

## ADDENDA ANTIQUARIA.

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### FINDS FROM HARDKNOT.

Miss M. C. Fair reports the following objects at Butterilket, found some time ago at Hardknot.

Coin, brass, in good fresh condition but broken round the edge. Obverse, bust of emperor r., cuirassed, laureate. The inscription is largely chipped away, but from Miss Fair's photograph it appears to be IMP MAXIMIANVS P F AVG (Maximian Hercules, 285-305). Reverse, genius standing l., with cornucopia and patera, GENIO POPVLI ROMANI.

Figured Samian, nine fragments, of which five or six appear to be first-century wares made at La Graufesenque, shape 37, the others second-century fabrics. At least one fragment is obviously in the style of the Antonine period at Lezoux.

Incised ("cut-glass" style) Samian. One piece. This style seems to have arisen in the middle of the second century.

Roulette-decorated Samian. One piece. This again, in the form in which it here occurs, belongs probably to the second century.

Plain Samian. Base of Drag. 33 with maker's name VIRILIS F.; a potter of Rheinzabern, second century. Also three cups, Drag. 27, and a rim of Drag. 36 with the usual barbotine leaves.

Castor, two fragments decorated in barbotine.

Coarse pottery. A base of a jar in coarse ware like that made at the Park House pottery, Muncaster. Two cooking-pot rims of the type which is usually associated with remains of the Antonine period.

Glass, base of a square bottle, piece of the reeded handle of a similar bottle, another fragment probably from a bottle of the same kind, and the rim of a bottle of a different type.

Animal remains; tine of a stag's antler, sawn off square; boar's tusk.

Stone, pierced circular net-sinker or loom-weight.

These remains throw a new light on the occupation of the Hardknot site. Hitherto all the recorded remains from this site have been uniformly ascribable to the period A.D. 80-120, and it has seemed necessary to suppose that the fort was finally aban-

doned in the time of Hadrian (see these *Trans.*, N.S. xxi, 29-42; *Archæologia*, lxxi, 1-16). The relics at Butterilket, on the other hand, include some of this period and others of the Antonine age, beside a coin of about 300. The exact *provenance* of these finds is perhaps not altogether certain, but there is no reason to doubt that they come from the fort at Hardknot or from some building closely associated with it. We are thus compelled to admit some kind of occupation at Hardknot in the middle of the second century and even later. But this does not alter the fact that if the fort had been garrisoned in the usual way after 120, the Antonine and later relics would have comprised not a few isolated specimens like these but a mass of material greatly outweighing the Flavian-Trajanic relics. The Butterilket finds, therefore, point not to a hitherto unsuspected general re-occupation of the fort at Hardknot after A.D. 120, but to the existence, on or near the site of the disused fort, of some kind of "dak-bungalow," or rest house, which continued to be used down to the fourth century. —R.G.C.

Miss Fair also in February, 1924, visited Hardknot with the intention of clearing up some of the damage and litter left by visitors. She collected all the fragments of tiles (many of them recently smashed) and put them into the stoke-hole of the bath-house and covered them with a heap of stones, turfing the edges. It was proposed to carry on this work, but the site, being now scheduled as an ancient monument, is in the care of H.M. Inspector of Monuments, who will no doubt direct operations which cannot be independently undertaken.

We regret hearing of the death, early in August 1924, of Mr. Fraser, the agent to the Muncaster estate. He took the most keen interest in Roman Eskdale, and gave at all times his courteous and sympathetic assistance to research and to the preservation of the antiquities under his care during the five years in which he held office.

#### REPORT ON A BED OF WHEAT FOUND JUST OUTSIDE THE ROMAN FORT AT PAPCASTLE.

About a foot from the surface of the existing road adjoining the Camp-field, a bed of wheat was found some years ago. When a new gas main was laid early in this year a trench was cut right through the wheat, thus giving one the opportunity of examining it and taking samples.

There did not seem to have been a granary, and there was nothing to separate the wheat from the earth either above or below it. The bed might be 12 yards long by two yards across and perhaps two feet deep at its maximum depth which gradually decreased towards the end of the bed.\* The dimensions, however, could not be estimated with any accuracy.

Many of the grains of wheat were almost intact, and showed the familiar structure of the grain, but much of it resembled black clay, the damp grains having been pressed into an amorphous mass. It was all quite black, the result evidently not of heat but of long continued damp and mould.

That it was probably all wheat is shown by the composition of the ash, barley and oats having far more silica in their composition than is the case with this material or with ordinary wheat. It is improbable that the silica would have been removed during its age-long moist existence. Rye grains, however, like wheat, also contain very little silica so there might have been some slight admixture of it but this is not probable. I picked out a number of practically perfect grains and after drying I compared their weight with that of a average dry wheat grains.

The ordinary wheat grains I found weighed .0416 grms.

The Papcastle do. do. .0132 grms.

Hence during their long damp existence, the Papcastle grains had diminished to 31.7 per cent. of their original weight. A large portion of the organic matter of the grains had been volatilized, evidently the result of bacterial decomposition.

How then has the inorganic matter been affected during the time the wheat has been lying in that position? To answer this question I have made a rough analysis of the Papcastle wheat and have compared it with one of ordinary wheat. The result I give below.

Papcastle Wheat (Dry).					
Combustible matter	..	..	..	85.60	
Silica	..	..	..	.25	} Total Ash. 14.40%
Oxide of Iron and Alumina	..	..	..	1.78	
Carbonate of Lime	..	..	..	12.01	
Carbonate of Magnia	..	..	..	.38	
				100.02	

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\* It is interesting to compare the similar, though thinner, deposit of wheat in the Agricolan granary at Ambleside; these *Trans.* n.s. xxi, pp. 3-4.—Ed.

## Ordinary Wheat.

Water .. .. .	.. .. .	14.3	
Combustible matter .. .. .	.. .. .	83.93	
Silica .. .. .	.. .. .	.03	} Total Ash. 1.77%
Phosphate of Soda and Potash .. .. .	.. .. .	.94	
,, Magnesium .. .. .	.. .. .	.48	
,, Lime .. .. .	.. .. .	.11	
Other phosphates .. .. .	.. .. .	.18	
Sulphate .. .. .	.. .. .	.03	
		<hr/>	
		100.00	

Comparing these we find:

(1) The increase in percentage of ash is only partly due to the reduction in weight of the grains, the bulk of it being due to the accumulation of other mineral substances.

(2) The soluble phosphates of potash and soda in the original wheat have disappeared, their place having been taken by the carbonates of lime and magnesia and the oxides of iron and aluminium.

(3) The increase in the percentage of ash is chiefly due to the presence of carbonate of lime. Of this mineral there is practically none in the ash of ordinary wheat.

Other than the road metal placed there comparatively recently there is no lime in the immediate neighbourhood, and why it should collect in these grains is a mystery. I assume that the lime on the road is being gradually dissolved by the CO<sub>2</sub> in the rainwater, and that these grains have the power of absorbing the bicarbonate of lime in solution, then causing the CO<sub>2</sub> to separate from it and leaving the insoluble mono-carbonate behind. The matter requires further investigation and comparisons might be made with the ash of similar wheat found in other localities.

WILFRED IRWIN.

## ANCIENT OATS NEAR COCKERMOUTH.

Mr. Wilfred Irwin also sends the following analysis of some blackened oats found about 1904 in the Brewery Field, just outside Cockermonth. A gravel-pit was being cut in a bank on the east side of the river Cocker when a filled-up cavity was discovered, originally perhaps as much as eight feet deep and six feet wide at the bottom. Its sides and bottom were lined with puddled clay three inches thick. On the bottom was a deposit of blackened grain, covered with hazel twigs also blackened. At the time it was thought that the blackening was due to fire, but Mr. Irwin thinks that this is not the case.

Average weight of each grain dried, 4.6 milligrams.

Average weight of a grain of dry oats, 43 milligrams.

Each grain had thus reduced to 10.7 per cent. of its original weight, assuming that modern oat-grains are equivalent in weight to those of past ages, though they have probably been improved.

Percentage of ash in the dried grains, 8.61.

A rough analysis of this showed—

Silica .. .. .	2.57
Alumina, with probably a little magnesium phosphate	2.12
Calcium carbonate .. .. .	3.02
Alkalies (by difference) .. .. .	.90
	8.61

The percentage of ash in dry fresh oats is 3.07, of which about half is silica. It would seem from this that the ash had also partially disappeared, as well as the organic matter, during the time when the grain lay buried. This is very different from the case of the Papcastle wheat, where the weight of each grain had only dropped to 31.7 per cent. of the original weight. Again, while in the Papcastle sample the calcium carbonate had increased to 12 per cent., in this sample it has only increased to three per cent., and this increase may be due to the lime being able to stand the effects of time better than the organic constituents of the oats. This sample of oats has the appearance of being very much older than the Papcastle wheat, and hence the surmise of antiquaries at the time of its discovery, that it was an ancient British grain-store, may be correct. These ancient blackened grains are often supposed to have been burnt, but on comparing burnt wheat with the Papcastle grains, one sees a marked difference in appearance. Mr. Irwin doubts if burnt grain would absorb calcium carbonate as the Papcastle wheat has done. Again, had the Papcastle wheat been burnt, one would in all probability have found some parts of the heap burnt more than others, and this does not seem to be the case.

#### IREBY OLD CHURCH.

The photograph opposite, taken in August, 1915, by Mr. A. W. Anderson, represents a graveslab built into Ireby Old Church, but not figured in these *Transactions*, nor described in the late Canon Bower's list (N.S. ix, 23). Underneath is a stone of tympanum shape but bearing a device of later date than that in which tympana were usual.



SLABS AT IREBY OLD CHURCH.

*Phot. by Mr. A. W. Anderson.*

TO FACE P. 374.



PACKHORSE BRIDGE AT ULLOCK.

*Phot. by Mr. W. L. Fletcher.*

TO FACE P. 375.

## ANCIENT CROSS-SOCKET AT NINEKIRKS, BROUGHAM.

*The Penrith Observer* of July 22, 1924, contained the following paragraph, signed with the well-known name of "Northerner":—

"Whoever was responsible for the idea of utilising the ancient cross socket at Ninekirks, by placing in it a new cross to the memory of the two Brougham men who fell in the war, is deserving of credit for a very happy thought. The design drawn by Mr. R. Morton Rigg is one in keeping with the venerable church and its surroundings, being based on a fragment of Anglo-Saxon stone now preserved at Tullie House—it is not claimed as having found its way to Carlisle from Brougham. That there once stood a cross of fairly large dimensions in the churchyard of Brougham is obvious from the size and character of the socket stone which for an unknown number of years has stood near the south-western door. It is of red sandstone, measuring about 30 inches by 29 inches, and 14 inches high. The edges of the top surface are bevelled, and the hole for the shaft measures 12 inches by 10 inches, thus providing security for a large cross. Not infrequently, though not by people possessing knowledge of archæological matters, this stone has been claimed to be an old font."

## EGREMONT CROSS.

In connexion with the late Rev. Cæsar Caine's paper in our last volume, Mr. Charles Collison of St. Bees kindly sends the following extract:—

"The new Cross at Egremont is finished, it takes up less room than the old one, giving the horses and carts a wider road to pass and repass, and excluding its utility, it gives the town a more respectable appearance than the old dilapidated Cross which stood for a great number of years. A neatly finished octagonal spire, upwards of nine feet high, is placed in the centre."

(From *The Cumberland Pacquet* of Feb. 24th, 1823).

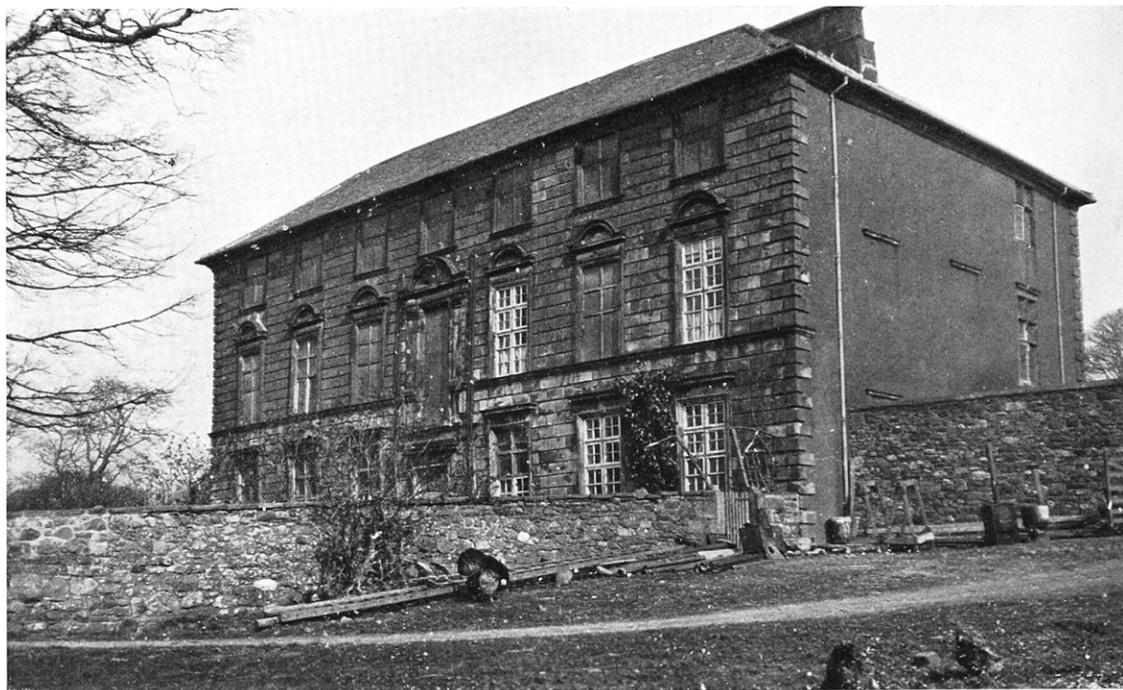
## PACKHORSE BRIDGE AT ULLOCK.

So much interest has lately been taken in old bridges that the inclusion of a view of the packhorse bridge at Ullock needs no apology, though it ought to have been kept to illustrate the Society's visit in July, 1924. But the preservation of the few remaining specimens of this type is desirable, and perhaps the need to call attention to them is urgent. The photograph is sent by Mr. J. R. Mason, who adds that there is another packhorse bridge crossing the river Marron at Calva Hall.

## RIBTON HALL.

The photograph by Mr. W. L. Fletcher is given because the destruction of this interesting old building is threatened. It is said that the fabric has become unsafe. An account of the hall was given in these *Transactions*, o.s. xii, 163-166, by the late Dr. M. W. Taylor, who said that it was built by Richard Lamplugh, son of the Thomas Lamplugh who came into Cumberland from Beverley, Yorks. in the Civil Wars and died 1670. Sandford, writing about 1675, mentioned this "very fair house" as recently built, and Dr. Taylor remarked that it was "one of the earliest examples of the Italian practice, as revived by Wren, which we find in the Northern Counties."

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*Phot. by Mr. W. L. Fletcher.*

RIBTON HALL.

TO FACE P. 376.