

WIRG

Wealden Iron Research Group

NEWSLETTER

No. 10

NOVEMBER 1989

Editor: Mrs. S. Swift, Hamfields, Withyham, Hartfield, Sussex,
TN7 4BH.

A LETTER FROM THE CHAIRMAN

Dear Fellow Members,

A particular pleasure for me this year was an invitation, last March, to open an exhibition of Wealden iron at Horsham Museum. In choosing some appropriate opening remarks, it struck me that some attention needed to be drawn to the poor notice which the 'heritage industry' in the South East gives to the iron industry of the Weald. One of the reasons, presumably, is the lack of remains, although Pippingford Furnace and the bath-house at Beauport Park (see below), for example, are located in Ashdown Forest and the '1066 Country' respectively, both areas attracting visitors. Yet here is a major element in the history of the South East which is being ignored, despite the fact that 'the past' is this country's greatest tourist asset. I am not suggesting that iron should be a central theme in the historical attraction of the South East, but it should be represented; and it is something to which planners and those who have an overall responsibility for the promotion of this region should be giving greater consideration.

As usual there are some words of thanks owed to retiring members of the Committee; to Sue Swift, Hon. Secretary until a couple of years ago, who will, I am pleased to say, continue to edit the Newsletter; and to Edmund Teesdale whose short stay on the Committee has nevertheless been valued. At the same time, I am delighted to welcome two new members to the Committee; Brian Awty and John Berners-Price. John has been co-opted after volunteering at the AGM.

Please keep your Committee informed of sites, finds, archives and publications which are relevant to the Group's interests. There is much about the iron industry still to be learned, although the sources become harder to find.

Finally, may I wish you an enjoyable Christmas and an interesting New Year.

Yours sincerely,

Jeremy Hodgkinson

THE WINTER MEETING

The WIRG Winter Meeting was held on Saturday 4th February at Groombridge Village Hall, attended by about 40 members.

Chris Place from the Field Archaeology Unit of University College, London gave an illustrated talk about the excavations he had recently undertaken at Blackwater Green Forge, Crawley. The excavation had confirmed the existence of the forge site. Two tail races with timber beams in good condition, and an anvil base had been found.

The excavation report was to be compiled and published in the near future.

The talk was followed by a delicious WIRG tea.

S. Swift

ANNUAL GENERAL MEETING - SATURDAY 22ND JULY 1989

This year's AGM was attended by some 45 people and took place at Matfield Village Hall in Kent, on one of those numerous very hot days of '89. The talk by Dr. S. Bull, of the National Army Museum, concerned the rise of the Browne family (1590-1645), local gunfounders who operated the blast furnaces at Horsmonden and Brenchley.

The theme of the talk was to consider the three successive members of the Browne family, Thomas, John and George, as the organisers of what we now call a "cartel". This is defined as a "manufacturer's union to control production, marketing and prices"; whereas, in the past, the Browne family were thought of as craftsmen who actually worked at the furnace.

The Browne family were probably casting iron for the domestic market before Thomas Browne is first recorded as obtaining a licence to cast iron ordnance in 1589. In the early 1590s he was casting shot and by 1604 he was receiving a daily sum of 6d from the Ordnance Office as "His majesties founder of yron shot". This was equivalent to the pay of a common soldier, whereas six other founders of ordnance (iron and bronze) were receiving 12d per day.

James I ordered very little ordnance prior to 1618, and the bronze founders fell on hard times. However, the Brownes could exist on cast-iron, and its conversion to wrought-iron, for local use. Even in these "quiet times" Browne claimed to have made 463 tons of ordnance between 1591 and 1609. This, although a small amount, was a significant share of the market. In 1609 alone, £1,000 was made available to the Brownes for cannon, whilst between 1608 and 1615 records show that the Brownes were owed £5,000 for ordnance, although some of this may have been paid as scrapped or damaged cannon. (Later discussion considered the use to which scrap cast-iron could be put. Large pieces put into the blast furnace would consolidate the burden and stop the

flow of air, causing a "bear" to form and necessitating the dismantling of the furnace structure. Small pieces would probably oxidise and be wasted even if it was possible to break the cast-iron into small enough pieces. It was unlikely that "air furnaces" had been invented to re-melt the cast-iron and allow the casting of other items. However, scrap cast-iron could be used at the conversion forge for conversion to wrought-iron).

Thomas Browne obtained a monopoly in 1614, and later was granted an export licence when the money he was owed was not forthcoming. Also at this time, other gunfounders were exporting cannon to Spain, Holland and Scotland.

By 1619 John Browne had taken over the family business, and when examined by a government commission he stated that half the ordnance was exported to the Dutch and that he employed 20 men on a regular basis. He protested ignorance over four Sussex furnaces, presumably because he did not run them despite holding a monopoly. It emerges that "invisible" exports were made when armed merchant ships sold their cannon abroad.

Problems arose in the 1620s. John Browne was challenged as to whether he was exporting guns, and a "Master Crow" obtained a patent to supply merchants with ordnance. Browne complained to the King that it was this work that allowed him to keep his industry operational and supply guns at short notice. Also, he contracted to provide 300 guns for 30 Newcastle ships, with £1,000 paid in advance. But nothing was forthcoming, and after five weeks of waiting, he lost patience and went "to employ himself in such works that would yield him ready money". Nevertheless he was soon working again on a government project: the design of a lighter gun. Six were tested on the Medway in 1626, only to find that they delivered their shot "uncertainly". For this he received £200.

Between 1625 and 1629, 931 pieces of ordnance, both new and redundant, were put into store in London. It is thought that the majority came from the Brownes' furnaces, as they were owed £11,062 by the King in 1628. Such a sum allowed Browne bargaining power for foreign trade monopolies. However, to counter competition from Sweden, with a rich supply of iron and copper and the use of Dutch labour, Browne sought a new monopoly for the supply of pots, kettles, salt and soap pans and firebacks (the first four items not normally associated with the Wealden iron industry). Inevitably, this Swedish competition caused price cutting and, with costs rising in England, it is estimated that Browne was "engaged" to the tune of £26,000. If the King did not support him now, he would be unable to make war, would lose vital revenue and have even more creditors wanting their money. With such arguments as these, the Crown naturally accepted Browne's proposals for more monopolies.

From the available evidence it seems that Browne was not just a monopolist, but subcontracted out many of his contracts to local ironmasters.

Even one of Browne's servants, Thomas Hawkins, who died in 1652, had considerable property: £100 in silver, £100 in gold; in total £566.

It is interesting to consider how the Brownes managed to keep control of this vital industry. It comes down not only to the usual considerations of availability of ore, wood and the Medway along which to convey their finished goods to Chatham and London, but also to whom their children were married. Two of Thomas Browne's children married into the influential Tylden family, whilst John Browne's wife was also a Tylden. John Browne's daughter married the Ordnance Office's proof master enabling government quality control to be carried out by a family member. The next generation of Brownes married into the Foley family. During the Civil War the Browne family supplied guns for the parliamentary army. In short, the story of the Browne family is one of cartels, continuity and flexibility.

After this illuminating talk, the actual AGM took place and the following Committee was appointed:

Chairman: Mr. J. Hodgkinson, 7 Kiln Road, Crawley Down, Crawley, Sussex.

Vice Chairman: Mrs. D. Meades, Brackenside, Normansland, Fairwarp, Uckfield, Sussex.

Hon. Treasurer: Mr. R. Houghton, 17 Woodland Close, Crawley Down, Crawley, Sussex.

Hon. Editor: Mr. D. Crossley, Division of Continuing Education, The University, Sheffield, S10 2TN

Hon. Secretary: Mrs. S. Broomfield, 8 Woodview Crescent, Hildenborough, Tonbridge, Kent.

Committee:

Mr. D. Combes, Fairlight, Croft Road, Crowborough, Sussex.

Mr. B. Herbert, 1 Stirling Way, East Grinstead, Sussex.

Mr. A. Scott, 36 Clinton Crescent, St. Leonards on Sea, Sussex.

Mrs. D. Hatswell, Squires Cottage, Squires Close, Crawley Down, Crawley, Sussex.

Mr. A. Stevens, 26 Lorna Road, Hove, Sussex.

Mr. B. Awty, 3 Norman Court, Lordship Lane, London SE22 8JT

Co-opted: Mr. J. Berners-Price, 91 Norfolk Avenue, Sanderstead, Surrey.

The traditional afternoon foray was a visit to Horsmonden blast furnace site. Unfortunately, due to the storm of '87, very little could be seen, apart from the bay, still holding back a substantial pond, and a large Browne bear - the result of a furnace burden consolidating whilst hot, due to some unfortunate happening.

B.K. Herbert

FRENCH FORAY APRIL 1989

On Friday morning, April 7th, after much preparation over several months including a weekend recce, the WIRG French Foray got underway. I was met outside my gate by Jeremy Hodgkinson and Reg Houghton in a white minibus to which was attached a piece of cardboard announcing 'THE IRON BUS'.

The plan was for a group of Wirgers to visit the Pays de Bray in northern France to see where the ancestors of some of the Wealden iron founders had come from. Brian Awty, who had been researching in the Pays de Bray for some ten years, led the trip. Also in the minibus was Bernard Worssam, a geologist who looked at that aspect of the trip. In fact we all had things to contribute, both professional and amateur alike.

We drove across to Folkestone, collecting more of the party en route. On arriving at Folkestone Harbour we saw that the Channel was choppy, a blue sea flecked with white horses battering the greensand and chalk cliffs. The train connecting with the ferry delayed our departure by an hour but finally we were underway. At first many of us stayed below; then, one by one, we went up on deck and were rewarded by great views, both Cap Griz Nez and the White Cliffs of Dover were visible, as was Dungeness Nuclear Power Station. As we drew nearer to France the different pattern of farming was clearly visible on fields beyond the cliff top, and approaching Boulogne harbour we could see the cliffs were sands and clays with a mini-fold in one section. The customs formalities completed we drove out from the town towards Neufchatel en Bray, our base for the weekend.

At first we drove through the Boulonnais, this is a semi-circular region of low land, surrounded by a chalk escarpment, leading to Cap Griz Nez in the north. The houses here are built of yellow limestone, like Cotswold stone, and from the same geological age - the Jurassic. We were soon climbing the escarpment so similar to the Downs at home. Most of our 80 mile drive to Neuchatel was over a huge chalk plateau in which Salisbury plain would easily be lost. It was intensively farmed and cut by deep valleys. We passed near the Foret de Crecy and a large beech forest, Foret d'Eu, which was under an interesting system of woodland management with young and old groves of trees at varying stages of growth. It was getting dark, black clouds unleashed curtains of rain against an ochrey yellow sky as we descended the steep hill to Neufchatel. On arrival at Hotel les Arielles we found our rooms then came down to the evening meal.

Next morning we left Neufchatel at 9.00 am. It was misty and ghostly silhouettes of old apple trees laden with mistletoe showed through the fog. This mistletoe goes to England at Christmas. The first stop was a brief visit to a factory built by a stream at Les Forges de Milly. Then we went via Beauvais, the medieval town still dwarfed by its abbey, to Rainvillers. Here was plenty of slag near the bay, which was planted with a form of black poplar. The trees reflected in water by the bay made a beautiful picture redolent of an impressionist painting.

At this site we were met by Messrs. Belouste and Cartier who invited us to visit a quarry in the rock formation where the iron came from, also Rainviller church which was built of local stone. This added interest to the tour.

After visiting Forge le Bequet we saw Le Moulin du Forneau. Here a large medieval-type mill had been built. Apart from the building the undershot waterwheel took our attention. Close by, part of the furnace seemed to form a foundation for the building, now a country house. The owner and family were pleased we took an interest in their abode.

After a brief stop for lunch we left the lowlands and climbed the southern chalk scarp to visit Les Forges du Vaumain where we found a large pile of forge bottoms in a field. Downstream we looked at a pond site. Then on via Gisors in the Epte valley to Gourney, Mont Louvet and La Forge du Petit Vivier de Bray, the latter a very flat site. Somewhere between these we went through the Foret du Bray then on to La Fayal. At Glinay we walked along an old sunken road by which we saw wild solomon's seal. Here by the stream was a lot of blue and green slag, nearby was a large bay. To finish this comprehensive tour we had a look at Les Forges de Beaussault. Associated with this site, which was near the northern chalk scarp, were a church and chateau. By the time we got back to the hotel we were ready to appreciate our excellent dinner!

During the first day the weather had been steadily improving and we started on the second day by visiting and trying to locate La Forge de Acher, and looked at Forge de Frenchy and La Forge de Hodeng. We went on to Neuville Ferrieres where the site was occupied by a woodyard.

When we had lunch at Neufchatel it was hot and sunny. We only had a couple of sites to see that afternoon, the most notable being La Forge des Iles. Unfortunately the farmer had been expecting a small party, not a group of 15, so at first we were not welcome. After some negotiation it was finally agreed that we could go onto his land. Jeremy led us through the gate and we followed in single file on our best behaviour. On our return after examining the site the farmer had cooled down and entente cordial was restored. Finally we had a look at the small museum in Neufchatel which was devoted to some of the local history and had an interesting collection of firebacks.

We drove from Neufchatel to Dieppe where the chalk hills curve to meet. This geological trend continues beneath the Channel to connect with the Isle of Wight. After some delay we boarded the ferry and soon set sail for Newhaven. Dieppe is almost a mirror image of Newhaven, both being at river mouths, both surrounded by chalk cliffs which are marked by Tertiary deposits sludging down during bad weather. We waited on deck to see France disappear in the sunset. The weather changed again, becoming overcast. After a meal we emerged on deck again to see the lights of Brighton and Seaford, the Royal Sovereign and Beachy Head lights. Soon we were in Newhaven harbour.

This was the perfect end to a great trip. We had visited 17 sites and looked at all aspects of history and geology, etc. A successful French foray!

D. Nicol

*** NOTE: The 1990 Winter Meeting on 10th February will be a French Afternoon, where we will be able to see slides of the sites visited on the French foray.

FIELD GROUP PROGRAMME

The Field Group held their annual meeting on 3rd September to decide upon their activities for the 1898/90 season. The following forays are to take place:

18th November	Survey of Cuckfield blast furnace
16th December	Examination of an area north of Panningridge (Dallington) to find possible bloomery sites
20th January	Examination of previously unexamined woods near Parrock (Hartfield)
17th February	Examination of an area known as The Cinder, at Newick
17th March	Survey of the Roman site at Beauport Park (Battle area) near Roman bathhouse.
21st April	as above
19th May	Inspection and possible trenching of to date large newly discovered bloomery site at Clappers Wood, Horam.

If you would like details of any of these forays please contact: Mrs. D.M. Meades, Brackenside, Normansland, Fairwarp, Uckfield, Sussex.

Mr. T.E. Evans (WIRG member) has written to ask me to remind members of the dangers of picking up old wartime mines and bombs, following an incident when he moved a "strange object" into Highbridge Mill. Subsequently a bomb disposal squad removed the object to a safe distance and blew it up. He would like to warn members to report, rather than pick up, any such strange objects (the one he found was made of wood with a knob at one end) they might find while out on a foray.

WIRG BULLETIN SECOND SERIES VOL 10 (1990)

The Editor, David Crossley, will be pleased to receive articles, from members and others, for inclusion in Volume 10. Copy should be addressed to:

The Division of Continuing Education,
The University,
Sheffield,
S10 2TN

by 1st January 1990.

ASHBURNHAM FURNACE

The reference to the Ashburnham furnace in the 1868 edition of Murray's Handbook to Kent & Sussex noted in WIRG Newsletter 8 does not appear in such informative detail in earlier editions (certainly not in that of 1859), leading one to wonder as to its provenance.

The 1859 entry (p.331) is: 'Ashburnham was famous for its iron-furnace, the last which ceased working in E. Sussex. Its site, with the "hammer ponds", still remain in the N. part of the parish. Ashburnham iron was the best in England. "It excelled in quality of toughness; and I have been assured by smiths who have used it, that it was no wise inferior to the Swedish metal, generally accounted the best in the world." (M.A. Lower.)'

M.J. Leppard

RECENT PUBLICATIONS

G. Brodrigg & H. Cleere 'The Classis Britannica Bath-house at Beauport Park, East Sussex' Britannia vol. XIX (1988), 217-74. Plans, diagrams, line drawings and photographs + specialist reports on finds.

Although not primarily concerned with the ironworking activity at the site, the background to the location of the bath-house and its setting in relation to industrial production in Romanized Britain and in the wider context of the Empire is explored thoroughly in this readable report. According to the evidence of finds, the site is dated to between the last quarter of the first century and the second quarter of the third century, with the bath-house itself dated, more by circumstantial evidence than actual finds, to the second quarter of the second century.

* Beauport Park ironworks will be the subject of two forays by the Field Group in March and April of 1990.

J.S. Hodgkinson

WIRG has decided to purchase some "remaindered" copies of the book "The Iron Industry of the Weald" by H. Cleere & D.W. Crossley. These books are offered to WIRG members, who may now place an order but should not expect it to be delivered before the new year. Please send your order to: B.K. Herbert, 1 Stirling Way, East Grinstead, Sussex, RH19 3HG.
Price: £12.00 (by post) £10.00 (at meetings)
