

PROCEEDINGS

OF THE

Cambridge Antiquarian Society,

4 JULY, 1901, TO 7 AUGUST, 1902,

WITH

Communications

MADE TO THE SOCIETY.

No. XLIII.

BEING No. 3 OF THE TENTH VOLUME.

(FOURTH VOLUME OF THE NEW SERIES.)



Cambridge:

DEIGHTON, BELL & CO.; MACMILLAN & BOWES.

LONDON: G. BELL AND SONS.

1903

Price 5s.

wardian Museum, the parietal ridge and zygomatic arch are strongly developed. Therefore, although the lower ridge and weakly developed arch may be considered as generally distinctive of dogs, we cannot infer from a strong ridge and largely developed arch that the animal was a wolf.

The dog or wolf of the fens belongs to what I have called the normal type, but there is less difference between what is called a wolf and what is called a dog than there is between the fen wolf and the Esquimaux dog. The fen wolf approaches the dog type, and the fen dog approaches the wolf type. It may be that the wolves are only the poor degenerate remnant of a dying-out race; or it may be that we have not procured any wolves at all from the fens. At any rate I know of no criteria by which the fen wolf and fen dog can be distinguished.

In the peat of the fens we have also some smaller dogs of the same character as those found at Chesterford, and perhaps of the same age. From the researches of Studer¹, we should be led to expect that we may find a considerable variety of breeds among the pre-Roman inhabitants of this country. At any rate it is quite clear that the remains of domestic animals found associated with man should be carefully preserved and the nature of the association carefully recorded.

[Specimens or figures of the various types referred to were exhibited at the meeting.]

Professor HUGHES, secondly, read a paper

ON ANCIENT HORSE-SHOES.

The history of horse-shoes is of considerable importance in archæology. They are continually being dug up and it would help us greatly if we could assign a date to the various forms which occur. They are said to have been found in this district associated with the remains of Roman, Saxon, Norman, and every later age; but it is very difficult to obtain any satisfactory

¹ Dr Th. Studer, 'Die prae-historischen Hunde in ihrer Beziehung zu den gegenwärtig lebenden Rassen.' (*Abhandl. d. Schweiz. Paläontologischen Gesellschaft*, Vol. xxvii.) 1901, p. 1.

evidence as to the nature of this association. They have often been referred to Roman or Saxon times merely because their shape is different from those of our day and Roman or Saxon remains have been found near. It requires great care to determine exactly the age of objects found in the course of ordinary excavations. Pieces of metal work down into the soil in various ways, or fall into the diggings and get trodden into the sand or clay at the bottom of the pit, and, without any intention to mislead, workmen give a wrong impression of the relative position of the objects found, while sufficient attention has not yet been paid to old horse-shoes and to the doubt which exists as to their age and origin, to make collectors generally as careful as they should be on this point.

Moreover comparatively recent shoes, which have been made for a special purpose, are often more peculiar than any of those which, in the present state of our knowledge, we call the most ancient.

Again, we do not know which of the successive races and tribes which have from time to time occupied this country brought with them horse-shoes of their own, and which of them, if any, adopted the patterns of the people who were there before them.

In this enquiry I use the terms British, Roman, Saxon, Norman, to indicate chronological not racial divisions. The inhabitants of the British Isles were in constant communication with the Continent, and the civilization and arts of northern and north-western Europe had reached this country long before the Roman conquest.

What we call Roman was an age of long duration, even if we limit it to the time before the withdrawal of the legionaries, while the Romanized British, who can hardly be distinguished from them, held their own for a very much longer time and overlapped post-Roman Teutonic invaders everywhere.

The introduction of the remains that we refer to the age of the Saxons was gradual and intermittent; and, although the Norman like the Roman conquest was a sharply defined episode, the English changed their habits and customs but slowly, and there must have been plenty of purely Saxon or

other German and Scandinavian communities here long after the arrival of the Normans.

In the case of horse-shoes therefore, which, although numerous in certain localities, do not, like pottery for instance, turn up almost wherever ancient remains are found, we must be careful to ascertain if possible whether those which seem to belong to the pre-Roman inhabitants (call them Celtic, Gaulish, British, or what not) are not of later date than the Roman invasion; and whether some of those which we should refer to the Saxon age may not have belonged to Saxons who lived here after the Norman conquest.

We must remember also that the area which was selected and cleared by the earliest inhabitants for settlement and cultivation would certainly be that which their conquerors would occupy, at first at any rate, and that in a country so diversified as ours this rule would apply to every successive invasion.

We must expect therefore Saxon horse-shoes, if there were any, on ground which had been occupied by the Romanized British, and Norman horse-shoes among late Saxon relics. Very little is known about the horse-shoes of the ancients. They may have been introduced from the East through northern Europe, but, instead of finding frequent mention of them in history, we should infer from many passages in ancient writings that horses were not shod in Southern Asia, in Greece, or in Italy till many centuries after the Christian Era. Alexander and Mithridates had to leave their cavalry behind because their hoofs were worn out. The advantages of a strong sound hoof were continually dwelt upon. Isaiah says "the hoofs of their horses shall be counted like flint," and Xenophon and Vegetius describe the best kind of floor for preserving the horse's feet and give instructions how to harden their hoofs.

All the supposed references to horse-shoes in ancient writers are either obviously founded in error or can be easily explained away.

For instance the ringing of a good sound hoof upon the ground was supposed by some to imply that the horses had metal shoes; and Xenophon's advice as to clamping the pave-

ment on which the horses were trained was taken to refer to fastening the shoe on with metal.

None of the Greek or Latin authors who wrote especially about the treatment of horses make any mention of horse-shoes or farriers. They had some kind of protection for the feet of camels, cattle, horses, mules, and asses, but these were either sandals of straw or hemp (*sparteae soleae*) tied on in cases of emergency such as a long journey, hard roads, or injury, or they were leathern shoes (*soleae*), something like those put on the horses employed to draw the mowing machine on our lawns, with such differences as might be suggested by the different object in view, ours being to prevent the lawn from being cut up, theirs to protect the horse's hoof. Vespasian's coachman would not have had time to fit and nail on horse-shoes or half-moon shaped metal plates (*selenaria*) on all his horses, but he could have fastened on sandals with straps and thongs; while silver and gold plates would have been much more conspicuous attached to such sandals or to the upper part of the hoof for the purposes of display, which was all that Nero and Poppæa wanted. The word 'induerè' would be more appropriately applied to pulling on a leather shoe of this kind than to nailing on a metal plate.

We must however bear in mind at this stage of our enquiry that horses were not so commonly used as mules and donkeys for ordinary commerce or travelling, and therefore we do not find such frequent mention of them, except for war purposes, as to make this negative evidence with regard to horse-shoes as trustworthy as it would otherwise have been.

Still the case remains very strong against the view that horse-shoes were in use in Italy at the time of the Roman occupation of Britain.

There is no sign of a shoe on the hoofs of the horses represented in ancient sculpture; yet they could be easily seen, if present, in the frieze of the Parthenon, in Persepolis, on Trajan's Column, or on the monuments of Antoninus or Marcus Aurelius.

Winkelmann describes a carved stone on which there is the figure of a naked boy on a horse and another kneeling on the

ground and holding up the near fore-foot of the horse as if examining the sole. But there is nothing to show that he is attempting to nail a shoe on; nor could anyone hold up a horse's foot in the way indicated—much less shoe him.

Fabretti refers to the hunting scene preserved in the Palazzo Mattei in Rome as in his opinion proving that horse-shoes were in use in the time of Gallienus, but Winkelmann has shown that this foot is a modern restoration.

Nor is there such necessity for, or even such great advantage as might at first appear in nailing iron shoes on to the horse's hoof. Of course if one of our horses casts a shoe he cannot without injury carry us far over a hard road. But in this case we are dealing with a hoof that has been pared and kept subject to all the vicissitudes of dryness and moisture, cold and heat, which are aggravated by keeping it covered by a shoe. With a view to keeping the hoof hard the most important thing is to protect it from moisture. This explains one reason why an unshod animal can accommodate itself to hard roads, that is because hard roads are more apt to be dry. A shoe keeps the water against the rim of the hoof and moreover prevents the sodden spongy part, which also retains moisture, from being worn away.

It is the same kind of reason as that which makes some people advocate letting children run about barefoot. They are sure to get damp feet, but shoes and stockings keep the damp on the feet and chill them, whereas the bare foot soon gets dry and circulation quickly returns. In the case of horses as of children, you have to balance the advantages of protection against one kind of injury against another in the circumstances in which they are placed.

The hoof of a horse or ass which is allowed to grow naturally without being subjected to much wear, develops enormously in front and turns up into a long horny process curving back towards the crown of the hoof and protecting with an elastic shield the whole of the front of the foot. A worked animal's hoof if cared for does not differ much in general appearance from the shod hoof of our day.

In many parts of the world horses, mules, and asses are still

commonly ridden and driven without shoes; and in parts of our country where the ground they have to travel over is mostly soft, as on peat bogs and on uncultivated turf-covered land, they are often not shod. Even where they have to travel over hard roads the hoof soon accommodates itself to the work it has to do, as people who habitually run about barefoot can travel with impunity over ground that would cut the unused foot to pieces. Some of the finest horses in Rome when I lived there in the sixties were those belonging to Prince Piombino, and these were driven about up and down the Pincian Hill and over the pavements with no shoes on their hind feet, which were as sound and as round as you could wish to see a hoof. In India also horses are still frequently shod on the fore-feet only.

There is therefore no reason whatever for assuming, from the high civilization of the Greeks and Romans, that they must have shod their horses, for we see that horses can get on very well without shoes; and, further, we know that the ancients were aware that the hoof could be rendered harder by treatment.

If then there is no evidence that the practice of nailing iron shoes on to the horses hoofs prevailed in Italy in the first few centuries of our era, it is obviously very improbable that the Romans introduced the custom of shoeing horses into Britain.

Much doubtful speculation always accompanies researches into remains of this kind, and we need not admit that the hundreds of horse-shoes found in the bed of the Vingeanne were left there after a great cavalry engagement between the Gauls and Romans, nor that the shoes picked up on the field where Attila is said to have been defeated necessarily belonged to his time.

There is, however, a great deal of cumulative evidence that horse-shoes have been found associated with Celtic or Gallo-Roman remains in such a manner as to lead to the conclusion that they were in use in Gaul during the age which we distinguish as Roman in Britain; and there is considerable reason for believing that horse-shoes of the same date have been found in England.

The shoes which have been referred to this age are of small size and narrow, and remarkable for their wavy outside margin, which is produced by the stamping of the nail-holes which causes the iron to bulge out along the edge.

If these do occur in Britain they ought to occur in the country of the Belgæ and of the Iceni, and this is the earliest form of shoe which we might expect to find in this district, but I am unable to offer any reliable information upon this point, which however I commend to the notice of the members of our Society.

The large flat shoe with no calkins (Fig. 1) which is sometimes brought to us from near where Roman remains have been discovered is not the kind of thing we should expect to find with pre-Roman or Roman objects, and I am unable to offer any evidence as to the occurrence of any horse-shoes of those periods in our district.

Nor does the uncertainty cease when we get on to Saxon times. No horse-shoes are found in Merovingian tombs, which so closely resemble our Saxon graves. There is no written evidence that the Germans shod their horses before the 12th century. Professor Skeat writes to me, "There is very little evidence for the early use of horse-shoes to be had from English literature. The earliest occurrence of horse-shoes is in 1387. There would have been no difficulty in forming such a word as *hors-scōh* in Anglo-Saxon: only as a matter of fact it does not occur. Nor can I find any early reference at all to the shoeing of horses. The turned-up end of a horse-shoe was called a calkin. The word occurs in *The Two Noble Kinsmen*, a play attributed to Shakespeare and Fletcher, Act v. Sc. 4, and it is found as early as 1445, which is not remarkably soon.

"The jocosé carving called 'shoeing the goose,' *i.e.* nailing a horse-shoe on to a goose's foot, occurs on a miserere seat in a choir-stall somewhere in England: but I don't suppose it is necessarily older than the fifteenth century.

"After 1400 I think there is good evidence for the shoeing of horses in England. But I know of no clear evidence going back to the 13th century."

In the face of all this we must reconsider the evidence,

which has generally been accepted so far, that horse-shoes have been commonly found in this district associated with Saxon remains.

The kind of shoe which has most constantly been brought from areas where Saxon remains are numerous is a broad flat shoe prolonged a little and squared at the heel ends, but with no calkins (Fig. 1).

An ordinary modern horse-shoe is a flat band of iron bent into an incomplete circle. It is sometimes of nearly uniform breadth and sometimes expanded on either side, and sometimes narrower towards the heel and bent inwards so as to offer more protection to the back of the frog.

Sometimes it is straightened out at the heel, and in a donkey's shoe this part is prolonged into two parallel bars.

The various forms are determined by the nature of the work the horse has to do and the character of the ground he has to travel over; while some are surgical, being intended for cases of disease or injury.

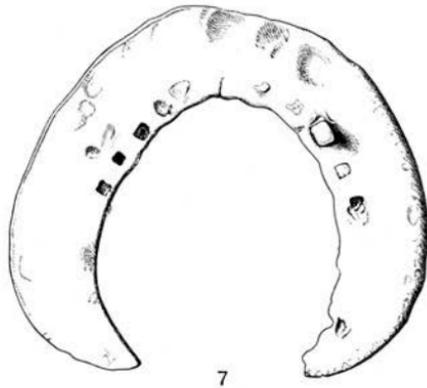
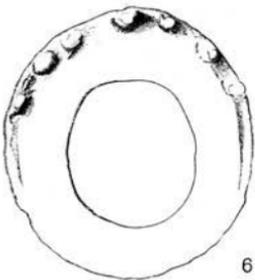
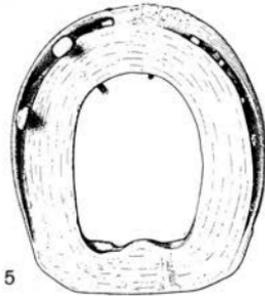
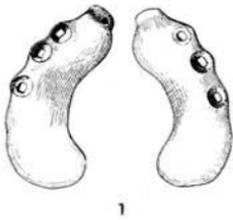
Where there is a difficulty in getting a sure foothold from the slippery nature of the road or the steepness of the hills, the heel ends of the shoes were turned up to form calkins, and sometimes, as seen on one of the shoes from Brigsteer in Westmoreland, a sort of front calkin like an inverted clip was hammered out on the toe.

In the oldest form of shoe known, namely the Gaulish shoe, the heel ends are hammered back on to the bottom of the shoe so as practically to come to little more than a thickening of that part of the shoe.

The upturned flange in front, known as a clip, was made chiefly to prevent the shoe being knocked off by coming in contact with the ground, or stones, but it also provides a considerable protection to the hoof.

Sometimes the shoe was made circular like a quoit. The specimen exhibited (Fig. 2) is from Stuntney near Ely and was given to me by Mr Cole Ambrose. These were probably used for a cracked foot or one very apt to pick up stones. I have no means of assigning any date to this specimen.

Horned cattle were generally shod when they had to be



ANCIENT HORSE-SHOES.

driven long distances by road, as for instance out of Wales to the English markets. I have frequently seen it done. The process was rough. The animal had a rope thrown round its legs and was turned on to its back, with its feet fastened together and held up in the air. Plates of iron were nailed on to the hoofs where required or a flat shoe much like that used for horses was fastened on. This was always done when there was a tendency in the foot to spread open and crack.

I exhibit (Fig. 3) one of these pairs of plates from Westmorland, for the shoe was in two parts, a plate being nailed on to each half of the divided hoof, so as to allow of the free play of the toes.

It would be very difficult to point out any means of distinguishing between the whole shoe of an ox and one of the flat early horse-shoes, with no calkins.

Another special kind of shoe is that made for horses which have to travel over very soft ground. Xenophon records that an Asiatic people drew some kind of snow-shoe over their horses' feet to prevent their sinking in the snow.

Jonathan Binns in his description of the reclamation of Chat Moss in Lancashire says that "the horses were shod with pattens or boards of about ten inches square, with the angles taken off."

In the fens a large iron shoe (Fig. 4), extending beyond the hoof, with the nails on the inside curve was used for the same purpose. A casual observer who did not notice the position of the nail-holes, which were perhaps obscured by rust, might infer from the great size of the shoe that the horses of those times were very large.

These devices were intended to prevent the horse from sinking into the peat; but of course if the animal's foot did break through the crust the shoe would be sucked off or the horse stand a great risk of being mired.

It would appear therefore that the shoe which we should expect to find with pre-Roman or Roman remains is a not very heavy shoe with a wavy margin such as is recorded from Gaul, but not the broad thin shoe which in this district has so often been called Roman because it has been found in the same area as Roman remains.

We have not however yet got any proof of their occurrence here.

There is a great deal of cumulative evidence, from the continual finding of the same type of broad, square-ended shoe over areas in which Saxon remains are common, that we have in this district Saxon or Norman-Saxon horse-shoes, but nothing that can be accepted as scientific evidence respecting their exact age is yet forthcoming.

The common broad flat uniformly curved shoe came down to very late times, and the various shoes of exceptional form of which I have exhibited and described a few this evening are either pathological or made for special work.

ON A TURF-PARER FROM WESTMORELAND.

By Professor T. M^cKENNY HUGHES.

Earthworms are always negotiating an exchange of mineral for vegetable soil, but where for any reason earthworms are scarce the vegetable soil grows apace, and on the unbroken ground the surface of the soil consists largely of vegetable matter due to the roots and stems of grass and other plants. This surface layer of vegetable soil is often sliced off and dried, and furnishes a useful fuel, though the practice is to be deprecated, as it renders the land useless for grazing purposes for many years. Peat is merely a very deep vegetable soil due to similar causes¹. The blocks of peat cut from below the layer with living plants are called *peats*, and the top slices whether from the surface of the soil or of the peat are called *turfs*, but this distinction is not everywhere strictly observed.

With a view to stacking either kind for winter use as well as for convenience of laying on the fire these pieces are cut of uniform size; the peats are of the size and shape of a brick, the turfs are thinner, square, and of about the area of two peats.

In order to facilitate cutting these peats and turfs different instruments are employed. The peat is cut in terraces, the

¹ Cf. *Journal of the British Archaeological Association*, Dec. 1899, 'Archæology and Geography of the Fenland.'

CONTENTS

OF PROCEEDINGS, No. XLIII.

VOL. X. (NEW SERIES, VOL. IV.) No. 3.

	PAGE
A supposed Romano-British settlement at Odsey. By Mr H. G. FORDHAM	169
The Potter's field at Horningsea. Part I. By Professor HUGHES . . .	174
A Roman Potter's field near Jesus College. By Professor HUGHES . . .	194
A box of weights and scales for testing moidores. By Professor HUGHES	197
A Kaffir pillow with a handle. By Professor HUGHES	199
Nottingham Stone-ware and Sgraffiato ware. By Dr J. W. L. GLAISHER.	199
Delft Pharmaceutical ware. By Mr W. A. HARDING	202
Visit to Coptic Monasteries of Egypt. By Mrs LEWIS	210
The Sepulchral Brass of St Henry of Finland. By Dr M. R. JAMES . . .	215
A Legend of St Stephen. By Dr M. R. JAMES	222 and 264
St Urith of Chittlehampton. By Dr M. R. JAMES	230
The War-ditches near Cherryhinton. By Professor HUGHES	234
Earthworks at Boxworth and Knapwell. By Professor HUGHES	237
Village of Romanized-Britons between Chesterton and Milton. By Pro- fessor HUGHES	240
Modifications of design on an Indian Cloth. By Professor HUGHES . . .	241
The Explorations of Dr M. A. STEIN in Chinese Turkestan. By Mr E. J. RAPSON	242
The Evolution of the Cart. By Dr A. C. HADDON	244
The Remains of the Dog near Cambridge. By Professor HUGHES	245
On ancient Horse-shoes. By Professor HUGHES	249
A Turf-parer from Westmoreland. By Professor HUGHES	258
A pre-Christian cross from North Ireland. By Dr A. C. HADDON	259
Stages and rejects in Stone implements, at Piny Branch, Washington. By Dr A. C. HADDON	260
Recent excavations in the Market-Place, Cambridge. By Prof. HUGHES . .	261
Annual General Meeting	263
Annual Report of the Council for 1901—1902	265
County History Committee	269
New Members elected	271
Summary of Accounts, 1901	272
Excursions	273
Additions to the Library	286
List of Officers and Council, 1902—1903	292