

Wealden Iron

First Series No 2
1971

Bulletin of the
Wealden Iron
Research Group

Prospect

We hope that the formalisation of WIRG will lead to greater effort without a loss of spontaneity. Certainly we can no longer work without membership subscriptions. Our Bulletin should now appear regularly; regard this one as an interim number; wait for a bumper effort not far away.

Individuals have been investigating but, apart from 'digs' there is little coverage by teams. We need regular, continuous sustained work in which a nucleus of experts of varying skills can initiate others, giving the confidence without conceit,

In some parts of the Weald, bloomeries were so numerous that investigators can hardly avoid tumbling over the slag left behind. The finding of actual furnaces is a problem of much greater difficulty. More difficult still is their interpretation as indicators of technological achievement and progress. Behind that lies the ultimate aim of the archaeologist: to become a historian or to aid the historian, We are not mere collectors, accumulating the interesting and the curious: we are helping to reconstruct economic and social structure

Envoi

"... .. Come, my friends,
'Tis not too late to seek this older world,
To scan with eager eye the wealden scene,
To find a something In the wealden mud,
To see our forebears with their ancient skills,
To feel what they once touched, to catch their speech,
And to hold the past within one hollowed hand."

After Tennyson.

More than somewhat?

What makes a successful local team?

First the team members must have a real liking for one another. They will be a random sample even on WI principles. There will be specialists, learners, beginners... They must be united in a sense of complementarity: each can contribute something. I do not mean that the women can be hostesses while the men make the pace.

The experts may contribute more than others but it is surprising what a 'nose' and an 'eye' non-technical people develop in a short while.

The story is told of the first foray of one team. One member brought stony coal cinder from a domestic boiler and hoped it was slag. She saw piece after piece rejected. However, she watched as the team saw first a blast-furnace site, and then tested the validity of the field names 'beech' and 'black'. She handled her first bit of tap slag and ...

A few weeks later she began a solo investigation of her own farm and found not only five concentrations of slag but also an interesting causeway. She hoped it was a water-powered bloomery bay but that was too much to hope for. She went on to find in direct association with one concentration some pottery sherds later dated as probably thirteenth century – a bit of evidence about a dim period of wealden Ironworking.

A team may find new sites but no actual bloomeries; it must proceed on the romantic assumption that the next ten yards or the bit of stone that is tripped over will lead to the longed-for medieval bloomery – intact – such as we all hope to find. One of the most interesting discoveries of one team was made when two stragglers tripped over a bit of slag; this led to the finding of the Pippingford bloomery furnace noted elsewhere in this bulletin.

One member of one team nurses a desire to find a bottle of burn-lotion and thus to begin to assess the social aspects of WI. Any odd or end may form part of an eventually discernible pattern of the infrastructure of a society.

The members as individuals must continue activities between forays: any one foray is only a nibble. One will do photos, another sketch, another speculate, another do a bit of documentary work, another mull over specimens.

...Another essential is to have a dogsbody who undertakes to organise. He or she must take the initiative: get agreements as to next foray at the current foray, arrange a rendezvous preferably with a host or hostess and coffee, get permissions for visits. Forays must be continuous, if not at regular intervals: they must be continued throughout the winter. Snow alone will be an excuse for cancellation: one may even welcome heavy rain so that arrears of cataloguing and discussion may be dealt with.

One such successful team has found nearly forty concentrations of bloomery slag, including 'unknown' blast-furnaces and one partly-intact, very early Roman furnace...

And, it discusses birds, flowers, trees, scenery, farming, inanities en route. Altogether delightful.

J.P.

Geologists

Many WIRG workers cry out for a geologist. Buxted team has an archaeologist, a metallurgist, an artist, a handful of photographers, one or two interested in documents, but no geologist,

WIRG needs large-scale maps with ironstone deposits marked or deducible. A practical contribution by non-geologists would be to plot all minepits with spot-heights and similarly all bloomeries. Tithe Apportionment schedules will give some extra minepit areas.

(Printer's note: See B.C. Worssam, Proc. Geol. Assoc., 1964, 75, 529.)

Wealden iron sites on O.S. maps

The O.S. is inserting certain 'good' bloomery sites on future maps of the Weald.

Maps

Can anyone help in solving the problem of duplicating maps for fieldwork? Duplicating paper is not very good in rain on Wadhurst Clay.

Excavations at Holbeanwood

Excavations continued at the Holbeanwood site in Ticehurst, Sussex (Nat. Grid Ref. TQ 664 305) at Easter, Spring Bank Holiday, and a week in August 1970, and for a week at Easter 1971.

The area first explored in the winter of 1968-1969 was considerably extended. The original course of the small stream running through the site was established. This had been partly filled in with slag, which had ultimately silted up to block the bed completely; the stream then appears to have taken a new course, about 10m to the north-west, and in doing so removed the entire west side of the timber building in which six furnaces were discovered in 1968-1969,

Two further sites were explored, 30m north and 20m north-east of the original area (Trenches II and IV respectively). Trench II had been test-trenched at Easter 1969, when a gully was found filled with slag. A small dump of roasted ore indicates that some kind of activity was carried out in this area, but successive extensions of the trench failed to locate either smelting furnaces or ore-roasting hearths; it is believed that considerable levelling activities carried out by the owner about ten years ago may have removed traces of this entirely.

In Trench IV a further group of six furnaces was found, in an area delimited by the stream and by three shallow gullies, all filled with slag. These were identical in form with those found in Trench I in 1969-1969, but less well preserved. It would appear that these were two separate clusters of furnaces, operating perhaps at different periods; unfortunately the dearth of dating material, such as pottery, makes it difficult to establish the sequence of operations in the two areas,

The quality and rarity of the pottery supports the view (expressed in Sussex Archaeological Society Occasional Paper No. 1) that this was a satellite workplace of the Bardown settlement, where industrial operations are presumed to have ceased by the end of the second century, but which was occupied until the middle of the third century. The Roman dating of Holbeanwood was conclusively proved by the finding of a much worn but still identifiable piece of Samian pottery in a stratified layer in Trench III in August 1970.

Henry Cleere

Fieldwork in the Wadhurst-Ticehurst area

Excavations for the natural gas pipeline during the first half of 1970 provided an excellent opportunity to cover a long stretch of country, from Etchingham through to Mayfield.

The first Site to be found was the Shoyswell bloomery (Straker, p.297). This was identified at TQ 682 279 by the finding of a deep layer of burnt clay and slag on the line of the pipe; the area measured about 80m in the dimension cut by the pipe trench, Slag was found in the wood to the south of the pipeline, and there are many pits on both sides. The slag was bloomery slag, very similar in appearance to that from Bardown and elsewhere.

An access road for the pipelayers transport ran northwards from Witherenden Farm, The pipe trench itself did not reveal any evidence of ironmaking in this area, but a considerable amount of tap slag and roasted and unroasted ore was found in the churned-up surface of the access road at approximately TQ 6535 2728.

As the pipeline moved towards Mayfield, a considerable deposit of slag was cut through at Dooze's Farm (TQ 6248 2735). This was contained in what appeared to be a pit measuring about 4m across, In addition to tap slag and cinder, the pit, which was nearly 1m deep, yielded a lot of burnt clay furnace lining and two (very indeterminate) sherds of coarse pottery,

Elsewhere on the pipeline, ore nodules were found at 6155 2755; there was a little tap slag in a small stream at 6175 2758; and at 6082 2685 there was some tap slag on the surface, but no apparent concentration of the material.

It is suspected that the Shoyswell, Witherenden, and Dooze's Farm sites may be other satellites of the Bardown site, similar to Holbeanwood. None lies more than 1½ miles from Bardown, and the field boundaries suggest that there may be tracks linking them with the settlement.

Two blast furnace sites have recently been visited. There is a large bay at Wedd's Farm, Ticehurst (TQ 677 291), a mound below the bay produced one or two pieces of burnt sandstone and may be the site of the blast furnace. There are a number of ponds in the vicinity, and ore was found on the banks of and in the bed of the Limden near site bay, together

with a small amount of blast-furnace slag. This site is not recorded by Straker, but his East Lynden furnace is very close, and he may even have been referring to the Wedd's Farm site in his reference on p.296.

The Iridge, Hurst Green, site (Straker, p.320) was visited at the beginning of May 1971; the owner is contemplating demolishing part of the dam and the earth moving contractor warned us of his intentions. The description given by Straker does not do justice to the remains. There are two dams, and below the second there are a number of earthworks. The small stream contains a great deal of blast-furnace slag. The site is heavily wooded and it is very difficult to identify features; however, it appears to have been relatively little disturbed. Incidentally if the proposed demolition is carried out, this will affect only a section of the upper dam, and so little harm will be done to the site. There are two very handsome cast-iron gateposts at the farm, with escutcheons bolted on bearing the arms of the Peckham family; there are six cast-iron gravestones in Salehurst Church belonging to members of this family who died between 1679 and 1713,

Henry Cleere
Dennis Hemsley

The Domesday 'ferraria'

The only ironworking site in the Weald mentioned in Domesday Book was in East Grinstead parish and hundred, which then included Forest Row. It was unnamed. Straker, followed by Schubert, suggested Walesbeech, but since this is named as apart from the unnamed tenement, the unnamed tenement cannot be Walesbeech.

There are certain references in Sussex Archaeological Collections which, followed up, might lead to a place-name, Have we a medievalist?

Broadfields, Crawley

John Gibson-Hill and his colleagues of the Crawley Archaeological Group have been working continuously for several months excavating sites at Broadfields, Crawley, where a substantial housing development is under way.

On all the sites that they have dug in Crawley in the past year or more, they have come across iron slag. At the beginning of March, at the Broadfields site (TQ 258 353) they were at last rewarded with the bases of three smelting furnaces of the Holbeanwood type, measuring about 35cm in diameter, The superstructures had disappeared, but the bases, of hard-burnt clay, were still in situ. There was also a larger structure, measuring about 1.5m across, which may have been used for ore-roasting. Unfortunately, these structures had to be excavated and recorded very rapidly indeed, since they lay directly in the path of a water main, the trench for which obliterated any traces of them.

H. C.

Water-powered sites as monuments

A select list of blast-furnace and hammer forge sites visited by the Buxted team has been submitted to the Ministry of the Environment for scheduling. Many others should be selected, Mr C.F. Tebbutt is an unofficial liaison.

Questionnaires

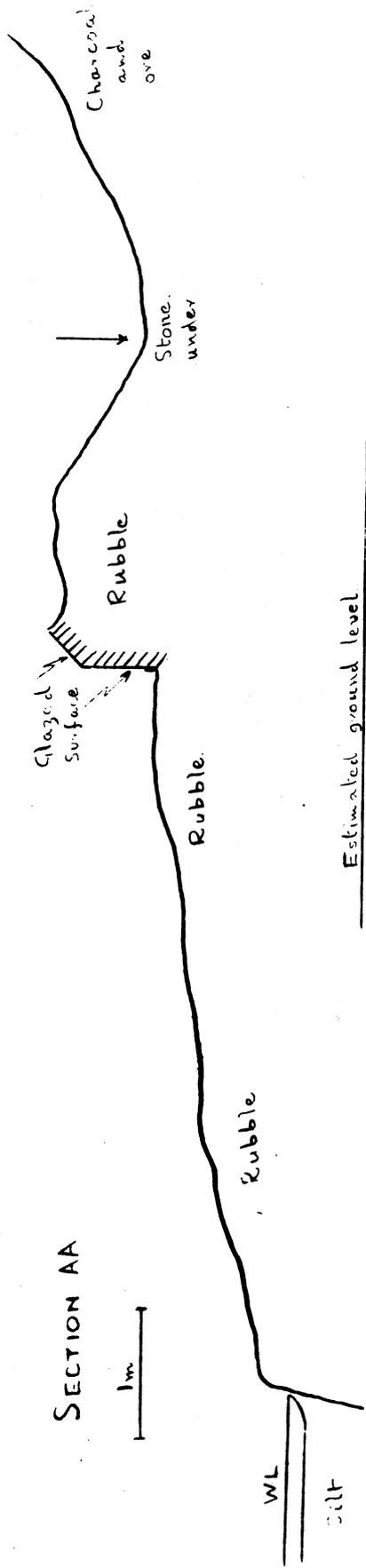
The Acting-Secretary has received from the conveners a miniature set of completed questionnaires – under twelve. Plenty of blank forms are available from: J, Pettitt, 42 Silverdale Road, Earley, Reading, who has himself omitted to complete any.

Verdley Wood Furnace

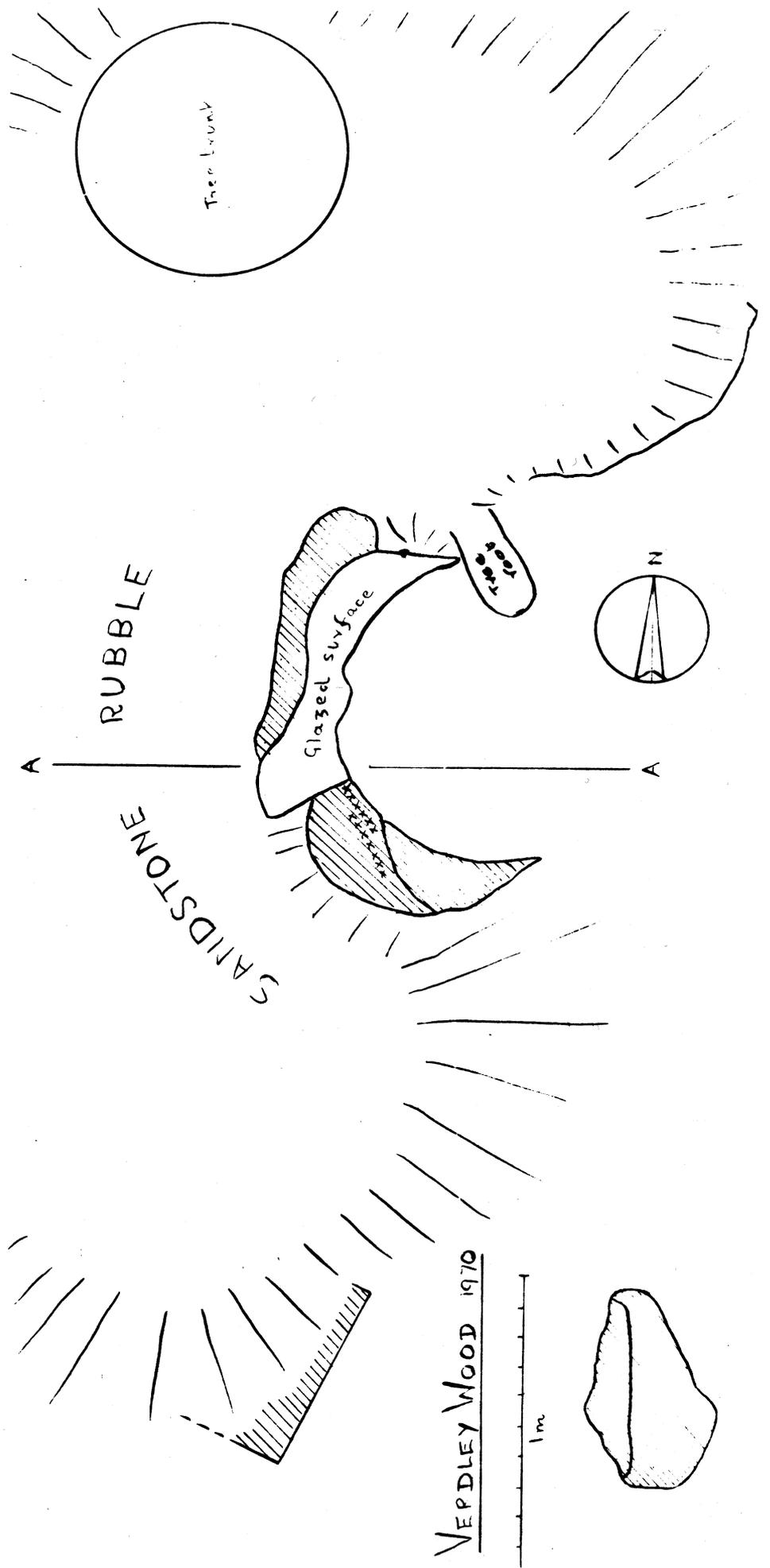
The site of this furnace, not mentioned by Straker but known to Kenyon is in the NE corner of Verdley Wood (NGR 906 264) at the mouth of a steep-sided, wooded valley. The stream is particularly small. The bay is high, about 12m, without stone facing and narrow at the top (no roadway). The spillway is indicated by a dip in the level of the bay and a deep cleft N of the present track. The pond, the size of which could not be estimated, has drained completely through the gap in the bay. There is no sign of silting. On the W bank, where the stream emerges from the bay, are some large sandstone slabs which may indicate the position of the wheel pit since there is no other hollow below the bay. The position of the furnace is certain from a semicircular fragment of glazed sandstone, possibly of the throat and a portion of the boshes, in situ surrounded by a sandstone rubble mound. Some dressed blocks may indicate the position of the tuyere hole but although a quantity of the infill remains the outer casing has disappeared. On the steep bank immediately W roasted ore and charcoal were found. The triangle formed by the E bank of the stream, the bay and the present track is covered by unconsolidated slag. There is indication of removal for road-metal but the amount was never large. A small amount of slag is scattered on both sides of the stream to N.

The service road to the site would appear to run from a point on the old Henley-Fernhurst road (past Denyer's Cottage) just S of the cottage along the present forest track. Where this track crosses a stream a square-section culvert in sandstone (dressed) is well-preserved at the N end. On the first track E, sandstone metalling is apparent to a point where it passes round the head of a small, but steep-sided ravine. This track then curves round to arrive at the site in line with the bay. The present track turns N here and swings sharply round to descend steeply to the site, across the stream and again rises steeply to the point where the valley side, the spillway and the bay coincides. Since a bridge here would have made the rise even more acute it is unlikely that there was a road out at this end of the bay. There is no evidence of a road N along the stream although there is an eighteenth century brick culvert on the main stream 60m from the present road to Surney Farm. The house known as Surney Hatch has been demolished and some of the material used in the modern farmhouse; it may well have been contemporary with the furnace, The same considerations apply to Denyer's Cottage.

P.J. Ovenden



Estimated ground level



Chingley Forge and Furnace – Summer 1970

Chingley Furnace, TQ 684 327 (Date range pre-1565 – c.1588)

Considerable progress was made with this site, the main furnace structure was cleared down to the level of the bellows area floor, and the major features are now clear. The furnace is a square stone structure with solid walls on the north and west sides. The hearth is in a relatively good state of preservation, certainly far more complete than at Panningridge, Sussex (TQ 687 175). The lining is in position, badly caked with slag, and a preliminary estimate suggests that when abandoned iron-making capacity must have been a third or nearer a quarter of the original. Further work is needed to reach the level of the hearth bottom. The "Pillar" of the furnace, between the tuyere and casting arches survives, but is remarkable for its small size, which must have made this, the south-east corner of the furnace, particularly fragile. The bellows appear to have been mounted to the east of the furnace, and at this stage of work are indicated by a large beam in a position appropriate to the front of the bellows and, perhaps less reliably, by a large timber, apparently the collapsed camshaft, close to the dam. The casting floor, probably to the south of the furnace, has been partially excavated, but much remains to be done. A small roughly-walled area immediately to the west of the furnace appears to be the remains of a store shed: indications were fragmentary. The wheel-pit area is now fairly clearly established, to the south-east of the furnace, in line with a disturbance in the front slope of the dam and, away to the south-west, a strip of marshy ground in the wood indicating a tail-race. Accumulations of silt will prolong work in this area, but the high level of the water table makes well-preserved timber likely,

Work in 1971 will involve

- (i) The completion of excavation immediately around the furnace,
- (ii) The excavation of the wheel pit
- (iii) Measuring the furnace, and dismantling to check for underground drainage of the hearth area, and any earlier structures.

The Forge (TQ 682 336) (Date range: medieval – early 18th-century)

What was planned as a fairly brief operation to delimit the western extent of the forge building soon became complicated by the appearance of earlier periods. An area to the west of the timber wheel pit recorded in

1969 was mechanically stripped, and features belonging to this period were investigated. To the west of the timber wheel pit were, respectively, a small wooden foundation for an anvil, and the sill-beam for the west wall of the forge. The tailrace of the wheel pit had been modified to include an offset and here an overshot wheel had been mounted; this would operate the chafery bellows, and fragments of the wheel were in position. The filling of the tailrace provided ample finds to date operation and silting to the late 17th and early 18th centuries; particularly noticeable were the quantities of iron objects, suggesting that secondary metal manufacture took place on the site; door furniture, nails, knife blades, and scrap both ferrous and nonferrous were found.

Two earlier periods were recorded, immediately to the west of the timber wheel pit referred to above. The more recent stage was represented by a massively-built wheel support, of particularly fine construction, in which appear to have been set two waterwheels, mounted abreast. This had been partly destroyed for the building of the later race. At a lower level still was a narrow channel, containing fragments of an overshot wheel, and a sherd of stamped Rye pottery appropriate to the period before 1500; a jug-handle fragment of generally medieval appearance was also present. This sample is, however, too small for any certain designation of this structure to the medieval period,

These features were not fully excavated, and, particularly in view of the doubts about the earliest period, much more work must be done in 1971.

Excavations will continue from July 23rd until August 23rd this year. As the threat to the site, the construction of the Bewl Valley Dam, is now about to materialise, offers of help would be extremely welcome, Either let me know beforehand, or just turn up on the site.

Access is from the A21, 1 mile south of Lamberhurst, turning south into Bewl Bridge Lane at the post box. The site is reached through a gate on the left of the second right-hand bend (indicated by a yellow board) and thence round the left-hand side of the field and the lane into the valley past the cottage once called Old Forge Farm. The site is across the bridge in the water meadows.

David Crossley

Pippingford Bloomery (c. TQ 446 313)

This bloomery site was discovered when a member of the Buxted team tripped over a piece of slag on a footpath in Ashdown Forest. Work on the site has now nearly finished and, to preserve it, the excavated soil will be backfilled before next winter. Henry Cleere has supervised and recorded the excavation, While it appears to resemble the furnace exposed at Withyham by Mr James Money, there were at least two phases. In the earlier there was apparently no exterior slag-tapping, but in the later phase the bottom of the furnace was raised to allow this to happen.

Trenches through the slag heap have produced sherds from many pottery vessels. A few of these are of imported ware and others show the characteristic curvilinear ornament of the Late Iron Age South-Eastern B pottery. A small (probably child's) bronze brooch dates from the early first century A.D, Some charcoal samples have gone to the British Museum for Carbon 14 dating, while others have been identified by Mrs Dorothy Cleere as mainly of oak with some hornbeam and birch.

Blacklands, Cansiron Bloomery (TQ 447 383)

This Roman site, first noticed by Mr I.D. Margary (S.N.Q. XIII p.100), was rediscovered by members of the Buxted team. Recent deep ploughing showed up an area of approximately 4 acres standing out in deep black colour and contrasting spectacularly with the surrounding brown soil. This was found to be due to heavy impregnation with charcoal and iron slag. Over the surface lay pottery sherds together with broken floor, roof and box-flue tiles. On part of the south side were furnace bottoms and squared stones with mortar attached.

Samples of the pottery were submitted to Dr Peacock and Mr Fulford of the Department of Archaeology, Southampton University; they consider that a date towards the end of the first century A.D. or the beginning of the second century would be appropriate for them. A coin picked up on the site was a dupondius of Vespasian (A.D. 69-79). Furnace bottoms found must have come from large furnaces of the Withyham rather than the smaller Holbeanwood and Crawley types,

The proximity of the London-Lewes Roman road (2 miles) suggests that this site was the source of its surfacing material and the dating supports this view. Scatters of slag along both sides of the Cansiron stream may be road-metalling for transport from site to major road.

C. F. Tebbutt

Publications by Group Members

The Following papers have been published recently by members of the Group

- G. Brodribb: "Stamped Tiles of the Classis Britannica", Sussex Collections, **cvii** (1969), pp.102-125.
- H.F. Cleere: "The Romano-British Industrial Settlement at Bardown, Wadhurst. Sussex Archaeological Society Occasional Paper **No.1** (1970).
- 'Notes on the Study of Early Iron Industries", Science and Archaeology (in the press).
- "Holbeanwood 1970", Bulletin of the Historical Metallurgy Group, **5** (1971), v.39.
- "Ironmaking in a Reconstructed Roman Furnace", Britannia, **3**, (1972) in the press. Note: This is a revised version of the report on the Horam experimental furnace described in a report published by The Iron and Steel Institute in 1970 and now out of print.
- D.W. Crossley: "Some Aspects of Fieldwork in 16th Century Industrial History". Bulletin of the Historical Metallurgy Group, **5**, (1971), pp.9-11.
- "Chingley Forge and Furnace - Summer 1970", Bulletin of the Historical Metallurgy Group, **5**, (1971), p,39.

Future Publications

- In addition, H.F. Cleere has written a paper on "The Classification of early iron-smelting Furnaces", which has been accepted for publication in The Antiquaries Journal.
- J.H. Money has written two papers dealing with his excavations at the Minepit Wood (Rotherfield) site - known as Orznash in Straker. The report on the medieval site will be appearing shortly in Medieval Archaeology.
- C.F. Tebbutt is preparing a paper on Pippingford Bloomery for future publication
- C.S. Cattell's "The Bloomery Period of the Iron Industry in the Upper Basin of the Eastern Rother" appeared in Bulletin of the Historical Metallurgy Group, Vol. **4**, No. 1 (1970). He has also prepared papers on "The 1574 Lists" and "The Losely List, 1588".
- J. Pettitt hopes to have ready for the General Meeting in July "An Interim Glossary of Wealden Iron Field names", (duplicated).