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PART 2

ROMANO-BRITISH COUNTERFEITERS ON MENDIP AND IN SOUTH WALES: TWO DEPOSITS AND A DISCUSSION

By

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The main subject of this note is the material from Mr. J. H. Barrett's excavations at *White Woman's Hole*, described in the preceding pages; but it is convenient to set on record at the same time a somewhat similar, much smaller deposit excavated by Mr. and Mrs. N. W. Tuck in *The Roman Mine*, Draethen, on the borders of Glamorgan and Monmouthshire (p. 74).

WHITE WOMAN'S HOLE

The location of the material was very carefully recorded by Mr. Barrett, and, as he makes plain, the deposits in the cave had at some time been thoroughly turned over, so that post-medieval pottery and a clay pipe-stem lay beneath some of the Roman objects. The 'reversed stratification' points to there having been well-demarcated periods of occupation or frequentation of the cave. Most of the numismatic material relates to counterfeiting but, as Mr. Barrett observes, there is nothing to prove that the counterfeits were actually produced on the spot. There are no crucibles from which metal was poured to make the little bars described; no débris of the clay moulds which must have been used; nothing resembling a die. It is his suggestion that the evidence of counterfeiting was merely concealed in the cave. On the other hand, such preliminary work as was required to produce the blanks may have been done elsewhere, perhaps as part of a perfectly ordinary and legitimate bronze-smithing activity; and the dies might have been too precious to leave in the dampness of a cave. In my report on the deposit at Coygan Camp, Laughare (Carms.) I commented on the similar lack of dies, crucibles and also blanks, which we have here: only one piece of a crucible turned up at Coygan[1].

SCHEDULE

The average diameter and weight of the coins are given where desirable, the weight by Sartorius balance corrected to two decimal places of a gramme. The figures in degrees indicate the alignment of the reverse type in relation to the obverse. An asterisk is used to denote the pieces figured (all pl. 4, except Group D(c), pl. 5) and the italic *s* to denote pieces retaining a silvery surface.

A. *Orthodox and other coins not apparently related to the counterfeiting* (8)

1. Victorinus, A.D. 269-71, *antoninianus*, Invictus type, slightly worn to worn. *Roman Imperial Coinage*, no. 114.
*2. Carausius, 286-93, early unorthodox *antoninianus* overstruck on uncertain type, Pax legend and type, 22 mm 3.13 g 360°, slightly worn.
3. Similar, not overstruck, *Invicto* legend with standing Pax type, star in exergue, 21 mm 1.98 g 360°, unworn.
4-6. Three radiate minims, one Salus and two uncertain types, 9 mm 0.38 g 150°, 9 mm 0.20 g, 12 mm 1.09 g.
*7. [Constantius II] *Fel temp reparatio* falling horseman type, counterfeit *c.* 355-65; 12 mm 0.89 g 210°, unworn.
8. Arcadius, *c.* 394-5, *Victoria Auggg* type of Lyon (?; cf. *Late Roman Bronze Coinage* II, no. 395), 12 mm, defaced, perhaps a cast; — **VSPFAVG** and **VICTORI**– survive indistinctly of the legends, but identification certain.

B. *Cut orthodox and other coins* (85)

*1-3. Claudius II, 268-9. Three halves of *antoniniani;* *1, Victoria type; 2, *Fides Militum* type; 3, uncertain.
4. *Divo Claudio*, 269. Altar type—cut scrap.
*5. Tacitus, 275-6. Quarter of an *antoninianus, Felicitas Saeculi* type of Ticinum, cf. *RIC* 139.
*6-7. Postumus, 260-9; 6, *antoninianus, Pax Equitum*, exergue T, Milan, *RIC* 381; reverse filed to make quarters, of which one is detached; 7, Victoria type, possibly a cast.
8-9. Victorinus, 269-71. Two thirds of *antoniniani;* 8, Victoria type.
10. Tetricus I, 271-4. Half *antoninianus*, Salus type.
11-12. Tetricus II, 272-4. Half and quarter of *antoniniani;* 11, obverse brockage; 12, *Spes Augg* type.

Not itemised: (*a*) Seven quarters and smaller cut pieces of orthodox *antoniniani;* (*b*) nine similar pieces, counterfeits (one*); (*c*) forty-five halves, quarters and other scraps of coins, mostly hammered flat, a few plain minim-sized discs; (*d*) eleven similar pieces, halves and quarters, curled up; a few impressions remain, including part of the name Victorinus (*one).

C. *Group ('hoard') of counterfeit antoniniani* (76)

The chief characteristic is a thin, angular flan formed by snipping thin metal, in many cases evidently quartered coins; a second characteristic is the faintness of most impressions, consonant with the use of flans compacted by cold hammering. Some have silvered surfaces or are of base silver. The coins were cleaned in Rochelle salt and caustic soda, with secondary treatment with dilute sulphuric acid where necessary.

(a) *Obv. 1*

IMPCTETRICVSAVG head rad.
R; coarse work
1. 9 mm 0.26 g 180°
*2. 12 mm 0.48 g 190°

Rev. 1
Pietas type, cf. pl. 5, A
*3. 12 mm 0.50 g 170°
*4. 14 mm 0.58 g 180°

(b) *Obv. 1*

Rev. 2

(c) *Obv. 2*

Laetitia type, cf. pl. 5, B
1. 10 mm 0.30 g 45°

..IITITRICVI neat head rad. R. *Rev. 2*

1. 9 mm 0.19 g 225°
2. 9 mm 0.21 g 135°
*3. 8 mm 0.21 g 360°
4. 8 mm 0.22 g 360°
5. 9 mm 0.23 g 360°
6. 8 mm 0.24 g 330°
7. 10 mm 0.24 g 330°
8. 9 mm 0.26 g 330°
9. 10 mm 0.30 g 360°
10. 10 mm 0.31 g 90°
*s*11. 10 mm 0.33 g 135°
12. 9 mm 0.33 g 360°
13. 12 mm 0.33 g 135°
14. 9 mm 0.34 g 360°
15. 10 mm 0.35 g 315°
16. 9 mm 0.35 g 360°
17. 13 mm 0.35 g 360°
18. 10 mm 0.36 g 360°
19. 10 mm 0.36 g 180°
20. 10 mm 0.36 g 180°
21. 10 mm 0.37 g 360°
22. 12 mm 0.37 g 180°
23. 10 mm 0.38 g 360°
*24. 9 mm 0.39 g 315°
25. 9 mm 0.39 g 135°
26. 9 mm 0.39 g 360°
27. 12 mm 0.37 g 315°
28. 10 mm 0.40 g 315°
29. 10 mm 0.40 g 360°
30. 10 mm 0.40 g 360°
*s*31. 11 mm 0.40 g 360°
32. 11 mm 0.40 g 360°
33. 10 mm 0.44 g 315°
34. 12 mm 0.44 g 360°
35. 10 mm 0.45 g 360°
36. 12 mm 0.46 g 135°
*s*37. 11 mm 0.47 g 350°
38. 13 mm 0.48 g 360°
39. 10 mm 0.49 g 270°
40. 11 mm 0.49 g 270°
41. 13 mm 0.49 g 315°
42. 12 mm 0.51 g 320°
43. 12 mm 0.51 g 360°
44. 11 mm 0.52 g 225°
**s*45. 12 mm 0.53 g 225°
46. 11 mm 0.54 g 360°
**s*47. 11 mm 0.55 g 195°
48. 11 mm 0.56 g 350°
*49. 12 mm 0.56 g 350°
50. 13 mm 0.56 g 320°
*51. 12 mm 0.58 9 310°
*52. 11 mm 0.59 g 350°
53. 11 mm 0.64 g 90°
*s*54. 12 mm 0.65 g 90°
55. 11 mm 0.66 g 90°
56. 12 mm 0.71 g 315°
57. 13 mm 0.87 g 315°
*58. 12 mm 0.89 g 45°
59. 13 mm 0.91 g 315°

Average wt. 0.44 g
Average wt. quartered coins (Group B) 0.47 g

(d) Unassigned obv./rev. and fragments (12).

D. *Counterfeits of 'hoard'-associated type* (4)

(a) *Obv. 1/Rev. 1:* 1. 11 mm 0.42 g 315°;

(b) *Obv. 2/ Rev. 2:* 2. 11 mm 0.41 g 315°

(c) *Obv. 3*
As Obv. 2 but with four long rays to crown instead of three;
ALTE . . ICVS
*1. 11 mm. 0.52 9 315°

Rev. 3
Uncertain female fig. R.
(obv. only*)2. 12 mm 0.63 g 45°

E. *Constantinian counterfeits* (45)

These have been struck on cast flans (Group F) and there is no silvering visible. Cleaned as Group C.

(a) *Obv. 1*
Constantinopolis type, bust L. with high hatched body, beady eye, hair *en brosse*, **ТИОЭ**
*1. 9 mm 0.34 g 315°
2. 8 mm 0.38 g 90°
3. 9 mm 0.46 g 315°

Rev. 1
Winged Victory, crude, rests R. hand on kite-shaped shield; cf. pl. 5, C
4. g mm 0.61 g 315°
*5. 9 mm 0.67 g 90°
6. fragment only

(b) *Obv. 2*
Similar bust but smaller and crested helmet, **СОИ**
*7. 8 mm 0.43 9 360°
9. fragment only

Rev. 1
8. 10 mm. 0.63 g 180°

(c) *Obv. 2*

Rev. 2
Similar but coarser, Victory rests L. hand on shield
*1. 9 mm 0.60 g 45°

(d) *Obv. 3*
Same type, neat bust L. in crested helmet showing laurel, cl.pl. 5, C. **ИОС ІИ**
2. 9 mm 0.49 g 45°
3 9 mm 0.52 g 315°

Rev. 2
4. 9 mm 0.59 g 360°
*5. 9 mm 0.89 g 200°

(e) *Obv. 3*
1. 7 mm 0.22 g 90°
2. 8 mm 0.34 g 45°
3. 9 mm 0.39 g 45°

Rev. 3
Similar, Victory rests R. hand on lozengular shield
*4. 10 mm 0.47 g 135°
5. 9 mm 0.54 g 270°

(f) *Obv. 1*

*1. 9 mm 0.44 g 270°
2. 9 mm 0.46 g 45°
3. 9 mm 0.46 g 180°
*4. 10 mm 0.72 g 225°
5. 13 mm 0.85 g 225°

Rev. 4
Gloria Exercitus (one standard) type, pole of standard continuous; cf. pl. 5, D
6. 11 mm 0.92 g 225°
7. 12 mm 0.98 g 45°
8. 10 mm 1.02 g 180°
9. 12 mm 1.12 g 90°
10. 13 mm 1.32 g 180°

(g) *Obv. 2*

Rev. 4
*11. 9 mm 0.37 g 110°

(h) *Obv. 2*
*1. 10 mm 0.48 g 45°
2. 9 mm 0.49 g 270°

Rev. 5
Similar, standard discontinuous, in exergue, dots

(j) *Obv. 4*
Neat bust L., crested helmet, **CONST**

Rev. 6
Similar to Rev. 4; in exergue **con**
*1. 10 mm 0.63 g 90°

(k) *Obv. 5*
Imperial diad. head R.
IVSAV (cl. pl. 5 D, *Constantius Aug*)
2. 11 mm 0.28 g 180°
*3. 11 mm 0.55 9 140°

Rev. 6

*4 12 mm 0.90 g 200°

(m) Unassigned obv./rev. (7)

F. *Flans and sections of cast bronze rod* (108)

(a) Twenty-four blank flans, 7 to 10 mm, 0.33 to 1.17 g, average 0.76 g. One or two with casting-pipes visible and others split by decay (? of lead constituent).
(b) Eighty-four sections of cast rod, some with casting-pipes, and one from the top of the mould where metal has adhered to one side only:
1. 6 to 7 mm. diam., thickness 2 to 3 mm, average 0.66 g (34)
2. 7 mm diam., thickness 3 to 5 mm, average 0.90 g (32)
3. 7 to 8 mm diam., thickness 5 to 9 mm, average 1.72 g (12)
4. 10 to 12 mm diam., thickness 7 to 12 mm, average 6.35 g (5); and the imperfect casting mentioned above.
(c) Flattened disc, diameter 13 mm, thickness 4 mm, 5.08 g.

G. *Residue*

About 120 small scraps, snippets and runners of bronze, mostly very small and weighing about 44 g in all; in the same envelope, twist of very fine bronze wire, scrap of twisted iron wire, latter perhaps modern.

ROMAN MINE, DRAETHEN

A report on the mine has been published by J. and N. Tuck as *Caving Report No. 15* (1971) of the Bristol Exploration Club. It is a wholly artificial cutting in the Dolomite of Cefn-pwll-du—'hill of the black pit'—and at present is the most certainly Roman lead-silver mine in the country. There are substantial signs of Roman interest in the ore, both here (especially at Machen in the valley of the Rhymney a little to the east) and at Risca (in the valley of the Ebbw) where a bath-house containing stamped bricks of the Second Augustan Legion was partly explored many years ago[2]. As far as is known, Roman mining belongs essentially to the first and second centuries, and it is therefore no surprise to find that evidence of counterfeiting in the Cefn-pwll-du mine is stratigraphically related to a period when the mine had been abandoned.

The site of the discovery lies some 45 m from the present entrance, but it is possible that one of a number of vertical shafts may have provided access in ancient times: such shafts are not untypical of Roman mine-workings in Spain and Gaul. The material occurred around the remains of a hearth associated with a little coarse pottery of the third century on top of a mass of miners' 'deads'. The hearth was of course in total darkness, and it is a considerable tribute to the care and enthusiasm which Mr. and Mrs. Tuck brought to their explorations that such tiny pieces of metal as those listed below were recovered. By comparison with White Woman's Hole, the material is very small in quantity, but a good deal more must lie beneath the excavated level in the 'deads' and possibly in the hearth, which Mr. and Mrs. Tuck decided not to disturb.

The material was deposited by the land-owners, the Tredegar Estate, in the National Museum of Wales through the good offices of the Forestry Commission (acc. no. 66.518). As a matter of general interest, it may be added that it includes part of a one-sided bone comb of the Viking period, found some distance from the Roman material[3].

SCHEDULE

1. Claudius II, A.D. 268-9, *antoninianus*, Salus type (?), worn; clipped and hammered to an oval shape 14 by 10 mm, 1.0' g.

*2. Tetricus I, 271-4, *antoninianus*, *Rev.*] **RITASA** [*Hilaritas Augg.* Hilarity standing L. with cornucopiae [and palm], *RIC* 80 type; clipped and hammered as above, 13 by 10 mm, 0.87 g. Pl. 5.

3-4. Hammered and cut pieces of coin, one square, 10 mm, 1.00 g, the other irregular.

5-8. Blank flans: 5, 13 by 10 mm, 0.79 g; 6, 9 mm, part missing; 7, 7 mm, 0.74 g; 8, 7 mm, 0.45 g.

9-11. Sections of cast rod, as at White Woman's Hole (Group F(b)), 7 mm diam., average 0.89 g.

12. Small scraps (14), weighing less than 2 g in all.

DISCUSSION

Counterfeiting is an endemic disease of coinage. Many of the Archaic Greek silver coins found in Egypt, for example, have been spoilt for the collector by the deep chisel-cuts anciently made to test for plated specimens. We read, too, of Manchu China where 'it appeared impossible to establish a silver coin, from the unconquerable propensity of the people to play tricks with anything more valuable than their base copper money; indeed they forged even that'[4]. At the endemic stage, all that the false moneyer has to do, is to make his coins acceptably close in size, weight and design to the official issues, a matter easier in ancient times than today, because there was often a fairly substantial permitted variation in the weight. Counterfeits are lighter, or else they are of poorer metal, being plated or base all through; some are light *and* base.

In Roman times especially, however, there were periods when this illicit but not very important activity assumed epidemic proportions. Such epidemics appear to have been inspired either politically or economically. A clear instance of political inspiration is provided by the White Woman's Hole coin A.2. The usurper Carausius arrived in 286 to find no mint in operation; and the pressing need to institute a coinage which would carry his name and features far and wide was evidently solved by recruiting engravers of varying capacity—among them, no doubt, the producers of the barbarous radiates of a few years earlier, well illustrated by Group C—who were set to coin money of reasonable size and weight in different centres. Frequently their products are found overstuck on earlier coins, mostly those of around 270. Since overstriking merely replaces one design for another, and does not add to the total of coins available for use, it is clear that the overtype, in this case the Carausian design, was either of a necessary, or of at least an especially desirable, kind.

In this case also there is no question of the demonetisation of the undertypes, for they continued to circulate in very great numbers. In the Blackmoor (Hants.) hoard, there were only 635 of Carausius and Allectus, and over 29,000 mostly of the base coinage of around 270. On a later occasion when overstrikes again appear, however, we have to do not with the requirements of a usurper, but merely with a new series of coins issued by the legitimate government of Constantius II. The *Fel(ix) temp(orum) reparatio* series was introduced in 348, but in 353 the type showing a legionary spearing a falling horseman appeared in smaller size. It so happens that an Imperial edict of 356 refers to 'forbidden monies' (*pecuniae vetitae*) as opposed to those 'established in public use' (*in usu publico constitutae*); and it has long been suggested that the forbidden coins were those which had appeared before the small 'falling horsemen' of 353[5].

Wherever there was a shortage of coin, it is argued, older types

would have been illicitly overstruck with the new designs, and where a shortage continued, there would be a flood of imitative pieces such as our A.7. This may be true; but older coins did not disappear, especially in regions such as Britain which had no mint. To be convinced of this, one has only to look at some later series, e.g. from Gough's Old Cave[6], or hoards such as that from Aylesford, Kent, composed of 1 radiate, 22, Constantinian, and 76 Valentinianic[7]. To take the point to an extreme, and to show that difficulties were not confined to Britain, I may refer to the Haarlemmermeer (Nord-Brabant) hoard of 12,389 pieces divided as follows: 1st century *aes*, 13 and one Claudian copy; second century *aes*, 28; first half, third century, 7; second half, 130; *c.* 300-364, 1,110; *c.* 364-402, mainly Valentinianic, 10,969[8]. It would be interesting to know how the large *aes* of the principate fitted into a late Roman picture: there was a single Claudian *as*, counterfeit, in the otherwise fourth-century Brean Temple series, and in dealing with it I drew attention to worn *aes* from Africa incised with numerals as if to mark a value in terms of the tiny *nummi* circulating there in the fifth century[9]. No similar coins have been found in Britain, but the early *aes* may well have passed at an agreed tariff.

In a time when coinage is stable and plentiful, there can be no reason for a dramatic reduction in the size and weight of contemporary counterfeits. Coin A.7, for example, is only two-thirds of the size and a third of the weight of the prototype. The length to which reduction could go seems absurd to modern eyes: the Brean Temple series is a prime example[10]. However, the decline perceptible in such a series as this is understandable, once it is appreciated that between *c.* 357, when the issue of 'falling horsemen' ceased, and 368 when the copious bronze of the Valentinianic dynasty appeared in quantity in Britain, there was a severe shortage of new coins in base-metal. Relative to earlier and later issues, few produced between 357 and 364 turn up in British sites. If the 'falling horsemen' were counterfeited soon after introduction, and continued thereafter to be imitated on an increasing scale, it must latterly have been the case that counterfeits rather than originals were taken as models. Since we have seen that counterfeits must in general be lighter or baser, or both, than the originals, it follows that copies of coins themselves counterfeit will, by the same rule, be lighter still, almost *ad infinitum*. In this way, we find an explanation for the production of very tiny copies, less than 5 mm in diameter, which come at the end of the 'falling horseman' series, as at Brean or Lydney. There is no reason to put them, as was once thought, much later.

The same tendency towards small size is noticeable in other epidemics, even in the earliest, 'Claudian', wave which in Britain ran from 43 to 64: there is from Sea Mills (Glos.) a copy of an 'altar' *as* of Augustus, Lyon mint, made about that time which weighs less than 2.5 g. The tendency is also very strong in the 'radiate' series, well-

exemplified in the White Woman's Hole 'hoard' and particularly by Group C(e), which averages about 10.5 mm and 0.44 g. The first question arising here concerns the principle of the thing: the originals being among the commonest of all Roman coins, why should there have been recourse to imitation at all, let alone to a markedly inferior standard?

At the beginning of the 'radiate' series stands the Whitchurch (Som.) deposit[11], composed of moulds for Gallic Empire *antoniniani* in the main, of the period *c.*269-74, together with one base cast of a pre-reform *antoninianus* of Aurelian (c.270-4). At this stage, the counterfeiting is best seen as the tail-end of the casting of *denarii* and *antoniniani*, with some *aes* (there was a mould from an *as* of Hadrian at Whitchurch), which belongs essentially to the Severan age. It seemed that the coins made at Whitchurch were of similar size to the originals but of course lacked even the minute percentage of silver which those originals still possessed. Aurelian reformed the coinage *c.*274, and after the collapse of the Gallic Empire in that year the new system was no doubt extended to Gaul and Britain, but met with very little acceptance[12]; presumably the rate-of-exchange, if any, with Gallic Empire *antoniniani* was so adverse to the inhabitants of these regions that they preferred to continue as best they could with the old coinage. Since, however, this was a time of rampant inflation, and since no more of those particular issues were struck, a shortage of change may well have resulted, leading in consequence to the widespread manufacture of copies and the inevitable decline in size and weight as time went on. The latest originals attested in the 'radiate' series are of coins of the Emperor Probus (276-82), by which date the reformed coins, though not perhaps very common by comparison with the Gallic Empire pieces, had become accepted. Certainly when Carausius instituted his 'unorthodox' currency in 286, the minim tradition had been suppressed, for, as we have seen, these early Carausian coins are of generally good size and weight.

White Woman's Hole Group C(c) is interestingly compared with Group F in the Coygan Camp deposit[13], which has an average of about 11 mm and 0.43 g. At Coygan, there was evidence that somewhat larger counterfeits (14 mm and 1.25 g on average) were being melted down to provide metal for Group F. On the grounds of size and weight alone, therefore, it is possible to link the Coygan and White Woman's Hole series chronologically; but we can do better than this. The Coygan group included numerous specimens with the name of Probus; and although originals later than Tetricus II are not attested at White Woman's Hole, the fact remains that the group in question was largely made by striking flattened quarters of other coins, and that B.5 among these is a quarter of an *antoninianus* of Tacitus (275-6). Like the Coygan group, therefore, the White Woman's Hole group is to be referred to

the years *c.*275-82, and possibly to *c.*280, since the Tacitus coin is not in mint state, but shows some degree of wear.

An explanation for the production of very small counterfeits has been offered, but to the modern mind a greater problem is consequential. How could such very small coins have been successfully placed in circulation or accepted as possessing value? Perhaps the cardinal fact to bear in mind is that the originals in question were part of the silver coinage, not the copper, however base they were. By a combination of a natural metallurgical process occurring in the blank, emphasised by the pickling or blanching of the pieces after striking, their feeble percentage of silver was to some extent concentrated on the exterior, so that they possessed a silvery appearance when first circulated. Now if this could be reproduced by a counterfeiter, the forgeries, small as they were, would have had an enhanced appearance and would the more easily enter circulation. Several of the White Woman's Hole Group C(c) coins are indeed silvery, and others have a blackish tone which probably represents an oxidised silver surface. It would have been difficult, I think, if not impossible, for our Mendip counterfeiter actually to plate silver on a coin, though this was done, and often done, in other periods by skilled workers. In most cases, however, the silvering is quite thick and often survives when the core has decayed[11]. For the tiny, barbarous late 'radiate' counterfeits one would suppose such skills to be out of the question. The White Woman's Hole forger, however, had an easier solution. Merely by cutting up and hammering orthodox silvery-surfaced coins, he produced four blanks for the price of one original, and his resultant counterfeits themselves retained a silvery surface: This mode of preparing blanks was not ideal, and the greater number of counterfeits of the period have not been made in this way. Possibly the surface which has been detected on some of them is not silver, but tin, which would be easier to apply: but more analytical work is necessary before the point is settled.

We might also note the fact that the large orthodox coins could not have been worth more than four minims, for otherwise this method of manufacture would not have been acceptable, would not indeed have been thought of; and that the same applies to the reformed *antoninianus* of Tacitus which is in evidence. No doubt highly tariffed officially, in the Somerset of around 280 it was not worth more than four minims or indeed more than a Gallic Empire *antoninianus*. Otherwise, it would not have been cut up.

The Constantinian group is especially interesting. The originals are again very common, but it is not unlikely that the frequent changes of type (e.g. in the *Gloria Exercitus* design from two to one standard, with concomitant reduction in weight), coupled with the continuing instability of the base-metal coinage, did again result in an inadequacy of change. The type of *Gloria Exercitus* with one standard was introduced *c.*335

and continued until *c.*341; our Group G(k) betrays an original of Constantius II as *Augustus*, after 337, and the whole series probably belongs to *c.*337-41. Stylistically, the Constantinian copies differ markedly from the 'radiates', and it is clear that the method of manufacture, using cast flans, Group F, also differed. I am inclined to think that all the pre-Constantinian material is present in the deposit only as scrap for this series, the hoard included. The heavy rod-sections of Group F(b), averaging 6.35 g, and the flattened disc of F(c), 5.08 g, are however problematical, since there was nothing over 6 g in the official coinage from *c.*310 to *c.*350, and the disc is well up to the weight of the first *Fel temp reparatio* coins of 348. These pieces were not meant for flans, therefore, and perhaps might be taken as stages in the manufacture of *weights*. The disc is heavier than a Roman sixth-ounce (*sextula*, 4.48 g taking the pound, after Naville, as 322.56 g), but may be unfinished.

The last question concerns proof of the acceptability of the counterfeits discussed. This would be established by the discovery of die-duplicates elsewhere. At present no such links can be claimed for either the 'radiate' or the Constantinian group; but in general, the study of die-linked counterfeits is at a very early stage; and progress depends more on the adequate illustration of specimens than on anything else. By dint of slow and painstaking research, for example, H. B. Mattingly has succeeded in tracing coins from a Midland 'mint' as far afield as Somerset, southern England, and indeed the Rhineland[15]. It is to be hoped that the illustrations accompanying the present article will be of service in this interesting and not unimportant study. Though the 'radiate' series is very badly struck and few of the coins are at all distinct, the Constantinian copies are highly individual in style and there is every hope that links may be found for them—supposing always that there were others, struck from the same dies, which were placed in circulation.

Finally, it has been abundantly established that the currency of particular kinds of counterfeit was contemporary with the currency of the prototypes[16] and that they survived in use thereafter only to a rapidly diminishing degree. It is therefore clear that both the 'falling horseman' A.7 and the small coin of Arcadius, A.8, itself probably a cast and not an original, relate to altogether later frequentations of the cave than that which the counterfeits attest.

ROMAN MINE, DRAETHEN

The finds show that the same mode of producing blanks was in use here as in the White Woman's Hole Constantinian series. It can hardly be claimed as a method of chronological significance in itself, however, and of the actual products we have no example. The pottery is of the later third, rather than the fourth, century, but the nearest hoard of radiate minims, from Caerleon (about 12 km. distant) contains

no die-duplicates in nearly 100 specimens, and no clue therefore to local manufacture at that time. The most interesting objects are the two original coins of *c.*270. I have not myself previously observed the clipping and rounding of base *antoniniani*, but there are comparable examples of base coins so treated in the Haarlemmermeer hoard mentioned above. It may be supposed that the reduced coins were returned to circulation at the 'pre-minim' stage of the currency *c.*275, and that the clippings went to the manufacture of flans for the counterfeits we do not at present have.

NOTES

1. Boon, G. C., 'The Coins' in: Wainwright, G. J., *Coygan Camp* (Cambrian Archaeological Assn. occas. paper, 1967), 110-126.
2. Tuck, J. *and* N., *op.cit.*, 12; Boon, G. C., *Isca* (National Museum of Wales, 1972), 17.
3. Tuck, *op.cit.*, pl. facing 29. It may possibly be somewhat earlier.
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5. *Codex Theodosianus* IX, 23 (conveniently, *Num. Chron.* ser. 6, **X** (1950), 266-7); cf. Pearce, J. W. E., 'Barbarous Overstrikes . . .', *ibid.* ser. 3, **XIX** (1939), 266-83.
6. Boon, G. C., *ibid.* ser. 6, **XVII** (1957), 321-7 and ser. 7, **I** (1961), 198.
7. Haverfield, F. J. *et al.*, 'Romano-British Kent', *Victoria County History, Kent* **III** (1932), 104.
8. Evers, J. H., *Oudheidkundige Mededelingen* **XLVII** (1966), 31-101.
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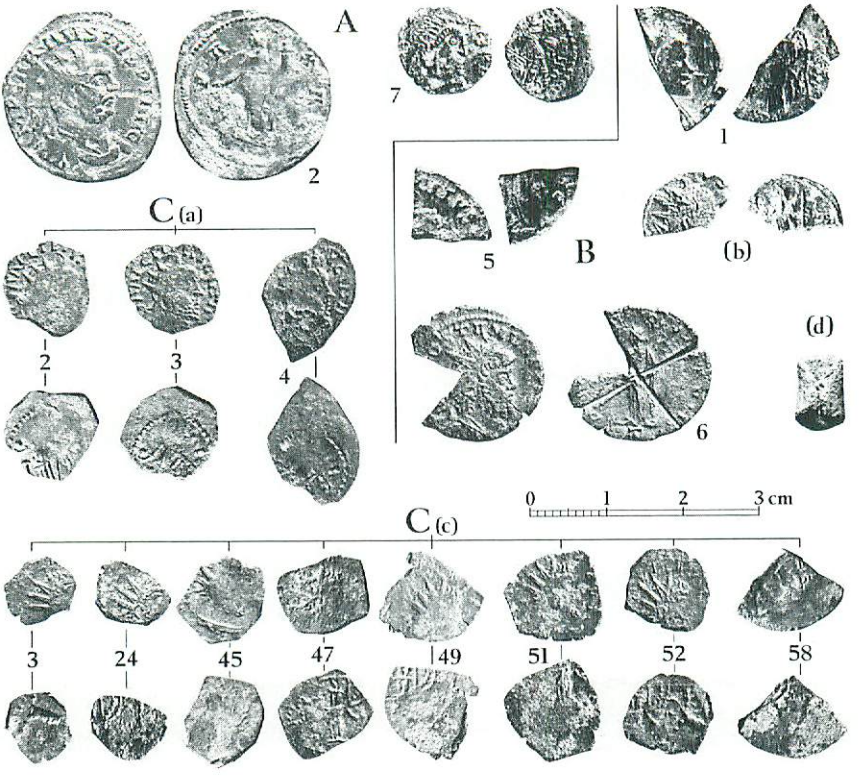
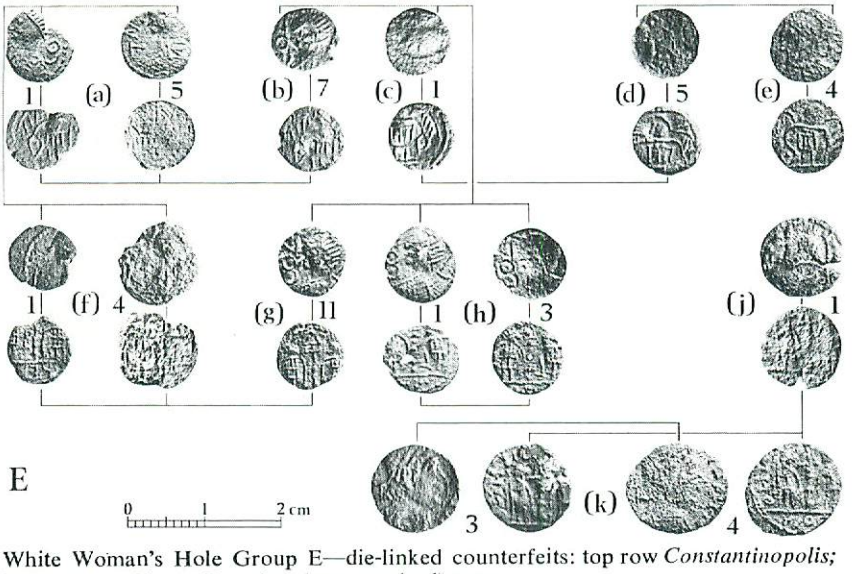
12. Mattingly, Harold, 'The clash of the coinages *c.*270-296' in: Coleman-Norton (ed.), *Studies in Roman Econ. and Social History in Honor of Allan Chester Johnson* (1951), 275-89.
13. *Loc.cit.* note 1.
14. On plating and silver-surfacing, see Cope, L. H., 'A silvered bronze false Antoninianus . . .', *Metallurgia* January 1967, 15-20.
15. Mattingly, H. B., 'The Lightwood Hoard and the Coinage of "Barbarous Radiates" ', *North Staffs. Journ. Field Studies* **III** (1963), 19-36, and other papers, e.g. 'A Hoard of "Barbarous Radiates" from Goring-on-Sea', *Sussex Archaeol. Colls.* **CV** (1967), 56-61. For comparable work in France, see Giard, J. B., 'La monnaie locale en Gaule à la fin du IIIe siècle', *Journal des Savants* Janvier-Mars 1969, 5-34.
16. Kent, J. P. C. 'Barbarous Copies of Roman Coins', *Limes-Studien, Vorträge d. 3. internat. Limes-Kongresses* (Schr. d. Inst.f.Ur- u. Frühgeschichte d. Schweiz, **14,** 1959), 61-8. The thesis was very strikingly borne out by the differing distribution of 'falling horsemen' and Valentinianic/Theodosian coins at Brean temple (see notes 9 and 10).

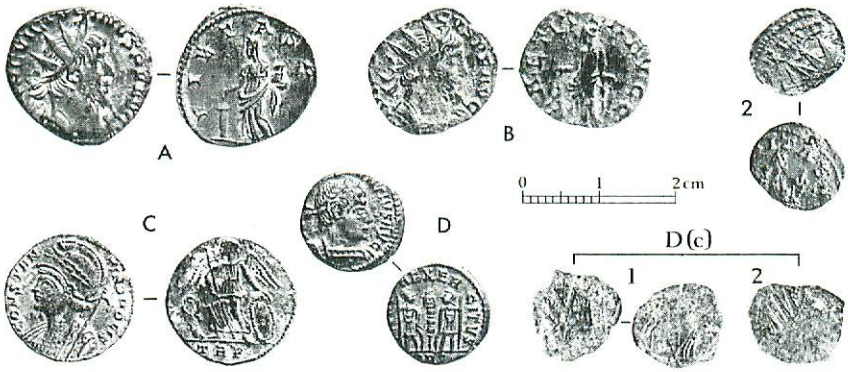


White Woman's Hole, Groups A (general series), B (cut coins) and C (a) and (c) die-linked radiate counterfeits.



White Woman's Hole Group E—die-linked counterfeits: top row *Constantinopolis;* lower rows, *Gloria Exercitus* (one standard) type.

Plate 4



Comparative coins, National Museum of Wales collection: A. Victorinus, AD 269-71 *Pietas* type; B. Tetricus I 271-4 Laetitia type. C. *Constantinopolis* type c330-5; D. *Gloria Exercitus* one standard type c337-40 (*Constantius II Augustus*). Top row: clipped coin of Tetricus I, Cefn-pwll-du. Bottom row: White Woman's Hole group D(c).

Plate 5