

# BLOWING-HOUSES IN THE VALLEYS OF THE SHEEPSTOR BROOK, THE MEAVY, THE ERME, AND THE AVON

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(Read at Ilfracombe, July, 1933.)

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## SHEEPSTOR BROOK.

YELLOWMEAD.—In Vol. XLVI, on p. 288, I reported the existence of a blowing-house on *Yellowmead Farm, Sheepstor*, my evidence being a large piece of slag containing beads of metallic tin.

Year by year further evidence as to this site has been obtained. It is now obvious that, of three possible buildings, I chose the wrong structure to identify with the blowing-house. The actual building is much ruined, a part of its wall has been incorporated in a field hedge, and its location is *lon.*  $4^{\circ} 0' 36\frac{1}{2}''$  W., *lat.*  $50^{\circ} 29' 23\frac{1}{2}''$  N., on the six inch Ordnance Sheet Devon CXII, N.E.

Built in to the adjacent hedge I have found a mortar stone, and a little further away a part of the "float" of the furnace, of the same type as is to be seen in the Lower Blowing House on the *Walkham* (Vol. LXII, p. 363).

Among the ruins of the house I discovered a stone with a sunken bearing, much worn and thoroughly polished by the movement of an iron spill on the axle of some form of machine.

At a later date Mr. William Manning and his sons uncovered the broken remains of a mould-stone, wrought in Roborough Down Elvan, and rather unusual in finish; and also a rectangular socket in a squared and set stone, which probably formed the setting of the bearing of the water-wheel.

Fig. 1 supplies drawings of some details: (a) being a plan of the "Float" (for view see Plate XXIII, fig. 2); (b) a section of the bearing for an iron spindle (for view see Plate XXIII, fig. 3, and Plate XXIV, fig. 3a); (c) a plan and elevation of the broken mould-stone (for view see Plate XXIII, fig. 3); (d) a plan and elevation of the socket for the bearing of the water-wheel (for view see Plate XXV, fig. 4).

At a yet later date there was discovered in a hedge near *Yellowmead Farm* one of the stones of a crazing mill, which was most probably brought from the blowing-house, the remains of which have been used as a quarry. A view of this is given on Plate XXV, fig. 5.

## YELLOWMEAD.

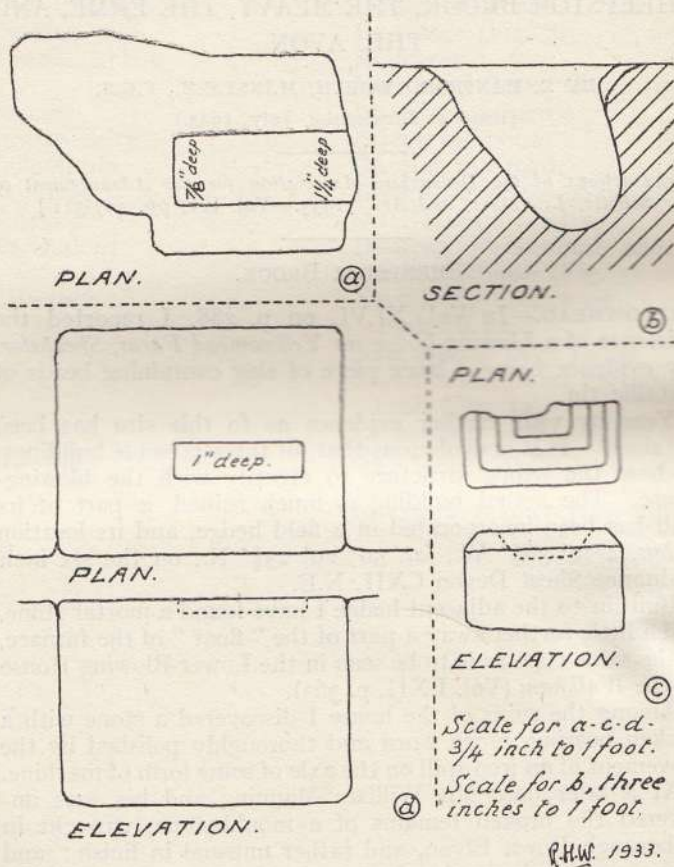
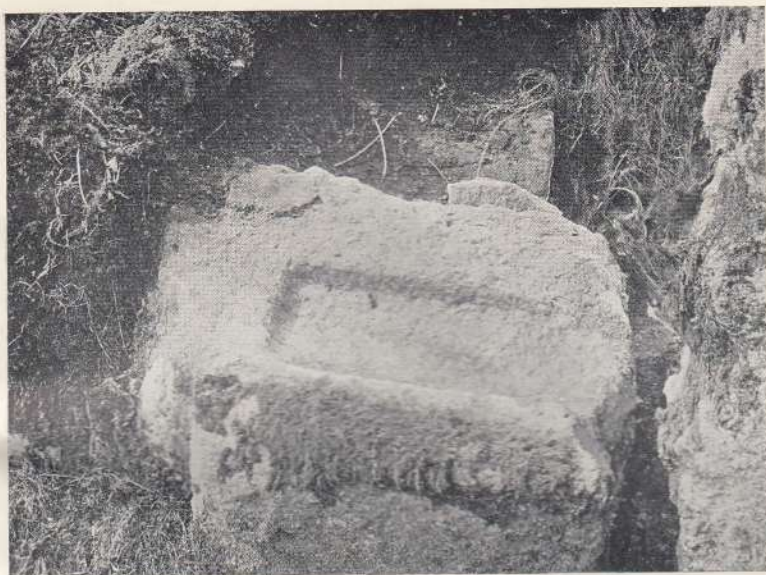


Fig. 1. a—Plan of float  
 b—Section of bearing  
 c—Detail of mould-stone  
 d—Socket for bearing of water-wheel

## OUTCOMBE, DEANCOMBE, MEAVY VALLEY.

Mr. William Manning discovered and reported to me a blowing-house at *Outcombe*. It lies on the left bank of the



*Photo R. H. Worth.*

Fig. 2. FLOAT FROM FURNACE, YELLOWMEAD.



*Photo R. H. Worth.*

Fig. 3. BROKEN MOULD STONE, and, above it in view, STONE WITH BEARING, YELLOWMEAD. (Snow on ground).





*Photo R. H. Worth.*

Fig. 3a. ANOTHER VIEW OF STONE WITH BEARING, YELLOWMEAD.



*Photo R. H. Worth.*

Fig. 4. STONE WITH SOCKET TO TAKE BEARING OF WATER-WHEEL,  
YELLOWMEAD.



*Photo R. H. Worth.*

Fig. 5. CRAZING-MILL STONE, YELLOWMEAD, diameter 28 ins.

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*Deancombe Brook*, almost due south of the ruins of *Deancombe Farm*, from which it is distant 150 yards. The location is lon.  $4^{\circ} 0' 9''$ , lat.  $50^{\circ} 29' 58''$ . (6" O.S. Devon CXII, N.E.). This blowing-house has obviously been a centre of considerable industry. There are at least a score of mortar stones lying within and without the house. There is also the upper stone of a crazing mill within the building. The building

# OUTCOMBE.

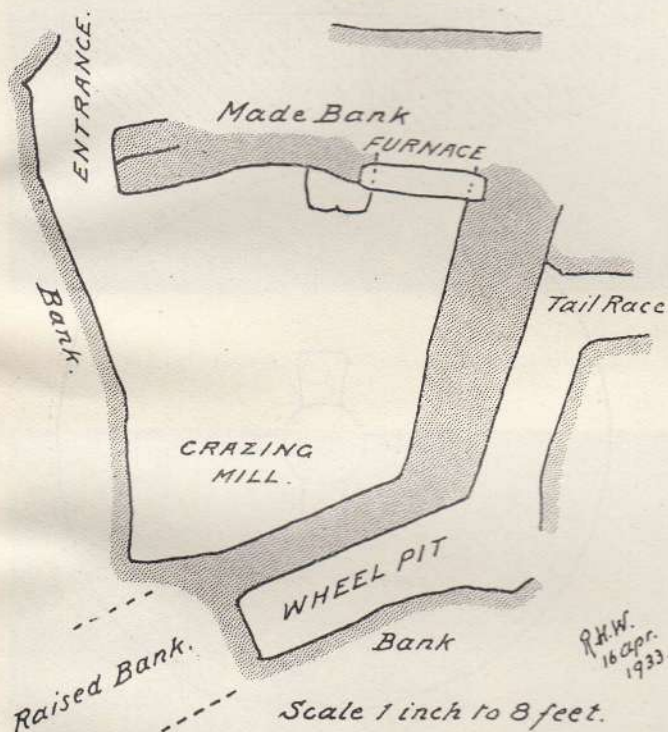


Fig. 6. PLAN OF OUTCOMBE BLOWING HOUSE

(fig. 6) is very irregular in plan, a feature which has arisen from the large size of the stones which constitute the walls, and the presence of earthfast stones. The wheel pit is well preserved, there is a raised bank to conduct the water from the leat to the wheel, and the tail-race is clearly traceable. The wheel may have been 9 ft. to 9 ft. 6 ins. in diameter. On top of one side wall of the wheel-pit is a stone with a groove very similar to that described as being found at *Yellowmead*, and this may have formed one bearing of the axle.



In the north-west corner of the house a substantial lintel spans a four feet opening, and indicates the position of the furnace. A view of this lintel is given on Plate XXVI, fig. 7. On the same plate (fig. 8) is a view of a mortar stone which lies outside the entrance to the building; the mortar is  $7\frac{1}{2}$  inches in diameter and  $2\frac{3}{4}$  inches deep.

DEANCOMBE.

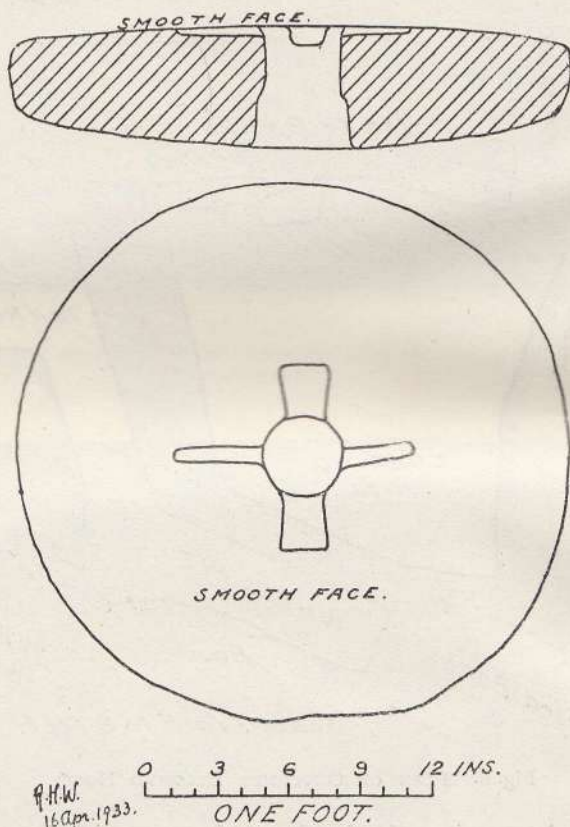


Fig. 9. STONE OF CRAZING-MILL, OUTCOMBE

Within the house, near the wheel-pit lies the upper stone of a crazing mill (see fig. 9). The diameter of the stone is 1 ft. 11 ins., and its greatest thickness 5 inches. Plate XXVII, fig. 10 is a view of the upper side of the mill-stone, and Plate XXVII, fig. 11 is a view of the smooth under, or working face.



*Photo R. H. Worth.*

Fig. 7. LINTEL OVER FURNACE MOUTH, OUTCOMBE.



*Photo R. H. Worth.*

Fig. 8. MORTAR STONE OUTSIDE OUTCOMBE BLOWING HOUSE.



A view of the entrance to the blowing-house is given on Plate XXVIII, fig. 12; it will serve to indicate the style of construction of this building.

#### NOSWORTHY, MEAVY VALLEY.

There is a blowing-house on the left bank of the *Meavy*, almost touching the stream, and 234 yards above *Nosworthy Bridge*. Originally known to the Messrs. Amery, Mr. Robert Burnard, and myself, I have since shewn it to many, but I am not aware that it has ever been described. The building is much ruined; the internal dimensions were probably 13 ft. 4 ins. by 15 to 16 feet. There are seven mortar stones within the house, one in the thickness of the wall, and three outside (eleven in all). Thorough search would very possibly reveal more. Up to the present no mould-stone has been found.

Two of the mortar-stones have been used as bearings for iron axles. One, which has mortars on two adjacent sides, carries the marks of three bearings (fig. 13 (a)). For view, see Plate XXVIII, fig. 14. Another has a single bearing (Plate XXIX, fig. 14a). (These bearings precisely resemble that found at *Yellowmead*).

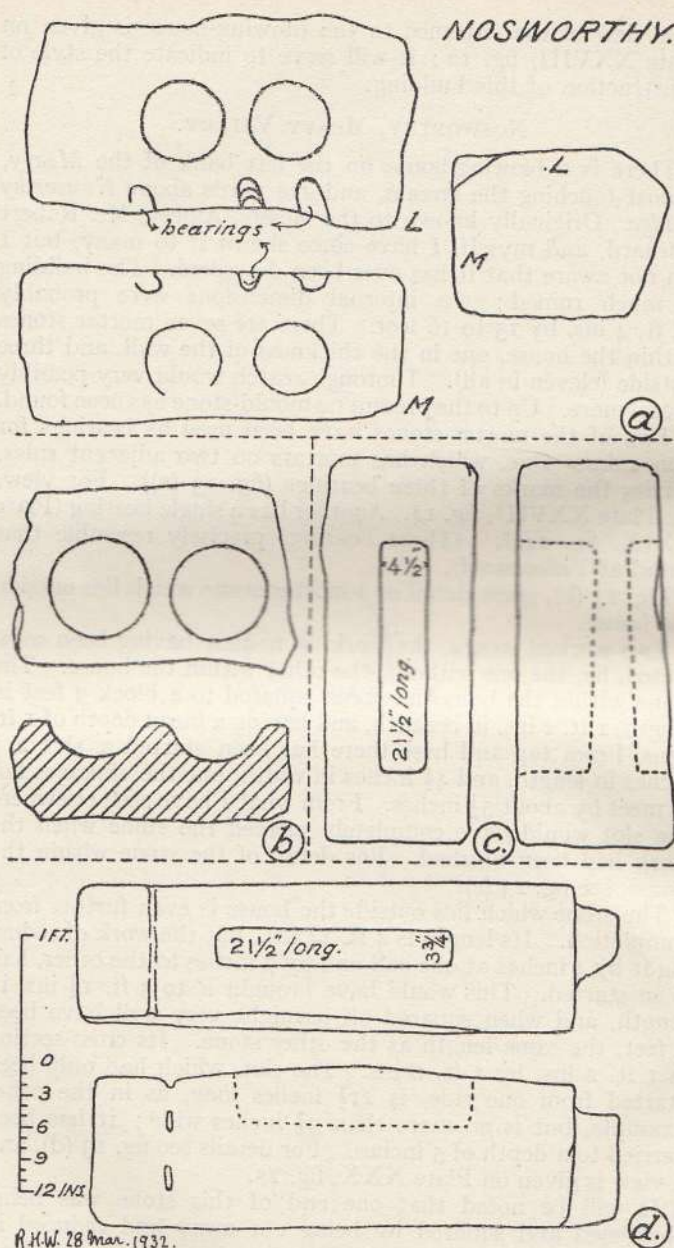
Fig. 13 (b), gives detail of a mortar-stone which lies outside the house.

Two worked stones, the work on neither having been completed, lie, the one without, the other within the house. The stone within the house has been squared to a block 3 feet in length, 1 ft. 2 ins. in breadth, and having a mean depth of 1 ft. 2 ins. From top and base there has been started a slot 21½ inches in length, and 4½ inches in width, but the sinkages fail to meet by about 3½ inches. From what I have seen elsewhere the slot would have completely pierced the stone when the work had been finished. For detail of the stone within the house, see fig. 13 (c).

The stone which lies outside the house is even further from completion. Its length is 4 ft. 1½ ins., but the work of reducing it by 4 inches at one end and by 7 inches at the other, had been started. This would have brought it to 3 ft. 1½ ins. in length, and when squared off it might very well have been 3 feet, the same length as the other stone. Its cross-section is 1 ft. 2 ins. by 1 ft. 2 ins. The slot, which had only been started from one side, is 21½ inches long, as in the other example, but is no more than 3¾ inches wide; it has been carried to a depth of 5 inches. For details see fig. 13 (d), and a view is given on Plate XXX, fig. 15.

It will be noted that one end of this stone was being shortened and squared by being cut away and reduced in section; at the other end a groove was cut on one face, and on another two notches were cut, after the fashion

NOSWORTHY.



R.H.W. 28 Mar. 1932.

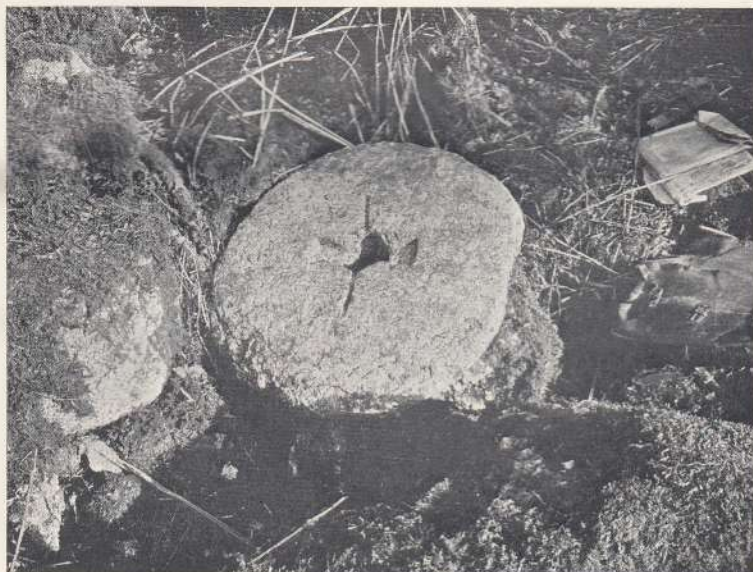
Fig. 13. a—Mortar-stone with three bearings  
 b—Mortar-stone outside house  
 c—Slotted stone within house  
 d—Slotted stone outside house





*Photo R. H. Worth.*

Fig. 10. STONE OF CRAZING-MILL, OUTCOMBE, UPPER SIDE.



*Photo R. H. Worth.*

Fig. 11. STONE OF CRAZING MILL, OUTCOMBE, WORKING FACE.

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*Photo R. H. Worth.*

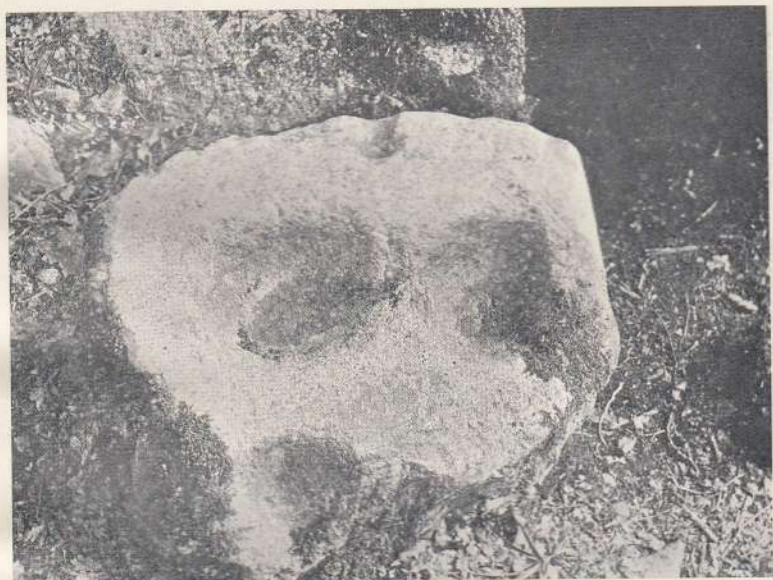
Fig 12. ENTRANCE TO BLOWING HOUSE, OUTCOMBE.



*Photo R. H. Worth.*

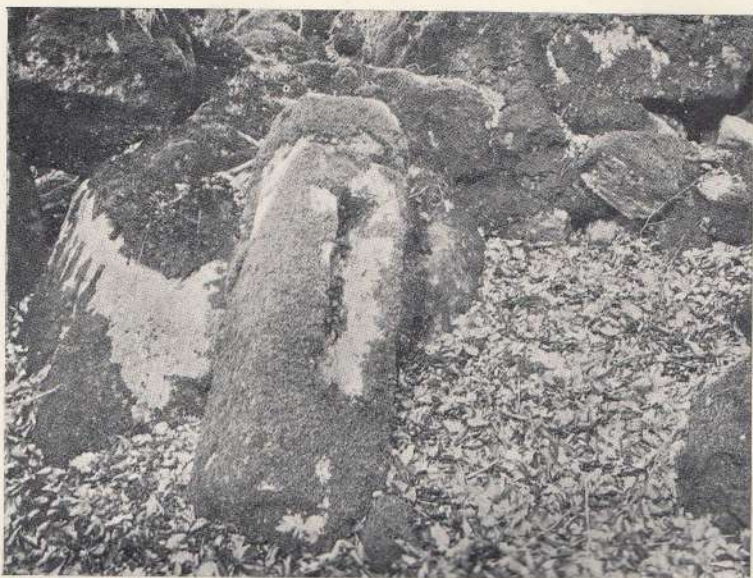
Fig. 14. MORTAR STONE WITH FOUR MORTARS AND THREE BEARINGS,  
NOSWORTHY.

Blowing Houses—*To follow Plate XXVII*



*Photo R. H. Worth.*

Fig 14a. MORTAR STONE, WHICH HAS ALSO BEEN USED AS A BEARING,  
(see top), NOSWORTHY.



*Photo R. H. Worth*

Fig. 15. SLOTTED STONE, OUTSIDE NOSWORTHY BLOWING HOUSE.



*Photo R. H. Worth.*

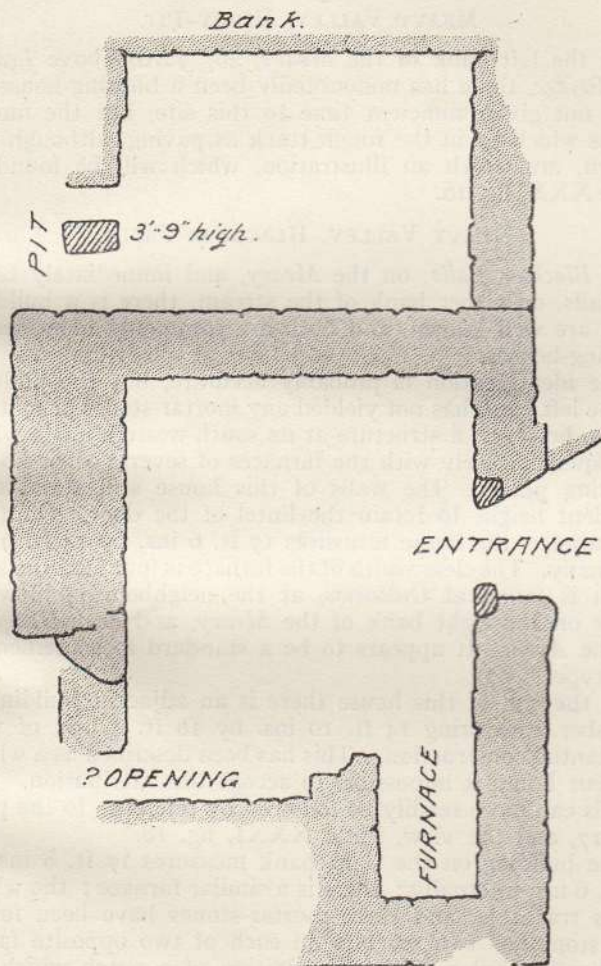
Fig. 16. MORTAR STONES IN ROAD, RIDDY PIT.

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adopted for splitting granite before the method of drilling circular holes for the "Tare and Feathers." It may be an

# *BLACK TOR, LEFT BANK.*



*Scale 1 inch to 8 feet.*

*P.H.W.  
25 Mar. 1933.*

Fig. 17

interesting digression that, as far as I can ascertain, the change over to the drilled holes took place in the *Chagford*

district about 120 years ago, and that date is probably applicable to Dartmoor as a whole.

It will be seen later that other examples of unfinished work can be found in the Dartmoor blowing-houses.

#### MEAVY VALLEY, RIDDY PIT.

On the left bank of the *Meavy*, 267 yards above *Leather Tor Bridge*, there has undoubtedly been a blowing-house. I have not given sufficient time to this site, but the mortar stones which lie in the rough track as paving, although well known, are worth an illustration, which will be found on Plate XXX, fig. 16.

#### MEAVY VALLEY, BLACKTOR FALLS.

At *Blacktor Falls*, on the *Meavy*, and immediately below the falls, on either bank of the stream, there is a building. Both are well known, and both are commonly identified as blowing-houses.

The identification is probably accurate, but the building on the left bank has not yielded any mortar-stones or moulds. It has, however, a structure at its south-western angle which corresponds closely with the furnaces of several other known smelting places. The walls of this house still stand to a sufficient height to retain the lintel of the door. Omitting the furnace, the house measures 17 ft. 6 ins. by 14 ft. 9 ins. internally. The clear width of the furnace is four feet, the same width is found at *Outcombe*, at the neighbouring blowing-house on the right bank of the *Meavy*, and near *Henglake*, on the *Avon*. It appears to be a standard measurement in this type.

At the end of this house there is an adjacent building or chamber, measuring 14 ft. 10 ins. by 10 ft. 4 ins., of very substantial construction. This has been described as a wheel-pit, but I find it impossible to accept this attribution. The details can more readily be followed by reference to the plan, Fig. 17, and the view, Plate XXXI, fig. 18.

The building on the right bank measures 17 ft. 8 ins. by 11 ft. 6 ins. internally; there is a similar furnace; the wheel-pit is traceable, and three mortar-stones have been found. One stone has two mortars on each of two opposite faces; another is similar, with the addition of a notch which has acted as a bearing for an iron axle; and the third has a single mortar on each of two opposite sides. When first I knew this blowing-house it was unique, in that some height of chimney still stood above the furnace. A colt fell down the flue, and in rescuing the colt the chimney was destroyed to the level of the lintel over the furnace.

Fortunately I photographed both these houses in the year





*Photo R. H. Worth, 1893.*

Fig. 18. VIEW OF BLOWING HOUSE ON LEFT BANK OF MEAVY  
AT BLACKTOR FALLS (taken from within).



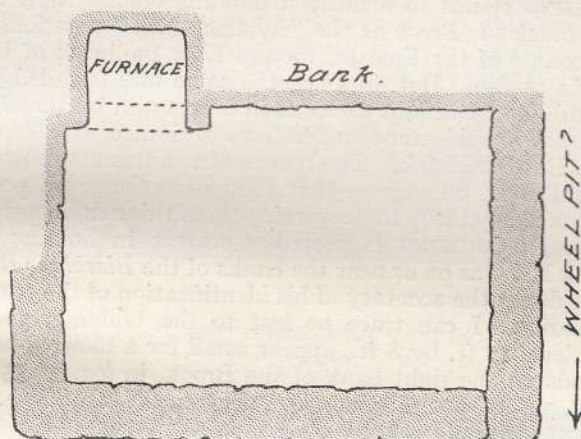
*Photo R. H. Worth, 1893.*

Fig. 19. VIEW OF BLOWING HOUSE ON RIGHT BANK OF MEAVY AT  
BLACKTOR FALLS.



1893, and on Plate XXXI, fig. 19, I am able to give a view which shows the furnace with a short length of chimney over it. The dark hollow on the left is the furnace; the lintel will be clearly seen, and some stonework of the chimney. Fig. 20 is a plan of this house. Both these smelting places were well placed for obtaining water power by means of but short leats, utilising the height of *Black Tor Falls*.

### *BLACK TOR, RIGHT BANK.*



*Scale 1 inch to 8 feet.*

P.H.W.  
25 Mar. 1933.

Fig. 20

In May of the present year Mr. T. Davey found in the bed of the Meavy, close to these last described blowing-houses, a sphere of granite. On the previous 25th March I had visited the spot, and I think I may safely say that I must have observed this stone had it then been in the river. The presumption is that it had in the interval washed out of the bank.

The surface of the sphere bears two iron stains, diametrically opposite, each to each. On this diameter the stone measures  $3\frac{3}{4}$  inches. Two other diameters, so taken that all three are at right angles, measure  $4\frac{3}{16}$  inches and  $4\frac{5}{16}$  inches respectively. The condition of the surface of the stone is consistent with its having been used as a hammer stone or pounder, and is not consistent with its being water-worn. On Plate XXXII, fig. 21, I give a photograph of this granite sphere.

I have never seen a spherical granite pebble in a moorland

river, and this negative evidence, together with the condition of the surface, leaves me willing to believe that the stone is truly a "pounder" and was used in conjunction with the mortar stones, as a pestle. The iron stains suggest that it may have been held in some sort of clamp, having iron jaws.

I admit that it is unsafe to build too much on this discovery, unless and until it is confirmed by other examples.

#### ERME VALLEY, BLACKLANE BROOK.

CROSSING claims to identify a building on the right bank of the *Blacklane Brook* as the "Wallack Mill" mentioned in the accounts of the Forester for the East Bailiwick of Dartmoor, in 1538-9. But, in 1532, the same mill is called Well Lake Mill, and I cannot understand how a mill by the *Blacklane Brook* should come under the cognisance of a forester for the East Bailiwick. The names of the tenants, however, Cole and Hele, do suggest that they were *Cornwood* people, and accordingly likely to be working tin in this neighbourhood.

Although CROSSING is probably correct in holding that Wallack Mill was on or near the banks of the *Blacklane Brook*, I much doubt the accuracy of his identification of the particular building. I can trace no leat to the building, and its dimensions, 17 ft. by 8 ft., appear small for a blowing-house. It stands on the right bank of the Brook, in *lon.*  $3^{\circ} 55' 57''$  and *lat.*  $50^{\circ} 29' 7\frac{1}{2}''$  (Six-inch O.S. Devon, CXIII, S.W.).

CROSSING mentions two buildings on the banks of the small stream which rises in *Ducky Pool* and forms a tributary of *Blacklane Brook*.<sup>1</sup> My measurements are in practical agreement with his as regarding the building on the left bank of this small stream; but the building on the right bank I make to be 11 ft. 6 ins. by over 18 feet, inside measurement. (He gives 13 ft. by 7 ft., and he has failed to recognise that the building has been a blowing-house. There is a well-defined leat leading to it from the *Ducky Pool* stream; there is a raised bank to conduct the water to the wheel (the wheel-pit is clearly traceable); and within the building is a stone with a sunk bearing for an iron spill or axle. The length of the structure is not clearly ascertainable, but, as I have said, it was over 18 feet. This, then, may have been the "Well Lake Mill" of the forester's accounts.

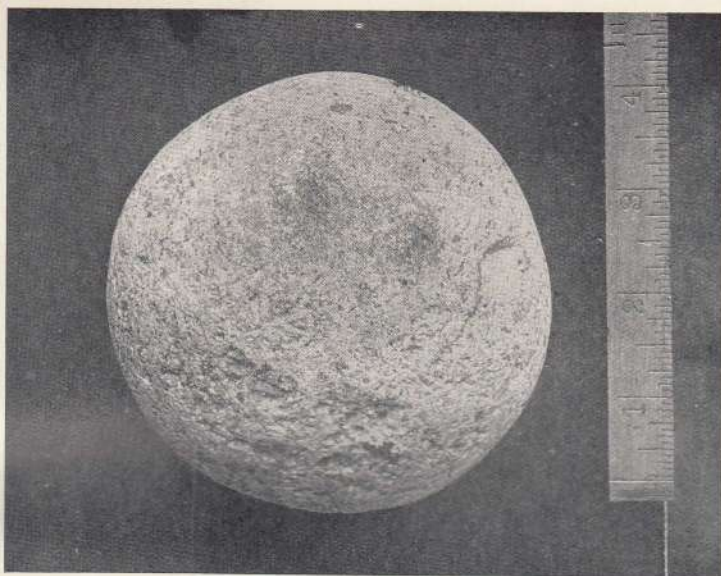
These buildings lie in *lon.*  $3^{\circ} 55' 57''$  and *lat.*  $50^{\circ} 29' 31''$ . Fig. 22 (a) is a plan of the building on the left bank, and fig. 22 (b) a plan of the blowing-house on the right bank. Plate XXXII, fig. 23, gives a view of the stone with a sunk bearing,

#### AVON VALLEY BELOW HENG LAKE.

On the left bank of the *Avon*, about 203 yards below *Timbern*

<sup>1</sup> *Guide to Dartmoor*, p. 374.





*Photo R. H. Worth.*

Fig. 21. GRANITE SPHERE FOUND NEAR BLOWING-HOUSE, RIGHT BANK BLACKTOR FALLS.



*Photo R. H. Worth.*

Fig. 23. STONE WITH BEARING, BLOWING HOUSE, BLACKLANE.  
Blowing Houses—To face page 316



Bridge, which spans the river near the confluence of *Heng Lake*, is a blowing-house, the ruins of which are relatively well preserved. Plate XXXIII, fig. 24, gives a general view of

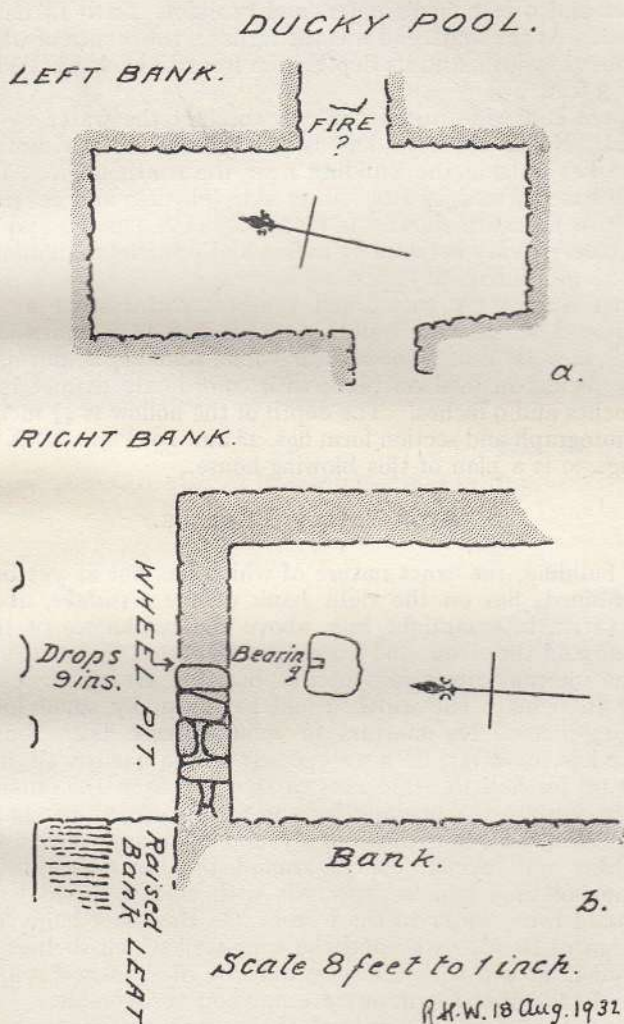


Fig. 22

this house, the photograph being taken from the far side of the river ; and fig. 25 on the same plate shows the interior. The opening in the far wall served to allow the axle of the

water-wheel to be brought within the house, as far as one end of the axle was concerned.

The internal measure of the building is 17 ft. 6 ins. by 12 ft. 3 ins. The wheel was at the north end, and was between 8 feet and 9 feet in diameter, and probably 12 to 14 inches breast. At the south end was the furnace, the mouth of which is 4 feet in width, and its depth from front to back a little less than 3 feet.

There is a wide raised bank to conduct the water to the wheel. No mould-stone has as yet been found; a mortar-stone lies outside the building near the south angle. This stone has mortars, two on either side (obverse and reverse). The two faces are shown on Plate XXXIV, figs. 26 and 27. The mortars vary between  $7\frac{1}{2}$  inches and 6 inches in diameter, and  $2\frac{3}{8}$  to 2 inches in depth.

Last August my wife found another mortar stone at the south end outside the building. This had two depressions, but is now broken. The mortar which remains is unusually large, being an oval on plan, with co-ordinate diameters of 11 inches and 9 inches. The depth of the hollow is  $4\frac{1}{4}$  inches. A photograph and section form figs. 28 and 29, Plate XXXV.

Fig. 30 is a plan of this blowing-house.

#### AVON VALLEY, FISHLAKE.

A building, the exact nature of which has not as yet been determined, lies on the right bank of the *Fishlake*, about 233 yards, in a straight line, above the confluence of that stream and the *Avon*, and about 100 feet from the stream.

The internal dimensions of this building are 19 ft. 6 ins. by 7 ft. 6 ins. The width would be unusually small for a blowing-house. No mortars or moulds have been found. There has, however, been an opening in the north wall, now built up for half the thickness of the wall from the outside. This resembles the opening for the wheel axle at the house below *Henglake*; and there is a raised bank supported by a retaining wall, which curves around the north-west angle of the building, and well accords with such a raised bank as would bring water to the wheel. On the other hand, the position of the doorway and the wing-wall which shelters it, are not in accord with the suggested site of the wheel, unless some details of the structure are not now recoverable.

Not far away, on the left bank of the *Avon*, 310 yards above the confluence with *Fishlake*, and about 100 feet from the bank of the principal stream of the river, here divided in two by an island, there are two little buildings to which CROSSING has referred as "The ruins of two tinnerns' buildings, placed so closely together as to leave only sufficient room for a man to



*Photo R. H. Worth.*

Fig. 24. GENERAL VIEW OF BLOWING HOUSE NEAR HENGLAKE, AVON.



*Photo R. H. Worth.*

Fig. 25. INTERIOR OF BLOWING HOUSE NEAR HENGLAKE, AVON.

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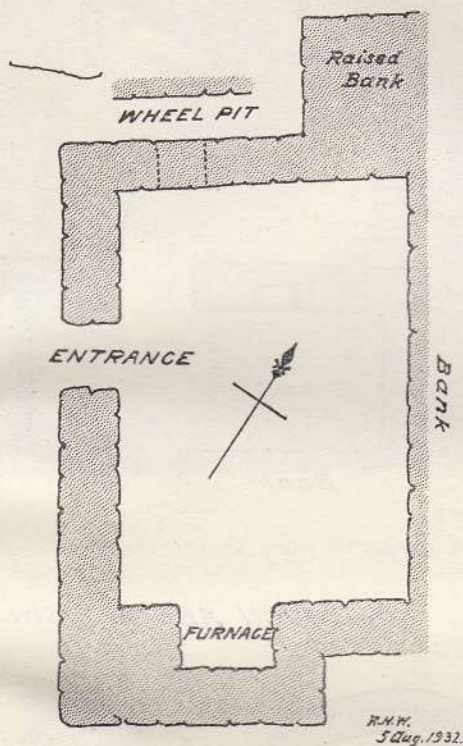


*Photo R. H. Worth.*  
Fig. 26. MORTAR-STONE, NEAR HENGLAKE, AVON.



*Photo R. H. Worth.*  
Fig. 27. OTHER FACE OF STONE SHEWN IN FIG. 26.  
Blowing Houses—To face page 319

## AVON BELOW HENGLAKE.



*Scale 1 inch to 8 feet.*

Fig. 30. PLAN OF BLOWING-HOUSE ON LEFT BANK OF AVON,  
BELOW HENGLAKE

pass between, and in this narrow passage, which was probably covered in, are the entrances."<sup>1</sup>

In fig 31, I give plans of these buildings. Very possibly CROSSING was right, and they may have been used by the tanners, but I have found nothing which may be regarded as proof.

## ERME VALLEY, BUTTERBROOK.

On Sheet CXIX S.E. of the six inch Ordnance Survey of Devon, on the left bank of the *Butterbrook*, near the stream,

<sup>1</sup> *Guide to Dartmoor*, p. 465.

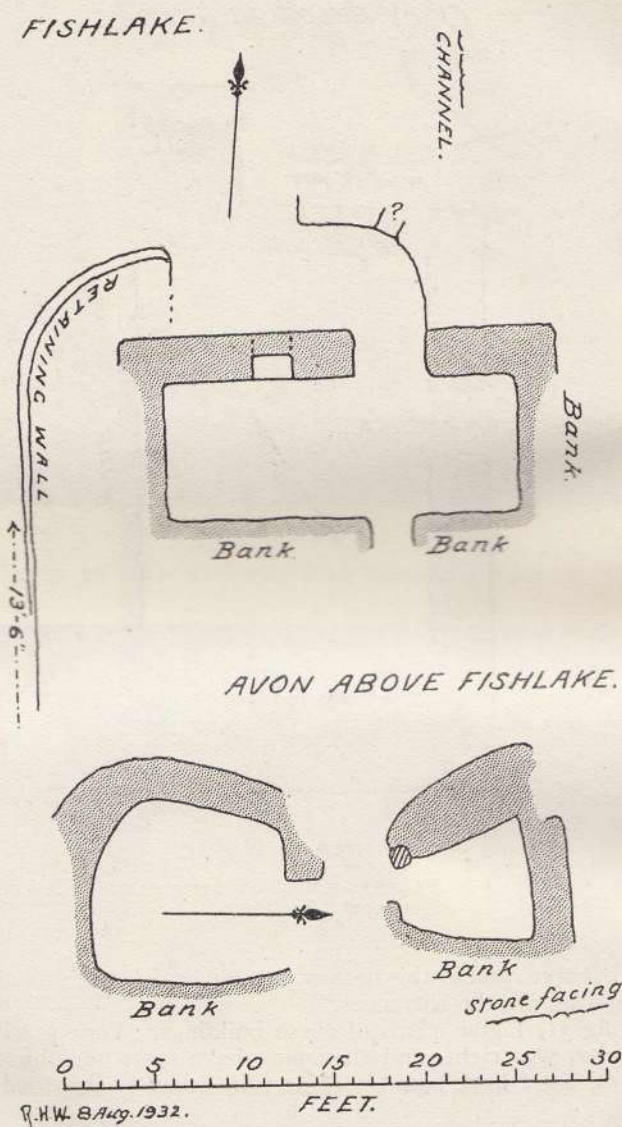


Fig. 31

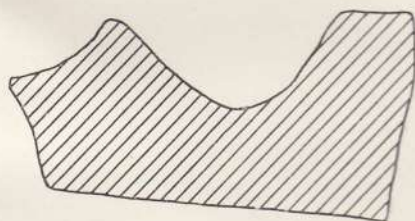
and about 185 yards E.N.E. from the quarry at *Tor Rocks*, a building is marked. This has not generally been recognised as a blowing-house. I cannot claim proprietary rights to the





*Photo R. H. Worth.*

Fig. 28. MORTAR STONE, NEAR HENGLAKE, AVON.



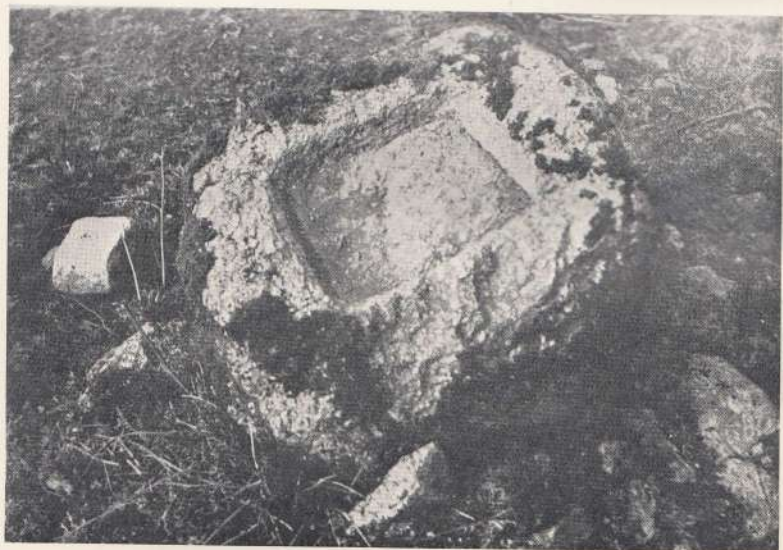
SECTION.  $\times \frac{1}{8}$

Fig. 29. SECTION OF STONE FIGURED ABOVE.



*Photo R. H. Worth.*

Fig. 32. BROKEN MOULD, BUTTERBROOK BLOWING HOUSE.



*Photo R. H. Worth.*

Fig. 33. PARTLY-FORMED MOULD, BUTTERBROOK BLOWING HOUSE.

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discovery, since Dr. and Mrs. Eckett Fielden quite independently ascertained its true nature. It is unusually large, measuring 34 ft. by 16 ft. within. Its leat is clearly traceable from above a small waterfall, some 70 yards upstream.

There are two broken mortar-stones, each now with one hollow. The cavities measure  $7\frac{1}{2}$  ins. in diameter by 3 ins deep, and 8 ins. in diameter by 3 ins. deep, respectively.

A broken mould lies within the building; the only ascertainable dimension is the depth of 3 inches. At the south-west corner of the building lies a partly-formed mould. The dimensions of the cavity are  $13\frac{1}{2}$  ins. by  $11\frac{1}{2}$  ins., with an unfinished depth of  $1\frac{1}{2}$  inches.

The usual method of formation had been adopted, a chase or groove carried round the margin of the hollow to some little depth, and the stone then chipped away within to the depth of the groove, whereupon the groove was again deepened. The same method can be seen to have been followed in a partly-formed mould in the burrows at *Yellowmead* and in the incomplete central perforations of some partially-formed mill-stones.

In the present instance it would appear that the stone proved to be unsound, and failed in the making.

Views of the broken mould and of the partly formed mould are given on Plate XXXVI, figs. 32 and 33.

A form of bearing for iron spalls or axles occurs which I have not met with elsewhere. A large stone in the north wall has in its inner face a hole  $4\frac{1}{2}$  ins. deep by  $1\frac{1}{8}$  ins. in diameter. A stone lying within the house has a similar hole  $1\frac{1}{2}$  inches in depth, and somewhat broken at the collar; both are polished by use. These holes in the body of the stone are the equivalent of the grooves on the faces of stones found elsewhere. Other examples may have been overlooked since bearings are comparatively a new find.