

## Further Notes on the Trade Weights found at Melandra.

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THE recent publication in a collected form\* of particulars of the discovery of a bronze cheese-shaped weight marked I., weighing 4,770 grains, in good condition, with numerous horse-trappings of late Keltic work, near Neath, Glamorganshire, and a similar stone weight only 3 grains less in weight at Mayence, and of the frequent discovery in early British sites of the iron money—currency bars of a corresponding weight or two or three times the weight of the unit—mentioned by Cæsar, *De Bello Gallico*, V. 12, as in use by the Britons at the time of his invasion (*Utuntur [aut aere aut] taleis ferreis ad certum pondus examinatis pro nummo*) in no fewer than seven English counties and in large numbers together, has given rise to the belief in my own mind that the series of leaden weights found at Melandra, described as Trade Weights and included in Table I. in my paper contributed to the annual number of the Society's *Journal* for 1903, are of similar Early British or Late Keltic origin.

This consideration increases the importance and interest of the discovery, and makes it worth while to add a few supplementary notes to my original paper, and to revise the

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\* *Guide to the Antiquities of the Early Iron Age, Brit. Mus.*, 1905.

list of trade weights by excluding therefrom the single bronze weight No. 9A, weight 405.6 grains, which is probably an example of the Roman *uncia* (*circ.* 421 grains) in a somewhat damaged or corroded condition, as therein suggested, No. 6 as being evidently in a damaged and defective condition, and No. 1 as unconformable.

The revised table of the remaining seven trade weights, which are all of lead, will then be as follows:—

TABLE I. TRADE WEIGHTS. Unit 4,770 grains.

| Prog. No. | Present Weight. Grains. | Fraction or Aliquot Part of Unit. | Norm. or Unit, Grains.          | Number of Minimum Units. |
|-----------|-------------------------|-----------------------------------|---------------------------------|--------------------------|
| 2.        | 148.8                   | ...                               | 4,761                           | 9                        |
| 7.        | 299.5                   | ...                               | 4,792                           | 18                       |
| 9.        | 331.2                   | ...                               | 4,769                           | 20                       |
| { 13.     | 918.7                   | ...                               | 4,724                           | 56                       |
| { 14.     | 921.12                  | ...                               | 4,737                           | 56                       |
| 15.       | 1,188.                  | ...                               | 4,752                           | 72                       |
| 19.       | 4,744.32                | ...                               | 4,744                           | 288                      |
|           |                         |                                   | Average                         | 4,753                    |
|           |                         |                                   | Ancient British weight marked I | 4,770                    |
|           |                         |                                   | Difference                      | 17                       |

The figures in the third column are obtained by dividing the present weight by the fraction in the intermediate column. Since 288 is the least common multiple of the denominators, it follows that a minimum weight was employed corresponding to the Roman *scripulum* =  $\frac{1}{288}$  *libra*, and weighing 16.55 grains. A weight corresponding to the Roman *uncia* ( $\frac{1}{12}$ th *libra*), and weighing 396 grains, is also indicated by three punch marks on No. 15 ( $\frac{11.888}{3} = 396$ ).

By reference to the photograph in the original paper it will be seen that the largest of the above series, No. 19, bears one punch mark, and from the table, that its weight is only twenty-six grains less than that of the Neath unit, a discrepancy no doubt due to its corroded condition. On the other hand

No. 9 is quite accurate, and No. 7 works out 22 grains more than the unit, the others being somewhat less. The average weight of the whole series works out only 17 grains below that of the ancient British standard, which is a very striking agreement.

Though based upon an Early British standard, they are sub-divided according to the Roman duodecimal method. When considered along with the historical facts this leads to the conclusion that weights of ancient British and Roman standards were used simultaneously for trade purposes during the friendship which existed between the Romans and Brigantes for twenty years (A.D. 50-70). It supports the view that the Melandra camp was constructed at least as early as the first campaign of Cerealis against the Brigantes in A.D. 70 (Tacitus Agric., 17), which is further confirmed by the early character of the *terra sigillata* (Samian) bowl, form 29 (carinated), found there, ornamented with patterns in a style which had disappeared from use before the close of the first century, and was made at La Graufesenque, whence the Gallo-Roman potters likewise ceased exporting by the end of the first century of our era.

The disposition of the Roman roads to the east of Manchester also leads to the same conclusion (Codrington's *Roman Roads in Britain*, ed. 1905, p. 381).