



NEWSLETTER

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Page	Contents
1	Letter from the Chairman - J S Hodgkinson AGM Report - JSH
3	AGM Talk by Diana Chatwin - D Brown
4	Obituary, Charles Blick - Dr. Henry Cleere
5	An Age of Concern - Dr. Tim Smith
6	A Railway Find - TS
8	NEWS FROM ELSEWHERE: Furnaces at Dampiere-sur-Blévy - JSH
9	The Abbotsbury Iron Industry - Bill Whiting
10	ODDS AND ENDS: Wealden Iron in Literature - Dr Helen Pearce
11	Drew Pickesse of Brambletye and Stephen French - M J Leppard Roman Iron D M Meades (Review) EXPERIMENTAL IRONSMELTING B Herbert and T Smith
12	DATES FOR YOUR DIARY Editor's Note.

LETTER FROM THE CHAIRMAN

Dear Fellow Members,

With the publication, in these pages, of my Annual Report to the AGM, one of this letter's functions – to keep you informed of things that have been going on – has been superseded. However, there are always items of interest or concern, which I may wish to bring to your attention.

One of these is the Group's web site. I think it is fair to say that it has been a success; people have come to know of WIRG by discovering the site, and it has provided some general information as well as offering contact names and email addresses. Chris Broomfield, who set up and has managed the site for us since, has indicated to me that he would like someone else to take over. So I am using this letter to appeal for someone to come forward. Now that the site has been running for a year or so, I feel that it would not be in the Group's best interests for

this job to be done by a novice, but equally, I realise that we may not be over-stocked with experienced web site designers or operators. Were anyone to step forward, they would be free to add their own particular style to the site, although the content would remain the responsibility of the Committee. I hope that the foregoing will stimulate some response, and I look forward to hearing from anyone who is interested.

Needless to say, I could not be more grateful than I am for the work that Chris has put into getting the site up and running.

My best wishes for the New Year

Jeremy Hodgkinson

ANNUAL CHAIRMAN'S REPORT 2001

The Committee has met on four occasions during the past year, and at each meeting has received a report on the Group's finances, and on the Tebbutt Research Fund. At its October meeting, Dr Helen Pearce was co-opted onto the committee. The Group has been represented on the Sussex Archaeology and History Forums, The Ashdown Forest Training Area Conservation Committee, the CBA's South East Region Industrial Archaeology Panel, and the steering committee for the proposed Wealden Historic Ironworking Centre at Horam. In connection with the last of these, application has been made for a grant to the Department for Environment, Food and Rural Affairs, and a planning application has been approved by Wealden District Council to build a visitor centre and replica blast furnace – almost certainly the first such application for a blast furnace in the Weald!

The Group's Annual General Meeting, on 22nd July 2000, was held at The Royal Armouries Artillery Museum, at Fort Nelson, Fareham, Hampshire. Members were welcomed by the museum's curator, Dr Nicholas Hall, who gave a short talk on the Fort's history. Then Bob Smith and Ruth Brown gave an illustrated talk on the history of iron ord-

nance, with particular reference to the museum's collection, providing an ideal background to the tour of the fort after lunch. The Committee were conscious of the departure that holding the AGM at Fort Nelson would be, as it is outside the Group's geographical area of interest, but the response from members has been very favourable. At the meeting a cheque from the Tebbutt Research Fund was presented by Margaret Tebbutt to Professor Alan Crocker, President of the Surrey Industrial History Group, towards the conservation of a manuscript map of the Downside iron mills at Cobham.

The Group's Winter Meeting was held on 3rd February 2001 at Nutley Memorial Hall, where members heard Nick Cook and Phil Andrews, of Wessex Archaeology, describe the excavations of a late-medieval ironworking site in Crawley in 1997; the first such excavation for many years.

Members of the Field Group met on 10th September to plan the 2000-2001 programme. The first foray, in October, saw the unsuccessful exploratory trenching of the small bloomery on Kidd's Hill, near Newbridge, on Ashdown Forest. A continuation of the project to extend the 1970s Study Area formed the subject of the November foray north east of Heathfield. No new sites were discovered. The opportunity to examine the Romano-British ironworks in Oaklands Park, Sedlescombe, resulted from the invitation by the estate manager, and the Field Group was joined by members of the Hastings Area Archaeological Research Group. Access to the site, which is occupied by the Pestalozzi Children's Village, had not been possible for many years. In contrast with the very wet autumn, the foray in January, along the Willingford Stream south of Glazier's Forge, was in almost spring-like weather. However, the purpose of the foray, to explore the possibility of a water-powered ironworking site at Cox's Mill, Dallington, did not meet with the hoped-for conclusion. The Field Group's other, long-term project, to investigate the postulated location of the Domesday *fer-raria*, continued in February, and an unrecorded bloomery site was discovered. Planned forays, in March and April, were cancelled because of the Foot and Mouth Disease restrictions. Hugh Sawyer has continued in the rôle of secretary to the Field Group and I am most grateful to him for this.

Bulletin 21 in the second series is published this

summer, under the continuing editorship of David Crossley. From this year, each volume will be indexed. An index of all Bulletins, in both the first and second series, from 1969 to 2000, was distributed to members this year. The Group remains indebted to the Planning Department of West Sussex County Council, and in particular to Mark Taylor, its Archaeological Officer, for printing both the annual Bulletin and, on this occasion, the Index at no cost to the Group. Two newsletters were also issued during the past year, under the able editorial hand of Dot Meades. Contributors to either should contact the respective editors, with material for permanent record – such as reports of sites discovered, archaeological and documentary research – for the Bulletin, and ephemera – such as notices of events, accounts of visits, reviews, notes and queries – for the newsletter.

I am grateful to Chris Broomfield for continuing to maintain the Group's web site. The Group has purchased the right to its own domain name – wealdeniron.org.uk – and the Committee has been pleased to note the increased number of enquiries that the Group's presence on the Internet has led to.

The Committee has decided to have a leaflet printed, which can be made available at museums, libraries and relevant historic sites. It was felt that interest in the Wealden iron industry and in the Group's activities could be widened in this way. This, in turn, could increase membership as well as assisting the Group in locating sites and furthering its other aims.

The Committee has also decided to purchase a microphone, amplifier and loudspeaker to improve audibility at the Group's meetings. The poor acoustics of some of the halls the Group has hired, the quiet voices of some speakers, and (dare I suggest it) the diminished hearing of some of our senior members, have conspired to make this a matter of necessity. The proposed purchase of a magnetometer has been put in abeyance because of cost, and a perception that such equipment would not be able to be used effectively in a substantial proportion of the terrain in which the Group operates.

Members of the Committee have responded to enquiries, and appeals for assistance from a number of individuals and bodies. These have included two television companies. Unacknowledged assistance was given to the makers of the recent programme on the Weald, in the *Talking Landscapes* series on BBC 2, and two members of the Committee were recently

involved in filming for a Channel 4 programme on the Spanish Armada, to be broadcast in the Autumn or Spring. The Group has been called on to advise West Sussex Planning Department and Network Archaeology on work being carried out at ironworking sites.

Committee members have given lectures to local groups, and to conferences. As in previous years, the Group was given the opportunity to mount a small display at the Wood Fair, at Bentley, last September. In September 2002 the Historical Metallurgy Society will hold its annual conference at Seaford, with its theme being the Wealden iron industry.

It is a sad fact, but the existence of the Group since 1968 has meant that it has been the sorrowful duty, of late, to record the passing of several of those members who were prominent in its early, formative years; the more so when they have been serving committee members. David Combes had been a member of the Group for more than a quarter of a century and had been a member of the Committee for much of that time. He had been a member of the Field Group, and had eagerly taken responsibility for the Group's resistance meter, extending its use to the benefit of other archaeological groups in the region. In addition he had applied himself to the compilation of the quinquennial indexes of the Bulletin, and it is a fitting tribute that the general index, to which he had made such a significant contribution, should have been published before his untimely death. In recognition of his contribution to the group, the Committee unanimously agreed to give honorary membership to his widow, Pam. Honorary membership has also been given to the widow of Joe Pettitt, who has generously donated her late husband's papers and books on the iron industry to the Group. Finally, the Group has been the recipient of a generous bequest from the estate of the late Elizabeth Gibb, whom many will recall was an active member for many years.

I am enormously grateful to the members of the Committee for their continued support during the past year, and in particular to Dot Meades, Shiela Broomfield and Reg Houghton. Shiela's intention to retire from the post of Secretary has been averted for a year, but appeals for a replacement have been answered. We could still do with a few more committee members, though.

Jeremy Hodgkinson July 2001

Many thanks to new committee member David Brown, who has written the following account of Diana Chatwin's talk to members who attended the AGM :

Diana Chatwin provided an interesting and stimulating talk on the background and history of Dedisham Manor. It formed an introduction to the afternoon visit which was to view Dedisham Forge and Furnace.

In the south-east of the country, early settlement is thought to have been on the fertile coastal plain where farming was easier. From the late Saxon period, these original settlements would have had Wealden outliers such as Dedisham where stock could be grazed in the summer. The timber in the Weald was an important resource for building and fuel. As the population increased and the demand for land grew, more of the forested area of the Weald was cleared for permanent agricultural use and habitation. Dedisham became a manor in its own right. When in the 12th century, parishes were created, Dedisham and other manors became part of Slinfold parish.

Dedisham Manor:

The speaker gave a clear explanation of the basic construction of the house in terms of its bays and roof structure. Initially, the fire was on a hearth in the centre of the main hall; over time it was placed in a brick-built fireplace with a chimney.

This 10-bay house was bounded by a moat, probably installed more as a status symbol than as defence, but also stocked with fish for domestic consumption. The River Arun runs very close to the house. Unusually the outbuildings, of which only two bays of a barn survive, were situated within this enclosed area. The house has several notable features, including some interesting moulded door frames (only generally found in better-class houses) and roof members which were less decorated than would have been expected for a house of this importance. Existing records provide evidence of its occupation from early medieval times.

Dedisham Park was divided into three areas, surrounded by a large bank and ditch and probably with a fence of pales on the bank. The park was originally used for hunting. The hunting lodge lies within the North Park and was used for viewing the hunt. Over time pressure on the land meant that parts of the park were sold off. Many buildings from that time still ex-

ist. Local woods of hornbeam coppice provided fuel for the iron industry. The Slinfold parish boundary has cut through the Park since about 1230. Interestingly, the South Park has now reverted to leisure use as a golf course. **David Brown**

AGM Site visit—Dedisham Forge and Furnace

The visits to these sites were enjoyable but baffling. The furnace site has been re-landscaped for fishing ponds to such an extent that it was difficult to imagine how it would have been in the past. The forge site was clearer to some extent but it was still very difficult to work out how the watercourses would have operated.

Contributions on this subject from readers would form an interesting future discussion for the newsletter. DMM.

Charles Blick

Charles Blick, who died on 10 January 2001 at the age of 84, was a loyal and long-standing friend of WIRG. He was an iron and steel man to his fingertips: he joined United Steel Companies Ltd in 1934 as an apprentice and served that company, and then British Steel after nationalization, throughout his working life, at Workington, Appleby-Frodingham (Scunthorpe), and Sheffield. It was in Sheffield that I first met and warmed to him: his gregarious charm fitted him admirably for his work at that time in public relations and ensured a sympathetic response from even the most hard-bitten technical journalists. For this he was rewarded with a well justified MBE, to add to the TD for his pre-war and wartime service in the Royal Artillery, in which he rose to the rank of Major.

But Charles was not always a PR man: he was involved with every aspect of iron and steel making during his long career in the industry. However, it was above all blast-furnaces that captured his heart, no doubt as a result of his spell as assistant blast-furnace manager at Scunthorpe. He was also fascinated by the history of the iron and steel industry, and it was natural therefore that he should be one of the founder members of the Historical Metallurgy Group (now the Historical Metallurgy Society) in 1963. He served the HMS with distinction, first as Treasurer (1970–78), then as Secretary (1979), and finally as President (1980–81). He was also for many years the Society's Conservation Officer, involving

himself with many campaigns to prevent the technological remains of the iron and steel from being swept away. When the HMS Archaeological Committee launched its landmark project of compiling a list of *Early Metallurgical Sites in Great Britain, 2000 BC to AD 1500* it was natural that Charles should become the co-ordinator and editor of the eventual publication, which took its place alongside his painstaking and highly readable history of *The Workington Iron and Steel Company*.

It was no surprise that this strong historical bent should lead him to take an intense interest in WIRG from its inception – and, indeed, from even earlier, since I well remember several long and very encouraging discussions with him at HMS meetings, and also on other occasions when we ought both perhaps have been concentrating our attention on the modern industry. He became a member of WIRG early on and always took a keen interest in our work.

All of us who treasure memories of this modest and delightful man, who carried his deep knowledge of his history of his beloved industry lightly, will wish to send our condolences to Audrey, his wife of 54 years, and to his family in their – and our – great loss.

Henry Cleere

An Age of Concern

By Tim Smith

Original version not attended
In Burwash church, southeast of Tunbridge wells, there is a single iron grave slab mounted on the wall of the small Lady Chapel in the southeast corner. (see p 5)

This part of the church is known as 'Panama Corner' after the most legible part of the inscription on the slab which was deciphered by Rudyard Kipling and his two children who settled in nearby Bateman's House.

The full inscription, in fact, reads, "ORATE P. ANNEMA JHONE COLLINS"

The guide to the church dates the slab at around 1343, based on the Lombardic style of the lettering and the shape of the cross in relief in the centre of the slab. It also goes on to refer to the slab as being of 'cast iron'. So here's the problem; we know that the earliest blast furnace in the Weald, and indeed, probably in Great Britain, dates from 1496.

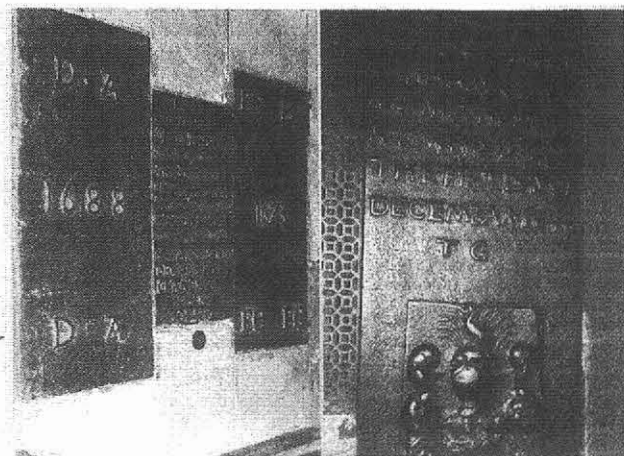
The slab, which measures approximately 5' 6", by

1'6", and is of undetermined thickness, but stands about a quarter of an inch proud of the wall, certainly looks like cast iron; its surface is heavily pitted and there are no signs of stringers as would be expected if it was wrought iron.

Did we have a much earlier blast furnace on the Weald than hitherto known? Or was the slab cast in Germany, Switzerland or Sweden, where blast furnaces were known as early as the 13th Century? Not for such a specifically commemorative piece.

family from 1902 – 36. The Jacobean house, surrounded by its old fashioned garden, contains many relics of Kipling's travels in India and the East. It also has a splendid collection of iron firebacks, including one of the dozen or so examples of the Brede fireback of 1636, showing Richard Lenard with the tools of the ironmaster and the only recorded picture of a Wealden blast furnace.

Moving on to Wadhurst, half a dozen miles or so to the northwest of Burwash, we find an abundance of iron grave slabs within the church, matched nowhere else on the Weald. There are 30 slabs in all, dating from 1617 to 1768. Most are still in magnificent condition, despite being walked on daily for the past 380 or so years. The inscriptions are clear and generally



The Lombardic inscription on this iron graveslab in Burwash church fooled historians into too early a date (left detail – right mounted on wall)

The reality is that the style of the lettering has deceived historians.

Jhone (an abbreviation for Johanne) Collins was in fact the daughter of the ironmaster of nearby Socknersh furnace. The furnace was built by Alexander Collins in c1525, and later run by John Collins. We do not know whether Johanne was the daughter of Alexander or John but evidently her demise was marked by a special cast into a lovingly prepared mould inscribed with old style Lombardic letters.

Even if the slab is not 14th Century but 16th it is, never-the-less, one of the oldest on the Weald, a generation older than the proliferation of those in nearby Wadhurst Church, which date from 1617.

Before we go off to Wadhurst, however, follow the National Trust signs to Bateman's half a mile to the south (Open beginning of April to early November except Thu & Fri). The house was built in 1634 by a local ironmaster, William Langham, who originated from Northamptonshire but its fame today is associated with Rudyard Kipling who lived there with his



The Lenard fireback

in high relief, with the exception of some engraved later additions, an indication of the ductility of the Wealden grey iron.

Evidently, the furnaces in Wadhurst Parish cornered the market on casting grave slabs as the church has over a third of the 85 or so, recorded on the Weald. John Barham, the owner of the Scrag Oak house in the South of the Parish in nearby Snape Wood, lies beneath one of the slabs dated 1657, so it is very probable that his slab was cast at Scrag Oak Furnace (built prior to 1629 and recorded as a ruin in 1664). Other furnaces in the area were Riverhall (Frant) to the Northwest, and Coshopley (Mayfield) to the Southwest.

For those keen to learn more about the Weald's iron graveslabs - incidentally, one of the few subjects too specialised to be accepted by 'Mastermind' -

I suggest getting a copy of Rosalind Willatts paper, '*Iron Graveslabs: A Sideline of the Early Iron Industry*' published by the Sussex Archaeological Society Vol 125 1987 p99. It will be a goldmine for those setting pub Quiz nights!

A railway find

By Tim Smith

During the railway boon of the mid 19th century, some 40 years after the last blast furnace had ceased production on the Weald, at Ashburnham in 1813, an iron industry of a different kind briefly flared into existence on the Weald - only to die within 13 months of conception.

This was the mining of iron ore, which was transported from the Weald to Staffordshire. This area had become a centre of ironmaking after Abraham Darby I first successfully replaced charcoal with coke in his blast furnace at Coalbrookdale in Shropshire in 1709.

An apparently rich seam of ore was found while excavating a cutting on the Hastings to Tunbridge Wells line, at Snape Wood, a little over a mile south of Wadhurst. Two apparently unconnected galleries are present, one to the north and the other to the south of the railway, located around grid reference TQ634302.

According to Topley's '*Geology of the Weald*' p377, as reproduced in Straker: "The mine was commenced in August 1857, and abandoned in September 1858; the ore was sent into Staffordshire. The ironstone was worked on both sides of the railway, just west of the 53rd milestone, by levels and cross cuts. On the north side of the railway only one bed was worked, this was 1 foot 9 inches thick, underlain by a

hard sandstone. The roof is sometimes bad and required timbering. On the south side of the railway two beds were worked, only one of which could be examined [by Topley] as the level contained much water; this bed was two feet thick. In this level the ground was softer and required more timber.

"The beds of ironstone were very irregular, but were found to be better on the south than on the north side; in both cases, however, the beds died out suddenly and re-appeared at intervals. Several shafts have been sunk from the higher ground.

"The ore, a clay ironstone, was sometimes calcined on the spot. A great deal of raw ore still lies by the side of the railway".

Straker then comments that the main gallery (referring to the northern) is about 150 yards in length and about 4' 6" wide and varies in height from 6ft to 8ft. Parallel galleries are connected with this by shorter ones at right angles. Wrought iron trolley rails about 3/8" by 1 1/2" still remain. He suggests that the railway was used to transport the ore, and also comments on a little inn nearby called the 'Miner's Arms' (now alas a private dwelling).

During one of the warmest days in July, Tim Smith and Brian & Val Herbert visited the mine at the invitation of the Kent Underground Research Group (KURG) who had recently benefited from a small grant from WIRG to assist in their excavation work of the mine. (Jeremy Hodgkinson had visited the mine the previous year when contact with KURG was established).

Just as Topley described, the southern gallery 'contained much water', even in mid-summer, so we were only able to go part way into this gallery which runs approximately NE, parallel to the railway line and maintains a single level without side cuts. The pick marks of the miners are clearly visible on the walls, and at the en-



Wrought iron tram rails remain in the Northern gallery

trance, a nook has been cut – possibly to hold damp clay to be used by the miners to attach their candles to their hats. KURG plan to pump this gallery out to enable further exploration in comfort.

In the gallery to the north of the railway, KURG have cleared a shaft and were in the process of improving access underground which is gained via a steep slope which enters at one end of the gallery, necessitating the use of a short caving ladder. The scramble down is well worth it. Here are Straker's tram rails, set about 3ft apart and running for some distance through the gallery. Not commented upon by Straker, is the graffiti, which covers most flat surfaces and apparently largely dates from the late 19th century, if we can rely on the inscriptions carved. The photograph clearly shows an example date of 1891, and a face carved below this. A poignant reminder of other visitors is the imprint of a hobnail boot preserved in the sand of the floor – but in view of the later graffiti on the walls, one supposes this to have been from a later visitor rather than one of the miners.

This gallery is far more extensive than that which can be explored to the south. It also runs parallel to the railway and maintains a single level. Several cross cuts have been made linking the main gallery to a second running parallel to the first. A detailed survey is currently being drawn up by KURG.

Back on the surface, although we did not look for the large quantities of ore in the railway cutting referred to by Topley, what we did find suggested it to be iron carbonate, ie the common siderite generally found on the Weald. Bernard Worssam, in his introductory chapter on the Geology of Wealden iron (Cleere & Crossley p 25) reports it to be 'silty' and containing 26% silica, a very high value (compare 9% SiO₂ in the Sharphorne ore we are using at the experimental bloomery, 6-7% at Ashburnham and

8.5% in Horsham stone at Crawley). Since even pure carbonate ore only contains 48% iron, its dilution with 26% silica would lower the iron content to 36%, which may well have accounted for the early demise of the venture. Topley reports that some of the ore

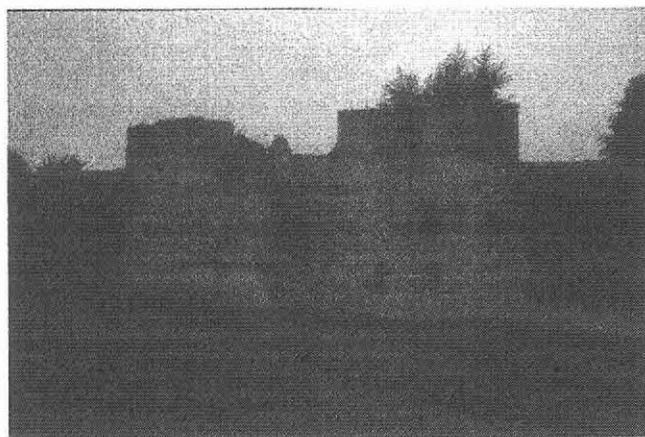
was calcined on the spot, this would increase the iron content but only to a modest 52% taking this high silica content into account. It would be difficult to justify the transport costs to Staffordshire of such a low quality ore.

However, well before the abortive Snape Wood venture, furnaces close to the source of ore evidently prospered. At Scrag Oak, just a third of a mile or so to the southeast, a blast furnace was built sometime prior to 1629 and was not reported in ruin until 1664. The iron must have been 'good' as it supplied forges at Brookland, Chingley, Hoadly, Verredge and Burwash, as well as no doubt cast many of the 33 cast iron grave slabs still to be found in Wadhurst Church, a mile and a half to the north.

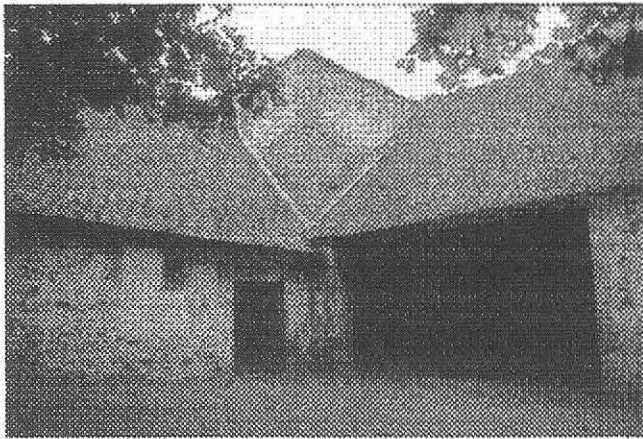


Graffiti on the wall carved into the soft sandstone

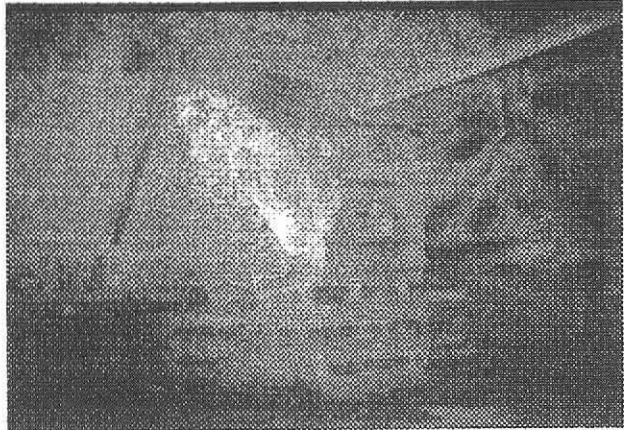
Mike Clinch of KURG would very much like to hear from anyone who knows anything more about the history of the mine. He is also happy to take WIRG members on an underground tour. Please contact Mike on Tel 01322 526425.



Dampierre double furnaces



Dampierre Casting and Blowing Houses



Dampierre Casting Arches

NEWS FROM ELSEWHERE

The Furnaces at Dampierre-sur-Blévy

A visit to Chartres in the summer allowed me the opportunity to call in at the village of Dampierre-sur-Blévy, in the department of Eure-et-Loir, south east of Normandy. I had become aware of its existence from the pages of *La metallurgie normande*, the superb volume published by France's Inventaire Général in 1991.

The ironworks at Dampierre were first recorded in 1466, when Robin Pathier rented the forge house, mill and waterway. Pathier was still the tenant in 1480, and the forge is mentioned again in documents in 1513, this time in the hands of Jacques and Pierre Langlois. No further records are known until 1671, when the works were re-established, with a pond of 26 hectares and two furnaces, together with a finery and a foundry, by Henri Jules de Bourbon, duc d'Enghien. The furnaces continued to work until about 1800, and the forge, which has since been demolished, remained in operation until 1857. The forges were latterly used for the production of iron tyres for wheels, and for axles.

The works are open to the public on only two days in the year, although not, alas, on the day we visited. However, having explained to an aged caretaker that we had travelled a very long way, and were extremely interested in the place, he offered to show my wife, our friends and me some of the site.

The buildings that survive are in very good condition, and comprise an ironmaster's house, the double furnace, blowing and casting houses. The furnaces' stacks are of octagonal section, and the casting and blowing arches are rounded. The pond is still in water and the sluices are in good condition, with a pow-

erful flow of water. Several other buildings also survive but we did not get the chance to see in them.

The whole site presented a very ordered appearance, with the house and works strung out along and below the stone-revetted bay.

JSH

The Abbotsbury Iron Industry

In the end the swans won! Today, it is the seven hundred year old Swannery and the yellow Hams-tone cottages that have made Abbotsbury famous. Yet even before a WIRG member arrived in the area the local landowner was hoping to turn his estate into an iron village. Possibly even in the late Iron Age/early Roman period, the local iron deposits had been worked, though no evidence or records of this activity remain. This is surprising as two millennia ago West Dorset was thickly populated. The chain of hill forts (ranging from the famous Maiden Castle at Dorchester, westwards) and the many hundreds of tumuli and long barrows, testify to the existence of the many, quite sophisticated, communities of the Durotriges, the local tribe. The presence of iron is so self-evident in Abbotsbury that the Victorians used its presence to justify building the local railway line (1885-1951). But the geologists will exclaim this stretch of Dorset is chalk, so how can there be iron?

Crystal clear springs run from the chalk at many points along the southern slopes of the range of hills from Burton Bradstock to Abbotsbury Hill. However, a geological fault near Abbotsbury alters the conditions. Here, Upper Jurassic rock ranges south against the Middle Jurassic rock that forms the westward slopes. The sequence in the neighbourhood of

Abbotsbury comprises Oxford clay (c 120m), Coral-lian beds (45m), Abbotsbury sandstone (8m), Ab-botsbury iron ore (8m), Kimmeridge clay (340m), Portland beds and Purbeck beds (67m)

The local ironstone is a chaemosite oolitic quartz sandstone, with striations of chamosite-siderite mud-stone. Much of the chamosite has weathered to li-monite. The ooliths often have quartz grains at their centres. All the outcrops are oxidised and the iron-stone is red. I understand that the natural green col-our of iron silicate chamosite can be seen in deep trench excavation. The local ironstone contains a rich benthonic fauna (suggesting much sea floor aeration), including several brachiopod genera, gas-tropods and serpulid worm tubes. Thus, there is evi-dence that the ironstone was formed as an offshore beach or barrier (ammonites of the early Kim-meridgian genus, *Rasenia*, also occur in the depos-its). The age of these deposits is hard to define accu-rately, but it would seem that they were laid down about 145-140 million years ago when Dorset was tropical (Cretaceous period) concurrent with Purbeck limestone, Portland sand and stone, Kimmeridge clay, cornbrash, Fuller's Earth and rock.

Most of the narrow lanes leading north from the main street in Abbotsbury contain sections of deeply weathered Abbotsbury ironstone. These are particu-larly accessible in Coward's Lane (SY571856) and the aptly named Red Lane (SY575855). Other loca-tions include Blind Lane, in the lane to the Tropical Gardens and in the gardens themselves on a bluff on which a lily pond has been constructed. The current Foot and Mouth restrictions have prevented a wider survey of the outcrops.

Various authorities have suggested that the Abbots-bury ironstone may have been mined and smelted, locally, since the late Iron Age. However, there is no firm evidence that such was the case. The Red Lane deposits were certainly quarried at some time in the past and, indeed, quite recently. A local builder, who excavated some of the material for mortar purposes, was banned recently in his activi-ties by English Nature. It is likely that the quarry was originally dug to provide building stone rather than for iron production. It is now designated as a Regionally Important Geological Site (RIGS).

That Abbotsbury Ironstone was seriously consid-ered for extraction as an ore is not in question. Much of the village and the surrounding countryside has been owned by the Earls of Ilchester for many

centuries. It still is. The Ilchester Archive, box 287 (Dorset Records Office) D124, records that on 22 May 1872, the then Earl leased land in the Abbots-bury area to Charles Moore of Bath. This gave Moore rights to search for and extract iron ore on Il-chester land, the area not to exceed 5 acres at any one time, "to open shafts, to erect sheds and ma-chinery and take away the iron Ore and ironstone and make tram roads, etc, over the lands described... and so far as the Earl can grant authority, along and over and across the inlet of the sea called The Fleet and thence along the Pebble Beach (the Chesil Bank - WPW) to Portland Harbour....." The initial lease was for 40 years from 25 March 1872. The minimum rent was £500 per acre per annum where ore was extracted, but only £5 per acre per annum for ground on which the spoil tips were located. For some 4 years prior to the lease there had been dis-cussions about building an aerial ropeway rather than a tramway.

The archive box contains a receipt covering two years lease to Christmas 1874. The continued inter-est is a little surprising as a letter of 13 January 1871 noted that the best ore contained 30% and the "top part" only 20-24%. There were later additions to the lease. These included restoring the land every six months for agricultural use but a provision allowing more acreage in the next year if there was no ore in one year was objected to, on the grounds that "it will be his own fault if he does not get the ore" A letter of 5 August 1872 gave permission to transfer the lease to George Eliot and Stephen Deed. Moore, who was not in good health, sold the lease to George Eliot on 25 October 1872. Eventually a tramway was built from Upway, with a branch from Portesham quarry, close to a working marked 'Shale Works'. These were known as Manfield Pit and were opened by a local farmer in an attempt to augment his income. They were still working in 1906. It is unlikely these workings were winning ore, but rather were to provide building stone.

The only other occasion when the Abbotsbury iron workings were considered for extraction was during the 1914-18 war. The terminus of the Great Western Railway branch line to the village was only about half a mile from Red Lane and marginally farther from the other sites. The 'war effort' encouraged such exploitation and the railway provided easy ac-cess to the South Wales blast furnaces. Thankfully for the village, the assay of the ore was too poor to consider, even under war time shortages.

Bill Whiting

Sources: : Michael House *Geology of the Dorset Coast* Geologists' Association (1989)

Paul Ensom *Discover Dorset—Geology* The Dovecote Press

Nigel Melville *Abbotsbury—Sketched in Mist and Sunlight* Odun Books (1999)

Dorset Railways Remembered: Leslie Oppitz; Countryside Books (1989)

Individuals: Clare Pinder, Senior Archaeologist, Dorset County Council

Jo Thomas, Secretary, Dorset's Important Geological Sites (DIGS)

ODDS AND ENDS

Many thanks to new committee member Dr Helen Pearce, for the following:

Wealden Iron in Literature : Sheila Kaye-Smith

Wealden iron features in many novels by Sussex novelist Sheila Kaye-Smith (1887-1956). Several mention Conster furnace, while the old 'Huggett and John' adage and 'Huggett's curse' recur within an enduring critique of 'modern' warfare.

The main 'iron' novel is *Gallybird* (1934). Anyone interested in a fictional treatment of the industry (plus romance and the occult) may enjoy looking for inaccuracies. The Alards, original owners of Conster furnace, skirmish with the Douces who were given the ironworks by Cromwell, only to lose them back to the Alards when Charles II acceded. The Douces remain as furnace masters and plot to regain the works by intermarriage. A spectacular explosion during gun testing kills four men and injures more. Obvious errors: the furnace operates both 'day and night' during a busy period - hardly unusual. Conster's cannon have ornate scrolled hoops on the cascabels - unknown on Wealden guns.

Gallybird 'prequels' an earlier novel, *The End of the House of Alard* (1923), which reveals the family's later profitable connections with the East India Company.

In *Iron and Smoke* (1928) a Yorkshire iron-founder's daughter marries into an old Sussex family who once had a furnace at 'Pigstone'. She and the other characters dream of the nocturnal glare from the furnaces, the noise of the hammers, and the ghosts of past ironworkers. Conflict themes include agricul-

ture and industrial, north and south.

Kaye-Smith and her husband Penrose-Fry purchased Little Doucegrove near Beckley in 1930 (*Three Ways Home*, 1937). In her later guide, *Weald of Kent and Sussex* (1953) the section on Beckley furnace and its real owners (Farnden and Gott), and Wealden iron in general is fairly accurate. She appears to confuse the furnace site with that of an old corn mill when referring to a huge waterwheel. References include SAS archives, but curiously not Straker. She corrects the Huggett adage by naming Baude and Hogge, and reiterates her view that Wealden iron-masters were war profiteers.

Kaye-Smith's books are available at specialist book dealers. The Sheila Kaye-Smith Society's address is: Silverden Oast, Northiam, Rye TN316NW. If WIRG members know of other literary references to Wealden Iron, I'd be pleased to hear.

Helen Pearce

Drew Pickesse of Brambletye and Stephen French

A good deal is known about Drew Pickesse, the subject of the note 'A Wealden ironmaster in Jamestown' in Newsletter 33 (Spring 2001) but I am not sure how accurate it is to define him as an 'ironmaster'.

To summarise the main facts: as Drew Pickers he was baptised at East Grinstead on 19th January 1564. A son, James, was buried in 1584 and ten further children baptised between 1585 and 1601, after which the family disappears from the parish register. Drew inherited the manor of Brambletye from his father James, to whom it had been bequeathed by John Shery, Archdeacon of Lewes, in 1552. Father and son both appear in a variety of records, invariably styled 'gent'. In 1586 Drew served as one of the Members of Parliament for the borough of East Grinstead.

As lord of Brambletye he was owner of the forge but it was operated by Robert Reynolds in 1574 and, at least from 1579 to 82 by Stephen French. Stephen French and his father John are well recorded in published work on the Wealden iron industry, part from Stephen's time at Brambletye, so it may be worth committing to print the evidence for that episode here.

In 1579, when Katherin Pickas, Drew's mother, was involved in an altercation at Brambletye, Stephen French's house there is specifically mentioned.¹ For 1579-80 he was one of East Grinstead's churchwardens.² As 'Stephen Frenche, of Eastgreensted, fordgemaster' he acquired property in Herstmonceux and Wartling in 1582.³ There are no references to him or his family in the East Grinstead parish registers, so it may be that his stay here was brief, presumably once he had succeeded his father at Chiddingly.

I have not as yet come across any references to Drew Pickesse's imprisonment for debt. It would be good if details could be provided, not least in case they throw light on economic factors in the Wealden iron industry.

M J Leppard

¹ Sussex Archaeological Collections, vol.9 (1857) pp 139ff.

² Sussex Record Society, vol.3 (1904), p.129

³ SAS, vol.64 (1923), p72

Roman Iron

Work on Roman artifacts from the Roman site at Castle Street, Carlisle, by Anthony Swiss for his Masters dissertation was reported in the Historical Metallurgy Society's Newsletter - Spring 2001. He subjected eight edged tools (four knives and four chisels) to radiographic and metallographic analysis. His findings were that seven of the objects were manufactured from low-medium carbon iron/steel, which had been cold-worked to enhance the hardness. The eighth object was a large knife. This was found to have a quench-hardened steel edge, welded onto a low-carbon back, thus giving it durability and the ability to sustain its edge. Thus, Roman smiths made use of varying grades of iron for various uses.

[This report is particularly interesting to our WIRG experimental smelters, in view of the fact the iron we produce tends to be fairly high carbon and therefore steely. The team is in process of learning how to control the carbon content of iron so as to produce a low-carbon product. No doubt the Romans were able to produce either at will.]

Further interesting work has been taking place at Carlisle Roman fort at the western end of Hadrian's Wall. A possible armourer's workshop uncovered there has produced an assemblage of Roman armour and other military equipment. Again, this shows the

enormous skill and versatility of Roman smiths. We await with interest the results of further work on these artefacts by David Starley at the Royal Armouries, Leeds. DMM

EXPERIMENTAL IRONSMELTING

The smelt yesterday (Saturday 27th October), (with the new charcoal from Mr Mann) went very well and a bloom of 2Kg was produced from 20 Kg of roasted ore and 20 Kg of charcoal [plus some pre-heating charcoal, say 30Kg in total]. This is an efficiency of 10%, which seems to be usual for our smelts. Bellows were used all of the time as there were plenty of visitors from Jeremy Hodgkinson's evening WIRG class in East Grinstead.

Brian Herbert

Email from Tim Smith to Brian Oct 30 2001: "I have sectioned the piece of bloom I brought home and it looks really good iron, already well consolidated. From the look of the spark I would estimate about 0.2% carbon. I will send Gill a sample of the bloom and the slag for micrographs and analysis."

Tim then refers to our efforts to reproduce the kind of slag that we find on Roman sites:

"I have been thinking further about why we are trapping so much gas in the slag. We seem to be producing good iron and a well consolidated bloom that any Roman etc should have been happy to work - but the slag is evidently very different to what we find in the field. I am wondering now if it is not so much the fluidity but rather charcoal getting into the slag which then reacts with the FeO to produce CO and hence the bubbles. (C is deliberately injected into the slag in modern electric arc furnace practice to produce a blanket of foaming slag to conserve heat)."

All suggestions gratefully received! DMM

DATES FOR YOUR DIARY

Field Group Foray programme: forays still to take place:

17 November 2001 Continuation of fieldwalking in Heathfield area—Leader Brian Herbert.

15 December 2001 Stumbleholm bloomery, Ifield. Trial trenching of bloomery to discover dating evidence—BH

19 January 2002 Fieldwalking in new area at Blackham—Leader Peter Goodall

16 February 2002 Further fieldwalking in Heath-

field area—BH

16 March 2002 Split foray Spoods Farm, Hadlow Down and Rushlake Green—Leader JSH.

20 April 2002 Blackham, further fieldwalking in new area. - Leader: Peter Goodall.

Any member may join in any of these forays. If you are interested please contact Hugh Sawyer, Spindles, Hackwood Road, Basingstoke, RG21 3AF or email: hughsawyer@compuserve.com for a full list and details of where to meet, etc. (SAE appreciated if using post.)

2nd February 2002 WIRG Winter Meeting to be held at The Memorial Hall, Nutley, E Sussex. (See full notice for further details.)

University of Sussex Centre for Continuing Education

This autumn the Centre in conjunction with its partners (i.e. various adult education providers) will be offering a wide range of archaeology and local history courses throughout Sussex.

Practical Archaeology: There will also be in November two courses at weekends at Butser Ancient Farm, Hampshire: Archaeological Surveying and Geophysical Surveying for Archaeologists. For further details please request a copy of the CCE open courses guide (01273 678527 or 678040).

Certificate Courses – there are still some places available on the CCE Certificate programmes for Archaeology, Practical Archaeology and Local History. (Telephone as above for further details.)

Study Tours in 2002 CCE STUDY TOURS ARE BEING ARRANGED TO VISIT Rome (of the Romans) in the Easter vacation and to the Orkneys for the Summer vacation. Further details from David Rudling, 1 West Street, Ditchling, W Sussex BN6 8TS.

Sussex Archaeology Symposium 2002 This popular annual event will be held on Saturday 16th March 2002 at the University of Sussex. Offers of papers to the convenor David Rudling (Tel: 01273 845497)

An Introduction to Industrial Archaeology – Option course – Tutor Geoff Mead: 24 credits. Level 1 or 2/3, Fee £210. Chichester College of Arts, Science & Technology. Thursdays 7-9pm plus site visits (t.b.a.). Dates 10/1/2002-14/3/2002. An introduction to the theory and practical approaches to industrial

archaeology, concentrating on post-medieval sites in south east England.

EDITOR'S NOTE

Books

Those who were unable to attend the 2001 WIRG AGM may not be aware that Mrs Pettitt very kindly donated Joe's books to be sold for WIRG funds or used for research.

A number of these remain, including the first edition of Cleere & Crossley *The Iron Industry of the Weald*, R F Tylecote's *Metallurgy in Archaeology* 1962, Charles Wilkins *History of the Iron, Steel & Tinplate Industries*. and various hardback and paperback volumes of the Sussex Archaeological Collections together with Index LI-LLXV and Index LLXVI-C.

There are also some interesting Sussex Record Society volumes: *Printed Maps of Sussex 1575-1900* (1982), *Accounts of the Roberts family* (vol. 71); *Giles Moore* (vol. 68)

If you are interested in any of these books, please contact me at the address on the front page of this newsletter.

Once again, my thanks to all our contributors, without whom there would be no newsletter. Please continue to support us with your letters and observations, accounts of visits to iron-related places and minor research topics. I can take copy for the Spring 2002 edition up to mid-March, although preferably earlier, so as to allow publication in early April.

Items may be typed, put on a floppy disk, neatly written or emailed. If in any doubt please contact me first

All good wishes.

DMM.