

WIRG

Wealden Iron Research Group

NEWSLETTER Number Two

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Secretary: Mrs. S. Swift, Hamfields, Withyham, Hartfield, Sussex.

Editor's Note

In this second annual Newsletter may I draw your attention particularly to two items asking for information, on cannon and minepits. Our widespread membership must surely include some who are able to help with these projects - do please send in any relevant material you may have. We are always glad to receive news items on matters of interest to WIRG, and welcome comments on the meetings and excursions.

Included with this Newsletter is the index to Bulletins 13 to 17, completing the indexing of the A4 format Bulletins. The new format Bulletins will be indexed in due course.

WIRG's affiliation to the Sussex Archaeological Society entitles members to use the Society's unique library at Barbican House, Lewes. Members wishing to avail themselves of this facility should contact the Treasurer who will pass the Group's affiliation card to them. The library is open for reading (books may not be removed) from 10.00 to 17.00 each weekday throughout the year.

Letter from the Chairman

Dear Members,

Let me begin this, my first letter as Chairman, with some words of thanks: firstly to Daphne Abbott, who has stood down from the Committee this year after many years which have included some valuable work as Treasurer of the Group. We have not let her go completely as her services have been retained for when the accounts need auditing. Secondly, I must put on paper my thanks to Dot Meades for steering WIRG through the last two years. It was largely her words that summarised WIRG's activities for our submission to the judges who conferred on WIRG the Chronicle Award for 1981. I am glad to say that Dot remains on the Committee as Vice-Chairman.

The past year has been an active one, as usual. At our Winter Meeting we heard Henry Cleere outline the research proceeding in Europe into early metallurgical industries, and how the early iron industry of the Weald can be seen in the context of the spread of technology in the ancient world. What was also interesting was the varying attention paid to this subject in other countries, and how significant gaps exist in research in some parts of the continent.

New sites continue to be identified, both of the bloomery period, where much work has still to be done, and in the post-Medieval era, where it might be expected that field research has already been fairly comprehensive. Our knowledge of sites, both new and familiar, has been greatly enhanced by the work of professionals whose expertise, often informal and in their spare time, has been put at our disposal.

/In

In recognition of this, the Committee have had pleasure in bestowing Honorary Membership on Dr. Owen Edwin, of the Sussex Archaeological Field Unit, and Dr. Tony Clark, of the Department of the Environment.

This year has also seen the new format of the Bulletin. I hope you will agree that, without a loss in quality, the Bulletin is now in a more convenient size. My thanks to David Crossley for the continuing work in its editing.

One exciting item of late news has been the discovery of an important group of documents dealing with Wealden iron works in the Restoration period. The whereabouts of these papers had been unknown for thirty years and it is due to the vigilance of one of our members, Jean Shelley, that they have been located in Sussex.

Finally, I need hardly remind you that the Officers and Committee are always interested to hear of the activities of members and, equally, further information on field work, excavations and other aspects of WIRC's programme can be obtained from them.

My best wishes to you for Christmas and the New Year.

Yours sincerely,

Jeremy Hodgkinson

Field Group Activities

Last season the Field Group held several forays field-walking the route of the proposed Uckfield/Maresfield bypass. Several interesting features were found, including a cave, part of a Bronze Age axe, and flint sites. The last two forays had to be cancelled because of the foot-and-mouth outbreak. There will be two forays this season to complete field-walking this route.

On 6th September the Field Group held its annual meeting to plan a programme of activities for the coming winter/spring season. A number of projects were proposed and it was decided initially to hold a single foray for each project in order to determine the feasibility of further research.

The programme for this winter is:

- 10 October - Survey of minepits, North Clays Farm, Hartfield. This is part of a research project into minepits and mining techniques.
- 14 November - Visit to a chalk downland site to look for evidence of the use of flint in bloomeries there, following the discovery of burnt flint in the Saxon bloomery excavated on Ashdown Forest.
- 12 December - Visit to Ashburnham - an example of a forge/furnace site where buildings and trackways still exist.
- 16 January) - Uckfield bypass field-walking
13 February)
- 13 March - Visit to Oldlands to examine the site as a whole, looking for trackways around the site, with a view to making a plan of the area.
- 17 April - A Saxon site. The Saxon period represents a gap in WIRC's knowledge. Documentary work has to be done before deciding what practical activities can be carried out on a foray.

/The

The Huggetts-Greenhurst excavation is continuing under the direction of Dot Meades (Buxted 3131) and Sheila Broomfield (Hildenborough 838698). The dig takes place fortnightly and anyone interested in joining in should contact the directors.

Any member interested in joining the Field Group should contact Sue Swift. SMS

Minepit Survey

As part of a project to research into minepits which provided the ore for the Wealden Iron industry, two minepits were excavated in July 1981 in Minepit Wood TQ 523338.

The one pit fully excavated was 2.5 m deep, 3.5 m diameter at the top. There was no belling out within the pit, quite the reverse in fact, with the pit tapering to a diameter of 0.75 m at the bottom.

There was some evidence that clay, possibly for marling purposes, was also being extracted from these pits.

The shape of the pits was similar to those excavated at Petley Wood near Battle (TQ 265175) (Battle and Dist. Hist. Soc. 1951-52 and 1952-53), and at Benzells wood near Hurstmonceux (TQ 634142) (WIRG Bulletin No 14).

During the autumn, as part of the Field Group forays, a survey was carried out of the minepits in Tugmore Shaw, North Clays Farm, Hartfield.

If any members know of, or discover, any of the small type of minepits which Straker called "bell pits" perhaps they could drop me a line giving a six-figure grid reference and an indication of approximate numbers or acreage covered. Please write to G. Swift, Hamfields, Withyham, Hartfield, Sussex. GS

Huggetts Farm Dig

As we had been held up by the very wet weather earlier in the year we dug all week at the end of July. This proved highly successful and we hope to make this an annual occurrence. We were very fortunate with the weather and achieved a great deal. A new area has been opened up and quite a bit of pottery has turned up, as well as a small glass or crystal button with a metal shank which may be 18th century. We also found two pieces of iron of uncertain use or date. Traces of walls have been found and planned.

Anthony Streeten visited the site whilst he was excavating at Garden Hill during the summer and had a look at the pottery from our site. He has said that the majority found so far is 13th century with some 14th and a great deal of late 15th and early 16th century date, but little later. He has promised that, when the excavation is completed, he will go through the pottery in greater detail and produce a report for us. We are of course very grateful to him for all his assistance.

Excavation will be continuing on alternate Sundays, weather permitting, but if you are in any doubt as to whether we are digging or not please give either Dot Meades (Buxted 3131) or myself, Sheila Broomfield, (Hildenborough 838698) a ring.

Of course I cannot finish without thanking everyone who has braved the vagaries of the English weather and given up their time to help us. SB

/Experimental

Experimental Bloomeries

Several bloomery smelts have been tried at The Pheasantry site during the past year, one yielding a small bloom of usable steely iron which, after sixteen failures, was somewhat encouraging. This was also the first time we had made iron in a non slag-tapping smelt and the furnace was cut partly into the ground as at Holbean Wood and other sites. This type of furnace can be made with far less effort and is much stronger than the above-ground type, and we had no trouble from rising damp. The operating procedure was to pre-heat the furnace, quickly rake it out, and then fill to tuyere level with cold charcoal, dampen this slightly then re-kindle above tuyere level and smelt in the normal way. A clay lid in two halves was kept on as much as possible to keep the heat higher in the charge, thus increasing the depth of the reaction zone without using more air, and this may have the same effect as narrowing in the top of the furnace.

I think we should try to avoid slag-tapping at present. When the slag bath is forming correctly there is a need to get rid of excess slag, but otherwise tapping can upset the atmosphere and cause the dry oxidising conditions which we cannot at this stage correct. The experiments are continuing.

During October a video-film of one of our bloomery experiments was made by the film unit from the National Museum of Wales directed by the Research Assistant in Roman Archaeology, Richard Brewer. This is to be used as part of the Museum's display illustrating ancient industries, and a copy of the film has been promised to WIRG. RJA

Sydford Bloomery, Worth. TQ 359389

Archaeomagnetic tests have shown a date at variance with the evidence of associated medieval (?) pottery. A date in the 4th century AD, or conceivably the 1st century AD, is now thought likely. Details of current activity can be had from the Chairman. JSH

Annual General Meeting and Excursion

From Mayfield a pleasant walk took us down an old green lane, once a coaching road, to Mayfield furnace. It was a pity to find on arrival that the road builders had damaged the top of the bay in an effort to ease the gradient at the valley bottom.

The old pond is now a stream in a peaceful valley to the west, but, on the other side, a 'bear' and an oak trough in the pool and old brickwork in the bank give clear evidence of the furnace. The cutting down of trees and undergrowth to the south had revealed the position of a cannon boring mill with a small bay, on a tributary stream. However, by the time of our visit, brambles and vegetation had begun to camouflage the area again and, in spite of much scratching about, very little in the way of slag or cannon mould was found. A walk down the path on the east side of the stream towards the probable forge site showed that, although clearance had revealed the line of leats as ditches, new growth was rapidly hiding them again and the new planting of conifers made investigation impossible. After tea a popular minor foray was a stroll in the sun down to Mayfield Church to inspect the cast iron memorial slabs in the floor.

Following the business meeting Pam Combes gave a very interesting account of the documentary evidence relating to the ironmasters families in the Mayfield area. RH

/Chronicle

1981 BBC Chronicle Award - A summary of the Group's successful entry

Members have naturally expressed interest in the content of this entry. The rules required that work entered should have been carried out or completed in the last three years. Our entry therefore included the following:-

1. Plotting and dating of bloomery furnaces in a given area of 182K². This was the culmination of many years' field work, and revealed the importance of the Roman industry and settlement in the area.
2. Excavation of Cowpark Roman bloomery site from which new information was gained on furnace types and possible working methods.
3. Rescue excavation of a Saxon bloomery site on Ashdown Forest, which gave the first archaeological evidence of Middle Saxon ironworking in the High Weald. Furnace remains of this period are very rare in Britain.
4. Excavation of a medieval bloomery site near East Grinstead (still in progress) from which we hope to learn more about medieval furnaces.
5. Metallurgical Experiments. The rather inconsistent results of these emphasised the technical sophistication of the ancient smelting process, although iron has been made and forged.
6. Documentary work, collated with field work on post-medieval sites, and a list of all known bloomery sites.
7. Educational activities, including advice to individuals, schools and societies, identification of finds, arranging courses, giving lectures and leading field visits.
8. Undertaking and advising on local and museum exhibitions, particularly those at Haxted Mill and Anne of Cleves House, Lewes.
9. Advising and taking part in various television and radio programmes.

We have been informed that there will be a summary of this work in one of the Chronicle programmes this autumn. IM

Recording of Cannon

Several examples have been noted in this area of cannon displayed by private owners or local authorities. If sufficient numbers can be recorded this could form the basis of an interesting study, and the editor would be glad to hear of any further examples known to members. Sites so far recorded include:-

Mayfield, High St. TQ 587270 (see WIRG Bulletin 13(1978), 22-23)
Westham, The Green TQ 643046
Pevensy to Eastbourne road, Farm Shop TQ 647033 - two cannon

Until mid-1981 a cannon stood at the bridge beside the Star public house (Pevensy to Normans Bay road) at TQ 687062. This has been removed, and we should be particularly interested to know its present whereabouts.

Not all guns found in this area are of local manufacture; one at the Farm Shop has the inscription "CARROK 1829". Please send in any records you have, noting the location with National Grid reference and measurements of the cannon plus any inscription or other feature. All information will be gratefully acknowledged. MT

/Exhibitions

Exhibitions

A window display was set up at the Haywards Heath Building Society in East Grinstead for two weeks starting on 27th April. The Society had invited Mr. Woodrow of Haxted Mill in Kent (where there is a Wealden Iron museum) to mount a display advertising his museum. As he did not have any suitable exhibits he borrowed a model water mill from the Brighton Engineering and offered the rest of the window to Wealden Iron. This proposal was accepted, and the model of a bloomery furnace working area, normally on display at the Mill, was put on show. Finally, a road map of the local area was traced from the 2 $\frac{1}{2}$ inch map and all the blast furnaces, forges and water mills located on it.

Three symbols were used to define the three industries; these were reproduced onto transparent film using a photocopier. Each was folded about 140° and stuck onto the map; thus giving a three dimensional effect, and a more interesting appearance.

As recorded in the last Newsletter, the slide show with commentary at Haxted Mill was being rebuilt to eliminate the "turning over" of the cassette tape after each five shows, also the 120 minute cassette tapes previously used proved unreliable after prolonged use. The new system has shown itself to be much more reliable during the year, despite the fact that the tape is "rewound" to the start automatically after each show; this has amounted to some 1000 times during the year.

This winter it is hoped to produce a question and answer machine covering Wealden Iron and milling subjects, the idea being that eight questions may be chosen out of sixteen, and the correct answer chosen from eight push-button switches. To make it more interesting a time limit will be set whilst choosing a question and whilst answering it. BKH

Museum of Sussex Local History, Anne of Cleves House, Lewes

An occasion of particular interest to WIRG members was the opening in July of the newly designed Iron Gallery at Anne of Cleves House, the ceremony being performed by C.F. Tebbutt. The display forms part of the current reorganization and extension of the Lewes museum under the direction of the curator Fiona Marsden, and was the special responsibility of her assistant Stella Bellem. Aspects of the post-medieval iron industry in the Weald are illustrated by means of maps and diagrams, excavated material and full scale models. The boring or reaming bar "rescued" by WIRG from Chiddingfold is shown in working position, and a model of a cannon-casting pit is based on David Crossley's excavation at Pippingford furnace. There is a comprehensive collection of cast iron firebricks. Many WIRG members helped in the preparation of the display which is open to the public from mid-February to November, 1000 - 1700 each weekday. MT

"Roasting, Blooming or Smithing?"

An article under the above heading, by James Cleland of the University of Cambridge Department of Metallurgy and Material Sciences, appeared in Current Archaeology No 77 (May 1981). The substance of the article was in the first paragraph - "Please can anyone find me some Roman smithing hearths?". The article concluded with an appeal to archaeologists to inform him should Roman smithing hearths be discovered, and an offer to analyse slags and other connected material.

This seemed to merit a reply, and one was sent enclosing an offprint of 'The excavation of three Roman bloomery furnaces at Hartfield, Sussex', Sussex Archaeological Collections 117 (1979). In expressing his thanks James Cleland paid

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tribute to the work of WIRG and said that his article had elicited a great deal of information which he hoped to collate, and offered to send along his manuscript for comment in due course. CFT

Reviews

"The Excavation of Batsford Mill, Warbleton, East Sussex, 1978" by Owen Bedwin. Medieval Archaeology 24(1980), 187-201

"The Excavation of a late 16th century blast furnace at Batsford, Herstmonceux, East Sussex, 1978" by Owen Bedwin. Post-Medieval Archaeology 14(1980), 89-112

Through the vigilance of our member Dennis Beeney the site of the 14th century corn mill at Batsford, Warbleton, was recognised before its probable destruction during preparation of the area for a fish farm. (WIRG Bulletin 14(1978), 8). Some preliminary excavation by WIRG members exposed the mill timbers, recovered 14th century pottery and established that it was unlikely to be the blast furnace known to have existed somewhere nearby. The Sussex Field Unit were then persuaded to take over the site. In the above article Dr. Owen Bedwin describes his excavation of the site where the wheel pit and foundation timbers were remarkably well preserved in a waterlogged situation. The timber mortices and joints are drawn in detail and, as Dr. Bedwin emphasises, can be almost exactly paralleled at Chingley (D.W. Crossley, "Pewl Valley Iron Works" Royal Archaeological Institute Monograph 1975), showing the close affinity in the construction of corn and iron mills.

The blast furnace at Batsford was eventually found at the opposite end of the bay from the mill, across the present stream and thus in a different parish. A preliminary report by Dr. Bedwin (WIRG Bulletin 15(1979), 27-31) has now been followed by the full publication in Post-Medieval Archaeology. The author is to be congratulated on the informative way he has dealt with these two sites, the documentary evidence putting the flesh on the bones of very competent archaeological excavation.

Members of the Sussex Archaeological Society will find both the above journals in the library at Barbican House, Lewes. CFT

WIRG Publications for sale

The following publications are available from: Mr. B.K. Herbert, 1 Sterling Way, East Grinstead, Sussex, RH19 3HG. Prices quoted include postage.

A Gun-Casting Furnace at Scarletts, Cowden, Kent. By: D.W. Crossley £0.90

An Abandoned Medieval Industrial Site at Parrock, Hartfield. By: C.F. Tebbutt £0.35

The Excavation of a Late 16th/Early 17th Century Gun-Casting Furnace at Maynard's Gate, Crowborough, Sussex 1975-1976. By: O. Bedwin £0.75

The Romano-British Industrial Site at Bardown, Wadhurst. By: H. Cleere £0.90

The Excavation of Three Roman Bloomery Furnaces at Hartfield, Sussex. By: C.F. Tebbutt £1.15

Bulletin of the Wealden Iron Research Group. Vols 1 to 9 £0.75 each
Vols 10 to 17 £0.90 each
Vol 1 new series £1.00 each

(Nos 5 and 7 are out of print)