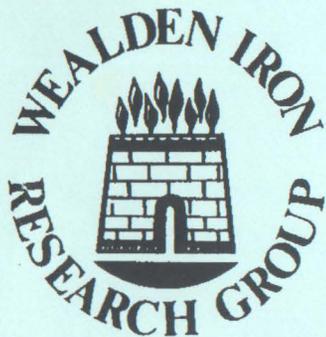


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FIELD NOTES

compiled by J.S.HODGKINSON

A bloomery at Outwood, Horne, Surrey

A concentration of bloomery tap and forging slag, within darkened soil, has been found in a shaw adjoining Hornecourt Wood, on land belonging to the National Trust (TQ 3360 4538). With the permission of the Trust, the Field Group dug three shallow trenches on the site in January 1996. Excavation was halted when, in one of the trenches, distinctive colouration of the subsoil, together with tap slag, suggested that a hearth might lie below. In the adjacent trench forging slag seemed to predominate. One small sherd of sand tempered, grey pottery was recovered from within the slag. The lack of a rim or a base made positive identification uncertain. Similar fabrics exist from both the Romano-British and 13th century mediæval period. Mediæval pottery has been found in the field to the north of the site. We are grateful to Robin Tanner of Outwood Local History Society for information about this site, and to Phil Jones, of the Surrey Archæological Unit, for commenting on the pottery.

Mr Tanner has also drawn attention to the occurrence of bloomery slag in the footings of Woolborough Farmhouse (TQ 306457), and at various locations along the course of Hathersham Lane, much of which was covered by the course of the M23 motorway. In neither instance is the source of the slag known.¹

Further evidence of medieval iron working in Crawley, Sussex

An archæological evaluation by Thames Valley Archaeological Services, of Reading, has uncovered further evidence of medieval iron working to the west of Crawley High Street. An exploratory trench in the rear garden of 28, Ifield Road, Crawley (TQ 26583 36557), has revealed pieces of bloomery slag and associated 13th or 14th century

pottery. This location is approximately 20 metres from the rear of 5-7, Spencers Road, where similar evidence of iron working of a contemporary date was noted.² A pit containing lumps of iron working slag and medieval pottery has also been found in the front garden at 8, Spencers Road (TQ 2663 3654), about 70 metres south-east of the other location in the same road, and about 45 metres from the site at 28, Ifield Road.

Pits containing forging and tap slag, with associated pottery considered, by Mark Gardiner, to date from the period between 1430 and 1550, has been found on the south side of Haslett Avenue, about 7-8 metres to the rear of what would have originally been 15, High Street (TQ 2678 3645). There was no sign of burning, suggesting that the smelting or forging was carried out elsewhere.

Since the above work is only of an exploratory nature, it should not be assumed that each of the areas of evidence noted constitutes a site in its own right. It is hoped that more concerted archaeological investigation will be undertaken to shed light on the relationship, if any, between these and earlier finds in the area. We are grateful to John Mills, Assistant County Archaeologist in West Sussex County Planning Department, and Dr Steven Ford for information about these sites.

A bloomery in Dallington, Sussex

A concentration of bloomery slag, covering an area of approximately 300m², has been noted in a field, opposite the north end of Grovely Lane, at New Castle Farm, Dallington (TQ 648187). Pieces of tap slag of at least fist size were apparent on the surface after the crop had been harvested.

A bloomery in Mayfield, Sussex

Fieldwalking in the upper reaches of the valley of the Eastern Rother, a concentration of bloomery slag was found, by the Field Group, upstream of Merrieweathers Mill, in what may have been the area of a former pond (TQ 60692737). The slag was seen at stream level along the north bank, and the site appears to have been covered by downwash from the valley side. Slag was found along the stream for a distance of about 30 metres, and was of an unfamiliar type, with a smooth, 'knobbly' appearance.

Rowfant Supra Forge, Worth, Sussex

A 1692 map of the Rowfant estate established this forge at the site at the western end of Horsepasture Pond, suspected by Straker (TQ 3192 3715).³ The Field Group visited the site in February 1995.

The pond bay, which lies roughly north-south, is 110m long and 1m high on the upstream side. Its height on the downstream side averages 2m. There is a modern, concrete spillway at the north end with a small pipe through the bay a short distance to the south. The stream issuing from this point coincides approximately with that shown on the 1692 map. A small stream issues from under the NW corner of the bay, possibly resulting from drainage off the field which lies to the north. From the south west corner of the bay a stream has eroded a deep course through the valley side, in a north-westerly direction across the site, suggesting that it predated the construction of the pond. Two ponds upstream, close to Rowfant House, may have been used as pen ponds.

Forge slag is in evidence on the north side of the site, close to the bay and the present spillway, and also on the downstream side of the bay about halfway along its length. The site is constricted by the southern valley side which encroaches about halfway across the site some 50m from the bay. At this point there is a further accumulation of slag. What must be assumed to be the main working area is level and

there is no evidence of the remains of buildings, which suggests that there was no subsequent use of the site, unlike at the lower forge site (TQ 3155 3774). From the limited extent of the slag one must infer that the site was in operation for a relatively short period.

Crown Hill, Wye, Kent

The Field Group visited this area at the request of the English Heritage Monuments Protection Programme, in connection with a number of pits which, it was thought, may have been related to iron ore extraction. The pits, which number in the region of 200, lie on the crest of the North Downs, where the chalk is overlain by a sandy strata called the Lenham Beds. The area was hitherto identified as a British camp with the pits as sunken house sites.⁴ However subsequent surveys have revealed no sub-surface structures and only a few pieces of Iron Age pottery. A slight linear earthwork had been identified surrounding the pits. As well as iron ore, possible uses of the pits include flint or sand extraction, but the only evidence of iron working was a single piece of bloomery slag found at the edge of a field at TR 0734 4662. A search of the surrounding area yielded no further evidence.

The suggestion that the pits were for the extraction of iron ore must be regarded with some scepticism, as it is rare for early iron working sites to be located at a distance from the source of ore. Ore was the least economical to transport, of the raw materials of the iron making process, and the experience in the Weald has been that sources of ore were generally close at hand. Also, with such a large number of pits, one might confidently expect a considerable concentration of iron making in the vicinity.

Wassell Forge, Kirdford, Sussex

The description of the water system given by Cleere and Crossley indicates the presence of two water courses, and the requirements of a finery forge suggest that a third ought to have been present.⁵ Recent re-examination of the site has detected the presence of a head leat which ran along the east side of the property, close to the modern road where it turns south from the pond bay. Unfortunately the course of the leat has been ploughed out, and it has not been possible to trace where it rejoins the main stream. The position of this leat is such that its use in connection with the forge is dubious.

The presence of heavy charcoal impregnation of the soil on either side of the shallow ditch which leads south from the site of the mill, adds weight to the supposition that the forge occupied this area, and that a further wheel race would have been close by.

Notes and References

- 1 . See also *Wealden Iron*, 3 (1972), 12.
- 2 . *Wealden Iron*, 2nd ser., 9 (1989), 2.
- 3 . *Wealden Iron*, 2nd ser., 6 (1986), 49-51. West Sussex Record Office, MP2746.
- 4 . Morris, *The History and Topography of Wye* (1842).
- 5 . H.Cleere & D.Crossley, *The iron industry of the Weald* (Leicester 1985), 364.



FOURTEENTH CENTURY IRONWORKING IN WARTLING MANOR

J.S.HODGKINSON

The following extract from the court roll of the Manor of Wartling in 1310 can be added to the small number of documentary references to ironmaking in the Weald in the mediæval period.¹

Adam Creppe who held from the lord one messuage and 30 ac. of land in villeinage paying 21d. has died. Heriot one pig worth 18d. Matilda his wife comes and asks for her bench and pays 21d. relief, pledge Robert ate Stone.

Ralph Kenne who raised under villeinage one forge [fabrica] to found [fundend'] the iron of Adam Creppe who has died gives the lord one bloom [bloma] of iron which he has founded worth 2/6d. to be able to work the said forge to Easter, pledge Roger Prinkle.

Adam Creppe's tenement can be identified as Creppelond in Dallington, and its descent can be traced through a number of references in the fourteenth century. In 1512/13 it was in the hands of William Hall.² A Cripps Farm exists in Dallington (TQ 652 183), and a tenement formerly known as Prinkle, which can presumably be associated with the family of Roger Prinkle, was centred on TQ 657 194. There is a geological boundary between the Ashdown Sand, the predominant country rock, and a cap of Wadhurst Clay close to Cripps Farm, further pointing to this location as the probable source of the iron ore.

Ralph Kenne owned land in the Brightling area and was probably related to others of the same surname in the parish.³ The location of Kenne's forge has not been identified, and is likely to prove as elusive as the better known ironworks at Tudeley which were working a few

years later.⁴ The reference to the tenancy of the forge in the Wartling roll indicates that it lay within the manor, possibly close to the source of ore, but there is no indication that it was on Adam Creppe's land. Mention of a Ralph Faber (i.e. smith) of Werthe (or Worge), in Brightling, in an undated Robertsbridge Abbey rental of about 1290, may also refer to Kenne.⁵ Further grants exist to Ralph the Smith, and to Ralph, the son of John the Smith, both of Werth, the latter of a tenement, Tumblond, formerly held by John of the Mill, in Brightling.⁶ Both properties formed part of the manor Robertsbridge. Adjacent to the Worge property is the site which subsequently became Glazier's forge, in operation before 1548, a demesne of the manor of Burgehurst.⁷

Some comparison can be made between the value of the bloom made by Ralph Kenne and those produced at the Kent works. Kenne's bloom is valued at 2/6d., while those at Tudeley, some twenty years later, had a market price of 1/8d., increasing to more than 3s. after the Black Death. Was Kenne's bloom bigger than those from Tudeley? Both works were described as *fabrica*, although the use of the word *fundend'*, which does not appear in the Tudeley accounts, is of significance, and may question the importance some writers have attached to the word 'found' or 'founder' as an indicator of the use of the indirect process of iron smelting.⁸

Notes and References

1 . British Library (BL), Additional Roll 32,615, m. 4v., Wartling Manor court roll, 23 October 1310. I am most grateful to Dr Mark Gardiner for information and references relating to this source.

2 . BL, Add. Roll 31,519.

3 . BL, Add. Ch. 13,605, 42,640-1, 42,644. Hastings Museum & Art Gallery, HPL/B4; BL, Add. Ch. 42,638, 42,649.

4 . M.S.Giuseppi, 'Some Fourteenth-Century Accounts of Ironworks at Tudeley, Kent,' *Archæologia*, 64 (1913), 145-64.

- 5 . H.Cleere & D.Crossley, *The iron industry of the Weald* (1985), 91; Centre for Kentish Studies, U1475/M242. Personal names in the document, and those of heirs in a dated rental of 1327 (East Sussex Record Office, SHE 7/4), suggest that it dates from the end of the 13th century rather than 70 years earlier; M.Gardiner, pers comm., citing A.Chapman, *Granges and Other Landholdings of Robertsbridge Abbey* (Ann Arbor, Michigan, Xerox University Microfilms 1977), 46n.
- 6 . C.L.Kingsford (ed.), *Report on the Manuscripts of Lord de L'Isle and Dudley preserved at Penshurst Place, Vol.1* (Historical Manuscripts Commission 1925), 123, 114.
- 7 . Cleere & Crossley, 384.
- 8 . E.g. B.G.Awty, 'The origin of the blast furnace. Evidence from the Francophone areas,' *Historical Metallurgy*, 21, 2 (1987), 96-9; or 'The Blast Furnace in the Renaissance Period: Haut Fourneau or Fonderie?' *Trans. Newcomen Soc.*, 61 (1990), 65-78.



A WEALDEN STEEL-MAKING PATENT

J.S.HODGKINSON

References to steel making in the Weald are rare; steel forges are known at Pippingford and at Warbleton, and German steel workers were engaged by Sir Henry Sidney at Robertsbridge, and at an unidentified site at Boxhurst, in the 1560s.¹ A hitherto unrecognised contribution to the search for a method of steel making is to be found in the Patent granted to James Goodyer in 1771.² Goodyer was a Guildford ironmonger, and in 1771 was the occupier of Abinger Hammer, near Dorking. In 1774 he took the leases of North Park furnace, near Fernhurst, and Pophole Hammer, near Haslemere. He was declared bankrupt in 1777.³

Steel making in England up to the 1770s was concentrated in two areas; in the North East, where the Crowley family had steel mills at Swalwell and Teams, near Newcastle, and in Sheffield. In both areas Swedish pig iron was the raw material, and the main process employed was that of cementation, in which bars of wrought iron, bedded and covered in charcoal dust, were heated in stone chests, thereby allowing the carbon in the charcoal to diffuse, to some extent, into the iron. The product was Blister steel; so called because of its characteristic surface appearance. From about 1770 Benjamin Huntsman's crucible steel making process, a source of high grade steel which improved upon, but did not supersede, the cementation process, became commercially available in Sheffield. Other centres of steel making, at this time, were Birmingham, Bristol and London.⁴ Edward Raby, who was a London ironmonger based in West Smithfield, and who later cast guns at the Warren and Gravetye furnaces, in Sussex, supplied the Board of Ordnance with German and Blister steel in 1758.⁵

German or Cullen (Cologne) steel took its name from steel made by the finery process in the Sauerland, in southern Westphalia, and exported through Cologne. This process took advantage of manganese-rich ores which, because they made the slag more fluid, allowed a higher degree of control over the finery process than was generally possible with ore rich in iron oxide.⁶ Wealden ores contain slightly higher percentages of manganese than most British iron ores, although the percentages do not approach those found in the Siegerland, but in the 16th century immigrant workers had been able to produce steel at Wealden locations, sometimes also using Welsh pig iron, presumably with the finery method.⁷

In the conversion of carbon-rich cast iron to wrought iron in the finery, drops of iron were melted off a sow suspended in burning charcoal. An oxidising combination of oxygen from the tuyere, and carbon dioxide from the burning charcoal, decarburized the iron drops, which began to solidify as they descended; their melting temperature being raised by the removal of the carbon. Further decarburization occurred as the drops descended through a bath of slag and hammer

scale beneath the burning charcoal. At the bottom of the hearth the iron coalesced into a bloom. The bloom might then be levered off the bottom of the hearth and remelted to ensure the complete removal of the carbon.⁸ In the manufacture of German steel the bloom of wrought iron at the bottom of the hearth was kept fluid by pointing the tuyere downwards at a steep angle, and a lump of cast iron, heated to just below fusion temperature, was stirred into it, producing an unhomogeneous bloom of semi-carburized iron.⁹

Goodyer's patent, which was granted on the 20th December 1771, is for a modification of the finery process, and in the Specification registered in Chancery on the 11th March in the following year, he described his method thus:

*Place the pig or cast iron in the fire as when you intend to make bar iron, but the blast of the bellows must not be so strong; when some of the iron is sunk in the fire you must work from the bottom, as when you make iron, but keep melting iron as at first; when there is a sufficient quantity to make a loop let the whole sink to the bottom, and take it under the hammer as soon as possible to shingle and draw it as you do common iron; the fire must be kept as free from cinder as possible. The addition of common salt or other saline substances, any parts of the parts of animals or charcoal dust, makes the steel better for many purposes; for the finest steel, after it is made as above, it may be converted in the same manner as common steel is made from bar iron.*¹⁰

Goodyer's method seems to rely on the fact that complete decarburization did not occur when the cast iron was first melted in the finery hearth. His method required the remelting of the bloom while at the same time melting more cast iron. Thus the new bloom formed would contain decarburized iron from the remelting of the initial bloom, together with partially decarburized iron added to it. The addition of salt or organic matter was not uncommon in early ironmaking; the intention

of their presence being to modify the conditions in which carburization took place, although their efficacy is somewhat questionable.¹¹

Coming as it did when the cementation process had been available in England for over 150 years, and Huntsman's crucible process was rapidly gaining acceptance, Goodyer's process seems far removed from the mainstream of innovation in the steel industry. With an ironmongery business in Guildford, it may be presumed that he had developed the technique in response to his own requirement for steel, although a tantalising reference to Richard Crawshay, later of Cyfarthfa, as one of the assignees of his bankruptcy, hints at wider interests.¹²

Notes and References

- 1 . H.Cleere & D.Crossley, *The iron industry of the Weald* (1985), 145-6.
- 2 . Public Record Office (PRO), C66/3734/10.
- 3 . Cleere & Crossley, 309, 386.
- 4 . K.C.Barraclough, *Steelmaking before Bessemer, vol. 1, Blister Steel; the birth of an industry* (1984), 60-100; while mentioning several early patents for making steel, Barraclough was apparently unaware of Goodyer's.
- 5 . PRO, WO51/202 p.247.
- 6 . H.R.Schubert, *History of the British iron and steel industry* (1957), 314-6.
- 7 . For comparative analyses see R.F.Tylecote, *The Prehistory of Metallurgy in the British Isles* (1986), 214; and *The early history of Metallurgy in Europe* (1987), 49-50. D.W.Crossley, *Sidney ironworks accounts 1541-1573*, Royal Historical Society: Camden fourth series 15, (1975), 33-4.
- 8 . W.Rostoker & B.Bronson, *Pre-Industrial Iron* (Philadelphia 1990), 139-42.
- 9 . Barraclough, 27.
- 10 . PRO, C210/13.
- 11 . Barraclough, 171-2; the French scientist, Réaumur, noted several ingredients used in steelmaking, including soap, old shoes, horn and poultry dung.
- 12 . Guildford Muniment Room, 1503/4/2.

OLDLANDS FURNACE, MARSHALLS AND THE NUTT FAMILY

PAM COMBES

The origins of the Nutt family are obscure. Although Mark Anthony Lower believed John Nutt to be the son of a London merchant, he cites no authority for the statement. However, by 1616 John Nutt was Rector of Bexhill, Rector of Berwick and at some time a Prebendary of Chichester. He was deprived of the living of Bexhill during the Commonwealth (1644-5) but remained Rector of Berwick until his death in 1653. He was undoubtedly a man of substance, eventually purchasing the Lordship of Berwick manor from the Earl of Dorset in 1651. Although he presumably lived in the substantial parsonage he built at Berwick, later in life his home was Mays in Selmeston.

The family preference for the names Thomas, John and Anne makes attempts to prove a family tree a hazardous business!

John and his wife Anne had eight children, at least one of whom was associated, probably as the landowner, with a Wealden furnace. Two of his daughters married into notable local families, Mary married Thomas Lade of Warbleton and Anne married Captain John Fuller an ancestor of the Fullers of Rose Hill and their niece Philadelphia, the eldest daughter of Sir Thomas Nutt, married Sir Thomas Dyke.¹

Among land settled on John Nutt's son Thomas (knighted in 1660) on his marriage to Katherine, the daughter of Sir Thomas Parker, in 1651 was the manor and farm of Oldlands. Most significantly, in view of our slight knowledge of Oldlands furnace, the holding was described as including a furnace and an iron mill as well as the messuage, cottages, barns, water mill and lands.²

Before the Nutt family acquired Oldlands the estate was owned by other individuals known to be associated with ironworks. Both Ninian Challoner, as ironmaster as well as part owner, and Francis Challoner were associated with Ardingly and Cuckfield ironworks in the 1574 lists.³ Francis Challoner was also part lessee of Steel Forge

(Hartfield) and Stumblets between 1549 and 1554.⁴ Challoner was in possession of Oldlands by 1576 when he sold the estate with 300 acres to Hugh Cornford of East Malling, Kent and his son Robert for £563 6s.8d.⁵ However despite the association of the former owners with ironworks elsewhere the fine of the same year records the capital messuage and a watermill as well as the land, but does not identify a furnace.

Hugh Cornford's name cannot be linked with the ironworks at Oldlands. But it was his son Robert Cornford who quitclaimed Oldlands to John Pucknell of Lewes in 1599-60 for £1100 and in 1609 sold the estate to William Wood of Crowhurst for £2200. A sum which records a substantial rise in the capital value of the estate in the 33 years since it had been purchased and which could represent the development of the furnace and forge.

A Robert Cornford is known to have agreed to purchase substantial quantities of wood (4250 cords) from Sir Thomas Palmer in 1590. At least some of the woods from which the cords were to be taken lay in the Buxted area close to Oldlands. If this Robert Cornford was the same person who held Oldlands purchase of such a large quantity of a basic commodity for iron smelting suggests that Robert Cornford was an ironmaster.⁶

William Wood, in his turn, sold the property to Richard Amhurst for £1400 in 1614. A possible reason for the low price becomes apparent when in 1622 Amhurst granted an annuity of £40 to a William Mason in consideration of a £600 debt owed to him by Wood. In 1623-4 Amhurst granted Oldlands to John Nutt of Berwick and shortly afterwards the annuity was also assigned to him.⁷ The furnace was leased to William Crowe and David Middleton by Amhurst between 1614 and 1617.⁸

One of The Reverend John Nutt's younger sons, also John, his son Thomas and after him his brother John were the family members most closely associated with the family's Wealden estates. Both the older John and Thomas are named as having rights of common on Ashdown Forest in the Parliamentary Surveys of the mid-17th century.⁹

John acquired Marshalls in 1654 and Anne Nutt his widow and executor agreed a deed describing in detail the small estate of Marshalls which was to be leased to John Newman in 1679-80.¹⁰ No ironworks are mentioned in the description of the holding and there is no evidence that the Nutt family were associated with the furnace there.

In 1677 Dame Katherine Nutt, widow of Sir Thomas, quitclaimed Oldlands to Thomas Nutt, son and heir of John Nutt of Maresfield.¹¹ Two years later George Nutt, his uncle, leased Oldlands to Thomas for £60 per annum for life. In effect a release of a 99 year lease that George had taken earlier at a cost of £1200.

John senior died in 1664, and Thomas himself was dead by 1689 when a John Nutt of Marshalls was described as his brother and heir. By 1695/6 the younger John had paid off all Thomas's debts, amounting to nearly £2000. In 1703 John Nutt described as 'of Maresfield' died intestate leaving three children. The William Nutt who still owned Oldlands in 1768 was almost certainly his son.¹²

Both the Nutt family and Robert Cornford were associated in some way with ironworks. Although there is no definite evidence that Robert Cornford was working Oldlands furnace circumstantial evidence suggests that he was, and that he may have been responsible for its construction. Thomas Nutt signed one of the late 17th century petitions regarding imports of cheap iron which, it was claimed, were ruining the Wealden industry. It is clear that he, and earlier his father, were landowners at Oldlands in the mid to late 17th century and derived at least part of their income from ironworks, hence his interest in thematter.¹³

The purpose of the tentative suggestions made in this note is to bring the names of the people associated with Oldlands to the attention of other researchers. Knowledge of their involvement with the site may lead to clarification of the exact nature of their respective roles as more information about the industry comes to light.

Notes and References

- 1 . G.M.Cooper, 'Berwick Parochial Records,' *Sussex Archaeological Collections* (hereafter SAC), 6 (1853), 228, 223.
- 2 . East Sussex Record Office (hereafter ESRO), SAS/G/41/20.
- 3 . E.Teesdale, 'The 1574 lists of ironworks in the Weald: a re-examination,' *Wealden Iron*, 2nd ser., 6 (1986), 29.
- 4 . H.Cleere and D.Crossley, *The iron industry of the Weald* (1985), 358.
- 5 . ESRO, SAS/F/201a.
- 6 . B.G.Awty, 'A new forgemaster, William Bassett, and an old name, Grubsbars, for Crowborough Forge,' *Wealden Iron*, 2nd ser., 9 (1989), 35.
- 7 . ESRO, SAS/F/213-220.
- 8 . Cleere and Crossley, 348.
- 9 . J.R.Daniel-Tyssen, 'The Parliamentary Surveys of the County of Sussex,' *SAC*, 24 (1872), 182-287.
- 10 . ESRO, SAS/F/225, 229.
- 11 . ESRO, SAS/F/226.
- 12 . ESRO, SAS/F/227, 252.
- 13 . J.L.Parsons, 'The Sussex Ironworks,' *SAC*, 32 (1882), 23.



THREE NOTES ON IRONWORKING SITES IN KENT

NEIL ALDRIDGE

Smarden - A Romano-British Iron Working Site at Romden

An extensive iron working site has recently been rediscovered, having been lost for the past eighty years. The site was originally discovered around 1912 by the then owner of Romden Castle, Mr W.Basil Worsfold. Together with four other antiquarians of the time he appears

to have carried out a number of investigations including the digging of trial trenches around the property.¹ They located iron slag and sherds of pottery, which appeared to be concentrated in three fields. Some were said to be Roman and others mediæval. The fields were known as 'The Orchard,' 'Black Pitts' and 'The Hamlets.' The latter is the site of a mediæval moated complex, adjoining the two other areas, although on the other side of a small watercourse.

A chance discovery made during 1994, of a large spread of bloomery iron slag, resulted in further research being carried out which confirmed this as Worsfold's site of 1912. A coin of Faustina, together with a possible contemporary burial, had been found at Romden c.1856, although the exact locations of these are now uncertain.² They would, however, appear to have initiated Basil Worsfold's investigations which took place during June and August 1912.³

The centre of the site seems to be located some 200 m due east of the bridge at Romden (NGR TQ 8985 4220). The largest concentration of tap slag appears to coincide with a low mound which may be natural or could possibly indicate a ploughed-down slag heap. This is appropriately located in the field known as 'Black Pitts.'⁴ The slag extends out from this spot for some 200 m; the largest pieces measure 40 m x 40 m and average 10 cm in thickness.

A few fragments of clay furnace lining were found in the area of the low mound. Fieldwalking eventually produced a number of sherds of possibly late 1st - mid 2nd century AD Romano-British pottery. The grog-tempered fabric is comparable with some of the Romano-British pottery from a number of other sites recently located in the eastern Weald of Kent.⁵

The site is the largest Romano-British iron working site so far discovered in the Weald of Kent and appears to be on a similar scale to some of those from the Sussex Weald.

Bethersden - Tuesnoad Farm

Further evidence for possibly early iron working has recently been recorded close to Tuesnoad Farm at Bethersden, in the Low Weald. The site lies 150 m north of the farmhouse (NGR TQ 9093 4220). A spread of dark soil together with tap slag and cinder was exposed in the ploughsoil. There is a lack of any datable material but the site is barely 1.3 km (¾ mile) east of the extensive Romano-British iron working area recently located at Romden, in the parish of Smarden, which is the largest site of this period so far identified in the Weald of Kent. The Ordnance Survey archaeological record cards relating to the parish of Bethersden record the following finds made from the same general area c.1860.⁶ A black patera together with sherds of another vessel of red ware were found in a field at Tuesnoad Farm around that date. It is possible that these may have originated from a cremation burial; however, further evidence is absent and the exact find spot is not recorded. This site, together with the iron working site at Romden, Smarden, are within 1½ miles of the amended line of the Roman road from Sutton Valence to the Ashford area.⁷

Biddenden - Ibornden Farm

Fieldwalking to the west of the disused Kent and East Sussex Railway line produced bloomery slag and some sherds of grog-tempered pottery probably of either 1st century BC or 1st century AD date. The Ordnance Survey archaeological records refer to two separate sites here but it seems more probable that they are one and the same.⁸ During the construction of the railway line c.1904, a total of six cremation burials were found when digging the cutting (TQ 8470 4027); six sherds from the vessels are in store at Maidstone Museum.

The O.S. also record a 'Belgic' cremation burial at TQ 8466 4021 but in view of the proximity to the other burials and comparison

of the pottery from Maidstone Museum with the recently recovered sherds they may all originate from the same site.

Notes and References

- 1 . W.B.Worsfold, 'Romden Place and its Restoration,' *Archæologia Cantiana*, 43 (1931), 82-3.
- 2 . *Victoria County History of Kent*, vol. 3 (1932), 168. G.Payne, *An Archæological Survey of the County of Kent* (1889), 19 (Record of a Roman Interment at Romden, in Smarden).
- 3 . Worsfold, op.cit.
- 4 . Local Studies Centre, Maidstone, TR30/17/332, Tithe Map and Apportionment, Smarden.
- 5 . E.g. at Moatenden Priory, Headcorn, and at Brookwood Farm, Headcorn; reports forthcoming. At the latter site bloomery slag has been found.
- 6 . Ordnance Survey Record Card, Bethersden, TQ 94SW, 2/1/64.
- 7 . Margary's Route 131.
- 8 . Ordnance Survey Record Card, Biddenden, TQ 84SW6, 15/1/64.



'DUTCH' LABOURERS AT SALEHURST IN 1566-1568

ANNE DALTON

It is well known that the Sidney's brought German steel workers to England in 1564 to produce steel at their Robertsbridge ironworks and at Boxhurst in Kent (these were often referred to as 'Dutch').¹ Rhys Jenkins listed the names he had found in the Sidney papers at Penshurst as: John Frolycke, John Bowde, Gervase Krisker (or Brisker), Harman Bowde, William Folycke, Peter Kriskar, Adolp Zincke, John Ferderbecker (Federbeck). John Cromer, Jacob Scult, John Bearmane, Roquis Smorde (Rocus Smede), Sempser van Loue, Harman Crine, Pete of Breckerfildde, Henericks, Corte, Powle and John Quakenberge

(brough).² According to Schubert at least fifty-five steel makers, some accompanied by their wives and children, came from Germany between 1565 and 1566 and were in England for less than a decade, leaving no traces, either in records or in parish registers.³ I suggest that Schubert was mistaken in this last statement, for there are two 'Dutch' labourers recorded in the Calendar of Assize Records for Sussex in July 1567 and March 1568, Pantellus Hacker and Harman Skryver, who could now be added to the list of those found by Rhys Jenkins.⁴ The entries in the Calendar, numbered by J.S.Cockburn, for these two, together with the entry for a Francis Damaske, whose case is linked to Hacker's by having the same jury at the Winter Assizes at East Grinstead in 1568, are:

East Grinstead. July 1567.

212 Gaol Prisoners ... Pantellus Hacker ...

227. **Hacker** (or Acor), **Pantellus**, of Salehurst, a 'Dutch' labourer, indicted for felonious killing. By an inquisition held at Salehurst, 13 Nov. 1566, before William Playfair, coroner, on the body of Harman Skryver of Salehurst, a 'Dutch' labourer, the jury ... found that on 3 Nov. About 5 p.m. Skryver came to a 'colehouse' in Salehurst where some 'Dutchmen' were drinking and drank there with Hacker. They quarrelled, and Hacker stabbed him with a dagger (12d.), inflicting injuries from which he died on 9 Nov.

Found not guilty at the Winter Assizes 1568.

East Grinstead. March 1568

239. Gaol Prisoners [inc.] Pantellus Hacker, Francis Damaske

260. **Trial Jury** for Francis Damaske, Pantellus Hacker: Anthony Hewashe, John Dickard, Peter Debusse, Peter Jonas, John Arthur, Robert Buse, John Pepper, Richard Ockenden, Thomas Cripps, Roger Michell, John Astone, William Forde.

[Endorsed] Each juryman is bound to appear at the next assizes or in Star Chamber, if required, for acquitting Pantellus Hacker.

261. **Damaske, Francis**, of Salehurst, labourer, indicted for felonious killing. By an inquisition held at Robertsbridge abbey in Salehurst parish, on 26 Dec. 1567, before William Playfair, coroner, on the body of Nicholas Cowper of Salehurst, labourer, the jury ... found that on 25 Dec. Damaske assaulted Cowper with a meat knife (1d.) giving him a blow on the neck from which he died on 26 Dec.

Not guilty.

J.S.Cockburn, in his Introduction to his Calendar of Assize Records, when discussing how a Trial Jury was constituted and behaved, explained that it consisted of freeholders and that each jury had to hear several cases before returning any verdicts. The presumption that all jurors were freeholders could be challenged if an alien were among them, and an alien, arraigned for a felony, could challenge the jury on the ground that it did not include an alien.⁵ Linguistic affinity with the accused was not insisted on and aliens of any nationality were considered adequate. He quotes no. 227 and no. 260 in the Sussex Calendar as an example of a jury with aliens in it.

There would appear to have been at least four aliens on the jury: Anthony Hewashe (or Hoyse or Huashe), taxed as a servant of John Ashburnham in Foxearle Hundred in 1550, taxed with his wife at Ardingly in 1563 and in Buttinghill Hundred in 1572;⁶ Peter Debusse (or Debewe), taxed in 'Marsfield' in the Hundred of Rushmonden in 1572;⁷ John Arthur (or Artor), taxed in the Hundred of Danehill Sheffield in

1560, with his wife at Slaugham in Buttinghill in 1563 and in Hartfield in 1576, when he paid 10s.;⁸ Robert Buse, who, with his two sons, was taxed as an alien at 'Bawcombe' in Buttinghill in 1576.⁹ It is possible that all four men were working at Salehurst at the Sidneys' steelworks at the time that both killings took place, explaining why they were called to the jury.

Francis Damaske is not described as an alien, but the Court could have assigned his case to Hacker's jury, either because he was in fact an alien or because he and Hacker were the only two men charged with murder in March 1568. Damaske could have been of French origin or, possibly, from his name, from Damascus, where he might have been connected with working with steel. Juries who acquitted suspects 'contrary to the evidence' were fined or bound over to appear at subsequent assizes or Star Chamber, though there is no evidence that these men actually appeared at Star Chamber.¹⁰ During these March Assizes two other juries were bound, one in £40 and the other in £20 each juror, to appear at the next Assizes or, in the meantime, in Star Chamber. There is nothing further in the Calendar to indicate what happened to the jury or to Hacker and Damaske when they were released from prison.

Notes and References

- 1 . H.R.Schubert, *History of the British Iron and Steel Industry* (1957), 316-320; D.W.Crossley, *Sidney ironworks accounts 1541-1573*, Royal Historical Society: Camden fourth series 15 (1975), 34.
- 2 . R.Jenkins, 'Notes on the Early History of Steelmaking in England,' *Trans. Newcomen Soc.*, 3 (1922-3), 34.
- 3 . Schubert, 316, 320.
- 4 . J.S.Cockburn, *Calendar of Assize Records, Sussex Indictments. Elizabeth I* (HMSO 1975).
- 5 . J.S.Cockburn, *Calendar of Assize Records, Home Circuit Indictments, Elizabeth I and James I. Introduction* (HMSO 1985), 56, 57-8.
- 6 . B.G.Awty, 'Aliens in the ironworking areas of the Weald: the Subsidy Rolls, 1524-1603,' *Wealden Iron*, 2nd ser., 4 (1984), 17, 59, 62.
- 7 . Awty, 52.

8 . Awty, 50, 61, 44.

9 . Awty, 62. I am most grateful to Brian Awty for his help in identifying these jurors.

10 . Cockburn (1985), 71.