

## HAMMER-STONES FROM THE COPPER-MINING SITE AT ECTON, STAFFORDSHIRE

Graeme Guilbert

**Abstract:** Hammer-stones found on a waste-heap at Ecton are suggestive of prehistoric copper-mining and constitute the first discovery of such evidence so far on record for the Peak District.

Following Pickin's suggestion that a search should be made for 'cobble tools' in mining regions where they have not previously been recorded and where evidence for early mining of minerals is consequently lacking (1990), the writer and friends (Keith Challis, Daryl Garton and David Walters) visited the well known Ecton Mines, located on one of the most easterly occurrences of copper in Britain. A cursory search of the extensive pile of mining-waste immediately below the entrance to the mine known as Dutchman Level, at SK

098582, yielded several examples of such tools. Among spoil, which otherwise comprises a scree of angular native limestone, six rounded pieces of stone, each evidently waterworn and foreign to the site were readily distinguishable. None of these stones has been 'modified', in the sense of deliberate fashioning, but four bear distinct signs of bruising at one or both ends of the longer axis, such as might be caused by use as hammer-stones. They would appear to be characteristic handheld crushing-tools, comparable to those commonly connected

with prehistoric mining elsewhere (Crew and Crew 1990, *passim*). These four utilized stones are illustrated in Fig. 1, from which their dimensions and elongate shapes will be self-evident.

The four hammer-stones have been shown to Dr R. Firman (University of Nottingham), who has kindly supplied the following notes on their petrology.

The two smaller examples, a and b in Fig. 1, are well-rounded cobbles with sharp edges where broken. Both superficially resemble meta-quartzite, but on closer examination appear very pure with tiny black specks of what may be carbonaceous material, and may therefore be ganister (without thin-section, no final decision can be made). If meta-quartzite, they could either have come from Peak District drift, ultimately derived from Scotland, or have been introduced by man from some area to the south or south-west of Ecton, in Leicestershire or Shropshire (their lithology and large size is unusual for Bunter pebbles, available at no great distance in the Trias and in silica-sand pockets. If ganister, they could again be erratics from local drift, having travelled south from the Lancashire Coalfield in glacial till. The larger specimens are both well jointed and angular with rounded edges. The smaller of these, Fig. 1c, is likely to be a fine-grained variety of Millstone Grit, while the other, Fig. 1d is a coarser sandstone which also appears

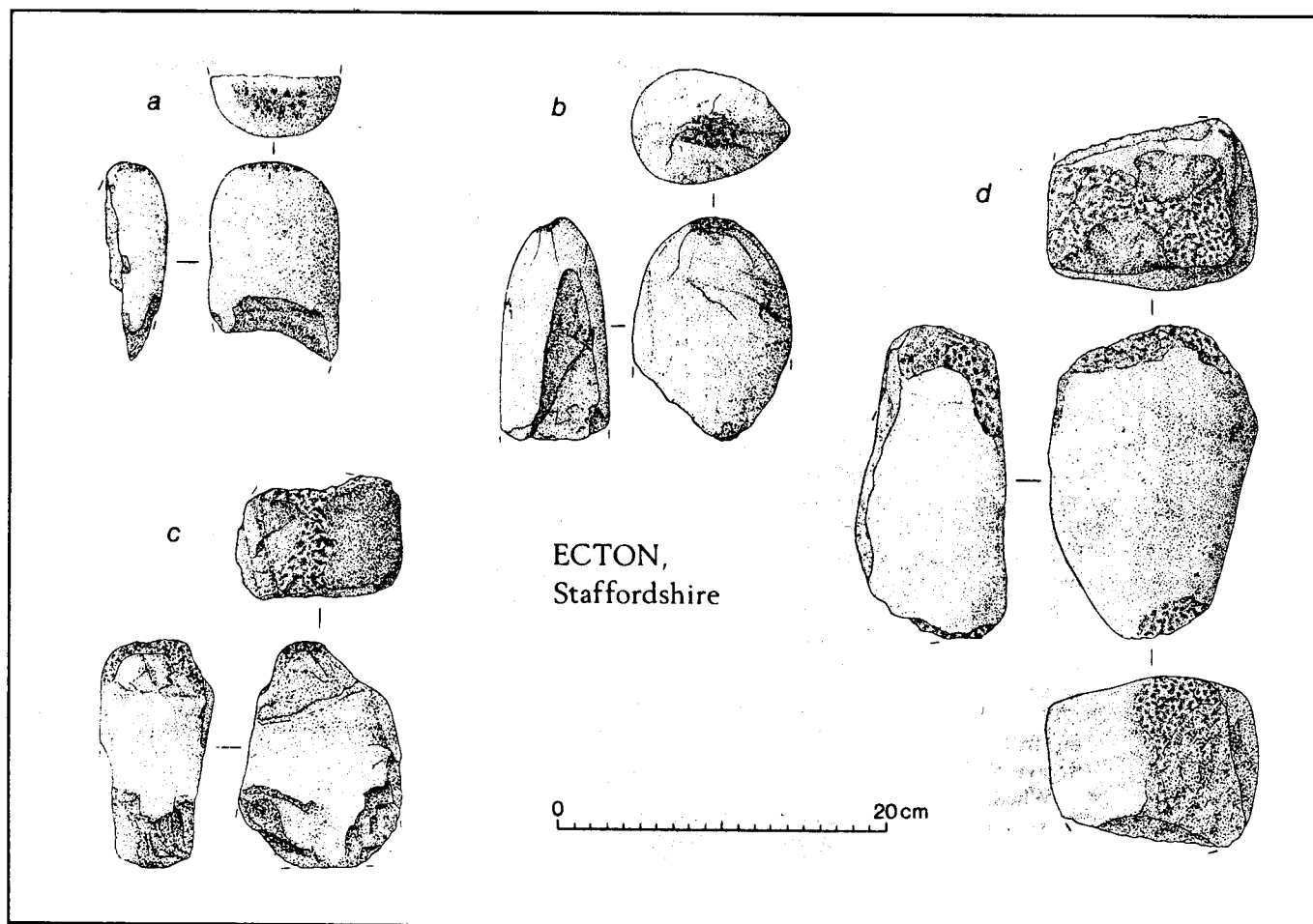


Fig. 1. Hammer-stones found amongst mining waste at Ecton in 1994. Scale 1:4. Drawn by Kate Fearn.

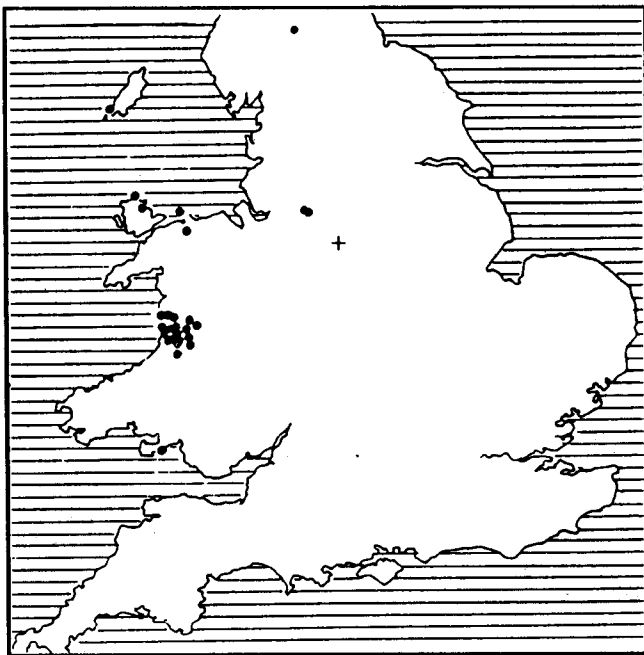


Fig. 2. Hammer-stones from mining sites in England and Wales, from Pickin 1990, with + added for Ecton.

typical of Millstone Grit but could be from the Coal Measures. Either way, these could also be derived from local drift deposits, whilst rocks in the Millstone Grit Series outcrop little more than 1 kilometre to the north-west of Ecton.

In addition to the localized pitting caused by pounding, all four hammer-stones are more heavily damaged, with pieces broken off, perhaps during use, or perhaps in part through subsequent abuse. Stone a has split longitudinally as is often observed with such percussive implements and has lost one end; b has also lost one end; while c and d each retain both ends, demonstrating that d has been used for pounding at both, whereas c is pitted only at the narrower end. The two unillustrated water-worn stones are more extensively fractured and have lost any trace of the localised pitting which we can only suspect they too once displayed. Consequently, they were not removed from the site, and have not been seen by Dr Firman. However, they appeared to the writer to be of similar rocktype to stones c and d and are presumed to comprise Millstone Grit.

Pickin's caution regarding the 'danger in unquestioningly associating the presence at a mine of a small group of unmodified cobble tools with mining activity' (1990 p.39), is of course, apposite to the present case; and the writer is well aware from personal experience that similar utilised pebbles, especially examples similar to a, can occur in other contexts, particularly on prehistoric settlement-sites, where some domestic usage often seems likely. Nevertheless, in this instance, the circumstances of discovery at Ecton Mines are at least suggestive of connection with the early mining of copper

cf., for example, Bradda Head (Pickin and Worthington 1989), and the most appealing interpretation is as broken tools discarded by Bronze-Age miners in, or close to, a working which was disturbed in the more recent past. Ecton Mines are known to have flourished on a grand scale in historic times, and the possibility exists that they had as great an importance to the local economy many centuries earlier.

These discoveries add another location to the recorded distribution of such hammer-stones from such mining sites, a distribution which is yet so thin in England (Fig. 2). They point to the possibility that the known distribution is less real than has been supposed (Pickin 1990, p.42). Further search at Ecton and other White Peak mines is in mind.

## REFERENCES

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- Pickin, J. 1990 Stone tools and early metal mining in England and Wales. IN Crew, P. and Crew, S. (eds) 1990 *Early Mining in the British Isles*. Occasional Paper No.1, Snowdonia National Park Study Centre, Maentwrog, Gwynedd.
- Pickin, J. and Worthington, T. 1989 Prehistoric mining hammers from Bradda Head, Isle of Man. *Bul.PDMHS*. Vol. 10, No. 5, pp.274-5.

Graeme Guilbert.

## EDITOR'S NOTE:

Discussions at the Ambleside Conference revealed that the presence of hammer stones at Ecton in Staffordshire had been known to a few for over a century. J. Hicklin's booklet on Llandudno (1863 p64-6) contains the following: A catalogue of the curiosities in the museum of that intelligent antiquary, Mr Bateman of Youlgrave contains the following entry:

*A collection of articles found in a very ancient copper mine at Llandudno . . . in October 1849 consisting of four large boulders which have been used in pounding the ore, bones of deer etc. . . .*

*Mr Bateman has also obtained an interesting set of primitive mining tools from the earliest works on Ecton Hill; they are boulders, been tooled, but for what purpose is not so evident. The similarity of these ancient tools to those from Llandudno in Mr Bateman's collection is very remarkable. . . . we strongly incline to the view that these mines were worked by the ancient Britons, long before the Roman invasion.*

The above hammer stones have been in the Sheffield City Museum collections since 1875 though only recently recognized for what they were. They bear the label: "A collection of pebbles showing marks of pounding and sharpened pieces of stag's horn found in an ancient copper mine at ECTON, Staffordshire in June 1855. The working tools of aboriginal miners". (Thanks to Julien Parsons of Sheffield Museum for this information).

In a letter from the pioneer lead mining historian Nellie Kirkham to Cyril James dated March 9th 1958, she described an exploration of the Stone Quarry Mine, high on the slopes above Dutchman Level at Ecton (there was an underground connection between the two mines). In this she commented "On a shelf (made I think) on the right hand side! four large (largest 9 - 10 inches) water-worn rounded stone, giving one the idea that they have been purposely put there for use. Also a bone which might be slightly worn and have been used. Certainly the stones are not fortuitous".

From the above it seems likely that some part of the Stone Quarry Mine high on Ecton Hill was probably worked in Bronze Age times.

## REFERENCE:

- Hicklin, J. 1863. *A Handbook to Llandudno and its vicinity*. Whitaker & Co. London.

Trevor D. Ford.