ON THE WOODEN BATTLE-AXE AND DAGGER FOUND AT HOLLINGBOURN, KENT.

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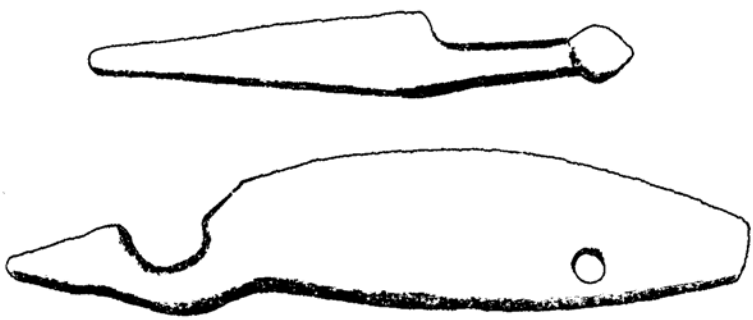
At the end of May, 1862, two very curious implements of wood were discovered at Hollingbourn, near Maidstone. They were found at the bottom of a stratum of gravel 3½ feet thick, resting on a stratum of white sand of considerable depth; over the gravel were 3½ feet of boggy earth. The implements themselves were at the



bottom of the gravel, resting on the sand; and near them were found a human skull and some very large bones, together with the bones of a large bird, probably a swan. They were found dispersed in the bed of gravel as if by the action of water, not lying together, but somewhat in the direction of a small, adjoining stream, at about sixteen feet from its course. The bones were unfortunately

dispersed, and I have failed in all my endeavours to recover or to trace them.

The implements themselves are clearly a sword and a battle-axe of oak,[1] and when we reflect that persons who used such weapons must have fought stark naked, their antiquity seemed evidently so great, that my first care was to place them for inspection in the best hands that I could find. I accordingly prevailed on Mr. John Lubbock, who had recently explored the lacustrine villages lately discovered in Switzerland, and Mr. Roach Smith, whose antiquarian experience is so widely known, to pay me a visit for the purpose of examining them. The weapons, as far as they were concerned, were unique; and, having nothing to guide them, they were at a loss to what period they should refer them. However, from the shape, more particularly of the sword, Mr. Roach Smith was disposed to refer them to some portion of the Roman period, (and Mr. Evans, who has seen some models of them carefully made by my carpenter, is disposed to take the same view for the same reason), because he thought that the maker of the sword must have seen one made of metal, the shape of which he copied. Nevertheless, the whole matter was involved in such complete obscurity, that neither of these gentlemen felt that they could form any definite opinion or make any really reliable conjecture.

In Sir Charles Lyell's work on the Antiquity of Man, just published, the discovery of another wooden sword is recorded. This was found in a bog in Ireland, at Drumkellin, county Donegal. Here a log cabin was discovered fourteen feet from the surface, twelve feet square, and nine feet high. The planking was of oak

[1] They were found on the property of Mr. Goodwin, of Maidstone, who has presented them to the Museum at Chillington House in that town. He gave strict orders that the bones should be preserved, but they were not attended to. He describes them as larger than those of beasts or of horses, and unlike any with which he is acquainted.

split with wedges of stone. The cabin was divided into two stories, each four feet high; the roof flat. In the interior were found one of the stone wedges used in cleaving the plank, a stone celt, a piece of leather sandal, and a flint arrow-head. In the bog adjoining was found a wooden sword. The whole structure was wrought with the rudest implements; the wood of the mortises bruised rather than cut; a stone chisel lay on the floor, which exactly fitted the marks in the mortises.

This incident seems to throw a glimmer of light on the objects discovered in Kent. It shows that at all events wooden swords were used when the tools of the carpenter were of stone. The height of the chambers in the Irish crannoge also seems to point to the same diminutive race, which appears to have been identified with the age of stone in Switzerland. It has been inferred from the handles of their tools and weapons, and the dimensions of their personal ornaments, that the Swiss inhabitants in the stone age were at least as small as the Laplanders and other Northern tribes at the present time. A story, four feet high, points to a similar race. Taller men, even by stooping, could hardly contrive to live in such a dwelling. It is like the slave-deck of a slaver, where the unfortunate passengers are kept in a sitting posture during the whole voyage, and a large percentage of whom do not outlive the hardships even of a short passage.

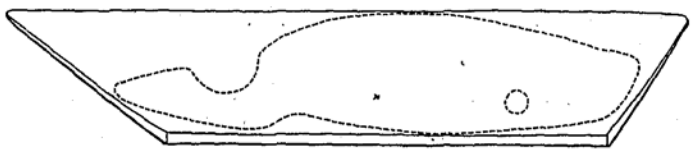
If any persons incline (and I confess I do so myself) to assign the sword and battle-axe found in Kent—as Sir C. Lyell evidently does with respect to that found in Ireland—to the age of stone, I can say with great confidence that there is nothing in their construction that at all militates against this solution; on the contrary, it is quite plain to any one who, like myself, is familiar with working in wood, that both the one and the other are cleft. They are made of pieces of oak that never

were square-edged; both have been split down to the centre of the log, so that they have a flat back on one side, and come to a sharp edge at the other. The fibres along the sides have not been cut, and so do not run perfectly straight. To satisfy myself as to the precise mode of their construction, I directed my carpenter to cleave two pieces like those from which the battle-axe seemed to have been made: one of them he worked up with no tool but a drawing-knife (a mere blade with a handle at each end), and he produced an exact facsimile; the other piece I have kept uncut, for the purpose of illustrating the process to any one who might be desirous to understand it. I have since done the same with respect to the sword, and with a like result. I therefore am quite convinced of the soundness of my opinion, that the tools employed were of stone; probably a stone axe and a flint chisel. It is evident that cleaving was employed as far as possible, and all cutting not actually unavoidable was dispensed with. The back, which is an inch and seven-eighths wide, is left flat, the sharp edge of the angle only being rubbed off; the handle is at the back, evidently because there was not in any other part of the piece of wood sufficient substance to make one. At the same time, rude as is the manufacture, there is an appearance of pains and care in the finish, and an effort after taste, which would show that the workman felt that he was engaged in a work of consequence. I have called this weapon a *battle-axe*, not a club, because it is evident that the edge was meant to cut, not to crush, as in the case of a club.

The size of the handle is also a point deserving of particular attention. It is plain that it was intended for a very small hand. Its diameter is about seven-eighths of an inch, and the curve is so sharp that a wide hand will not enter it. A large man would have also wished for a heavier weapon, as he would have been able to

deal a much more powerful blow, and would have had ample strength to manage the weight.

As the handle is at the back, it will at once be seen that it is only the thinner portion that has been cut away. The log from which it was cleft would clearly have been severed from the tree by an axe, not a saw, and would therefore be of the form here sketched, and



the portions indicated by the dotted lines are all that would require to be removed. The flint knives and other tools discovered in Switzerland would be amply sufficient for this purpose. Boring tools were also found there which would form the hole through which a leathern thong was probably passed to sling the weapon round the neck.

The construction of the sword is still more simple. The wood of which it was made was of the same general form, but thinner. The back of the axe being an inch and seven-eighths thick, the sword nowhere exceeds three-eighths; it was cleft from the outside of the log to the pith, and therefore had a sharp edge on one side. Here there was even far less to cut away, as will again be seen by the dotted lines in the figure.

I may observe that the shape of the sword differs in one essential point from that of a metallic knife; the latter, if meant for use as a dagger, would have the thick edge straight, and the cutting edge of a wedge-like form.

Here the back forms the wedge, and the sharp edge is straight; and this proceeds purely from cleft wood being the material, as the sharp edge would not stand if cut across the grain. This form, however, is far less adapted to the purpose, and the fact that the maker was driven to use it points rather to a knowledge of the properties of wood than of those of iron. Every detail in like manner points to a wooden origin; the flat handle is made, where alone it could be made, viz. as near as possible to the thicker edge. The weapon is not made with a double edge, like a dagger of steel. This would have entailed the use of a very different piece of wood, and would have called for a much greater amount of cutting. It will also be seen that by cutting away the upper portion of the back and bringing the point towards the opposite side, the wood becomes thinner towards the point, and tapers in both directions. The point also is better placed with reference to the projection. This was designed to prevent the weapon slipping through the hand in dealing a blow. At the extremity of the handle the wood is left projecting on both sides. The use of this knob is also obvious, viz. to prevent the weapon escaping from the hand whilst being drawn out of the wound. All these points are so certain to occur to the contriver of the weapon, and several of them are so exclusively due to the accidental peculiarities of the particular piece of wood which formed the material, that I do not attach much importance to its unavoidable resemblance to a knife; I should rather be disposed to say, that, though it does somewhat resemble a knife, which it is *not* meant to represent, it does *not* much resemble a steel dagger, of which it has been suggested that it is a copy.

Another idea has been suggested, viz. that these may have been wooden models of iron implements, buried instead of the originals from economical motives. Now,

whatever may be said of the sword or dagger, this could not have been the case with regard to the club or battle-axe. Nothing of the kind can ever have existed in metal. It would be far too heavy for the arm of the strongest man. The earliest axes, whether of stone or of bronze, are totally different. They consist of a head of moderate size fixed on a wooden handle,—sometimes the stone passing through the wood, sometimes the wood through the stone; and such no doubt would have been the external appearance of any model that might have been made for sepulchral rites. I therefore have no hesitation in concluding that they are not imitations of anything previously made, either of stone, of bronze, or of iron; but that they were made to be used, and were buried (whether by surviving friends or by the action of water) with their owner, whose skull was found at the same time.

But again, supposing them to have been made during the British age of stone, at what epoch in the world's history was that age likely to terminate? There has probably been an age of stone in the history of every people that has progressed from the savage to the civilized state. There are savages who use stone implements even at the present time; and, when communication was unfrequent, it is conceivable that one race may have been using iron for many ages before another race, at no great distance, became acquainted with the use of that metal. The age of stone may have lasted longer in England than in Switzerland, and it most probably lasted longer in Ireland than in England. Nay, further, it is probable that Kent was the first part of England where stone would fall into disuse, and the metals would take its place. Hence it would be right to assign to these implements as high an antiquity as is consistent with the disappearance of stone from England. This I should lay down as a guide to their minimum antiquity, unless, from its tin-mines and

its intercourse with the Phœnicians, Cornwall might possibly precede Kent. At all events, so far as improvements have been derived from the contiguous parts of the Continent, Kent would have a priority over the rest of the island.

Looking then to such evidence as we have, it is plain that both the Gauls and the Britons were thoroughly acquainted with iron in the time of Cæsar. We find that the Britons had even war-chariots with scythes fixed to the axles of the wheels. Hence a date long anterior to Cæsar must be fixed, for in all probability centuries of bronze intervened between the stone and the iron age, and the iron age in Cæsar's day was considerably advanced.

But, taking the intercourse with the Phœnicians as our point of departure, it is the opinion—even of the late lamented Sir G. C. Lewis, without exception the most scrupulous of all investigators of history—that Great Britain supplied the world with tin, whether by the overland route through France to Marseilles, or by sea, *viâ* the Straits of Gibraltar, in the earliest recorded antiquity. How it is hardly to be credited that such an intercourse should have existed for centuries, whilst the inhabitants, who were capable of working tin-mines, should have remained destitute of metallic tools. We see how metallic wares are the very first objects of interest to the savages we come in contact with in our own day; so it must have been of old. Their intrinsic usefulness points them out as the very first objects of barter; and it is also worthy of observation that the borders of Kent and Sussex are the sites of the earliest iron-works of England. Iron-stone abounds there even now, and it is only the juxtaposition of iron and coal in other districts that has, for the present, driven them out of the market. I should therefore be disposed to place the stone age of England at a very remote era. Indeed, I see no great

reason for placing it much after that of Switzerland. That district is as far removed from the course of commerce (looking at Cornwall as a frequented spot) as Kent or Sussex would be; its mountains seriously impeding intercourse with the Mediterranean coasts, and being more than an equivalent for the actual space between Kent and Cornwall. This argument would be still stronger, if the route of the tin was, as many suppose, through the Isle of Wight to France.

The Swiss antiquaries have found a kind of clue to the date of the stone period in their own country from the rate of silting up at a particular spot. We have nothing to guide us here; but the size of the weapons and the size of the handle of the battle-axe point to the same diminutive race which the Swiss identify with their age of stone, and their construction certainly points to the use of tools of stone. All these indications throw us back at least upon prehistoric times.[1]

Thus far I have proceeded on the supposition that they are the weapons of the warrior whose skull was found near them, and that they may have been buried with him. But if Mr. Goodwin is correct in his belief that they were drifted into the spot where he found them, with the bones and the gravel, their era might possibly be very different. They might then possibly belong to the age which produced the flint weapons and tools discovered by my friend M. Boucher de Perthes, as similar flints have been undoubtedly discovered in parts of Kent not very remote, or the drift of gravel may have been formed at some intermediate date. This however is a geological question, into which I am not competent to enter; I shall therefore content myself with merely pointing

[1] Sir Charles Lyell remarks ('Antiquity of Man,' p. 369),—"When weapons of that mixed metal [bronze] were in use, a somewhat uniform civilization seems to have prevailed over a wide extent of Northern and Central Europe." This may also have been the case in the stone period.

out this possibility, and leave its discussion to those who have made such matters their peculiar study, should they think that there is any likelihood of their having belonged to the antediluvian period of stone.

On the main question, I would merely say in conclusion that there is no post-Roman period at which I can conceive it possible that such weapons could be used in Kent, and that the very slight indication afforded by the form, which I strongly think is of wooden and not of metallic origin, is too slight to have any weight against all that history has recorded of the manners and customs of this country between the landing of Cæsar and the discovery of these very singular objects.