm in a notarized statement that he made this visit to the site "on the south side of Falling Creek...less than 150 yards nearer the James River than are the Falls of the said Falling Creek and that Falling Creek is a tidal stream and was no doubt deeper than at the present time." He confirmed that he saw there (1) "a part of the foundation and a part of the walls that he believes were a portion of the original iron works" and (2) "much ancient charcoal and much ancient slag such as result from the smelting of iron ore." He further stated that the foundation, walls, slag and charcoal had been brought to view by excavation work that "extended down a good many feet below the surface of the ground."

The substance of this report appeared later in The Iron Age magazine⁴³ and was headlined as "Site of America's Original Blast Furnace Found." It included a further description of the "blast furnace slag" and additional date on the discovery:

"This slag shows that in the process used at that time, about 1619, only a very small percentage of the iron was extracted from the ore. The slag is in very large lumps and extremely hard, as is characteristic of all charcoal produced slag. A curious feature is that large pieces of charcoal are imbedded in the slag, a fact which surprised the discoverers, as it was not known that charcoal would withstand the elements for 300 years and remained in a state of perfect preservation. R. C. Wright, of Wright & Company, Inc., Richmond, Virginia, slag shippers, is much interested in the discovery, and with others, has proposed that the site of the Falling Creek furnace should be marked by the erection of a monument to designate the spot where the American iron and steel industry had its birth. Pieces of the slag will be deposited in the Virginia mineral exhibit."

It was learned from Eddie A. Swineford, a local resident of long standing, that in the years 1887-1890 there was "a large and long pile of slag and charcoal near" the ironworks site. He stated "that the quantity of this slag was so great that over a considerable period of time it was hauled away and that public roads of that area were constructed therewith." Swineford, also, about 1887 dug a lump of iron out of the ground about the slag pile near the ironworks site. It had the shape of a "pig."⁴⁴

In the fall of 1955 Roger C. Bensley, then owner of the ironworks site was in the process of landscape operations near the south bank of Falling Creek several yards below the foot of the rapids where he planned to open a public recreation park.⁴⁵ In the necessary bulldozer operations for a swimming pool, he related that he "uncovered a great many pieces (well over a ton) of ancient and original iron works material, some considerable number of the pieces of which had been pre-shaped into long, rounded billets or pigs and...these were mixed with much of the ancient, original charcoal." Mr. Bensley further reported: "that acquaintances, with his consent, carried away most of this ancient iron works material." He also related that, in 1955, at a depth of five or six feet, he saw a part of the blast furnace and that "the inside of this blast furnace was circular in shape." This was covered over for protection, yet he made careful notations of its location.

In 1957 an additional quantity of material taken from the Falling Creek site was, also, deposited with the Virginia Historical Society. This, unlike the earlier material, was supported by affidavits, analyses, and documentation.⁴⁶ This material, taken with the documentary record, allows some very definite and positive conclusions.

