

## III.

## ON THE BRONZE SWORDS OCCASIONALLY ATTRIBUTED TO THE ROMANS.

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In the study of primeval archæology, there are few researches more important in themselves, and in their influence on subordinate topics, than those which relate to the metallurgic skill and practices of the ancients. At present I am desirous of directing attention to only a very limited section of this most extensive inquiry—to a point which may seem to be in itself of comparatively little moment, but which, from its indirect bearing on British, and indeed on European archæology generally, it occurs to me is deserving of some notice.

A recent French author, M. Mauduit, who was at much pains to test the capability of bronze to receive *temper* by experiments which I believe were never successful, has averred<sup>1</sup> that the Romans, at the great battle of Telamon, in the year 225 B.C., against the Transalpine Gauls, were armed with swords of that metal. Mr Wright, in his volume, “The Celt, Roman, and Saxon,”<sup>2</sup> has, on the authority of Mauduit, repeated the statement with the object of supporting his own view, that the bronze leaf-shaped swords found in this country and elsewhere were, peculiarly, Roman weapons; and from the use thus made of it, it becomes desirable to discover in how far M. Mauduit’s opinion is to be received as accurate. For myself, I cannot perceive, for the following reasons, that any tenable grounds for it can exist:—

Polybius,<sup>3</sup> in his celebrated essay on the military institutions of the Romans, furnishes many details respecting the arms employed by that warlike people in his own day; and he thus incidentally informs us that their javelins, their shields, and their spears were mounted with iron. He simply describes their swords without indicating their material; but surely, even apart from other considerations, it would be more than probable that they were fabricated of the same metal as those other weapons which he mentions. We shall, however, find, that there is something more than probability, strong though it be, to depend upon. And in passing, let us mark this author’s description which is best applicable to a stouter stuff than bronze<sup>4</sup>:—“They (the swords) are made not

<sup>1</sup> Decouvertes dans la Troade, p. 127.<sup>2</sup> P. 77.<sup>3</sup> Lib. iv.

<sup>4</sup> I beg it to be understood that on this inference, simply and alone, I do not found any argument whatever, as such argument, under any circumstances, would be vague and indefinite, but especially so when it is stated that bronze *is* capable, although modern ingenuity has failed to detect the process, of being endowed with properties which at first sight might appear incompatible with its nature. The ancient Egyptians, for instance, who used this alloy

only to thrust but to give a falling stroke"—“and with singular effect.” Now, be it observed, these are almost *the identical terms* in which he also characterizes the swords wielded by the soldiers of Æmilius at Telamon, in his account of that battle; so that it is very evident they differed in no very marked manner from those in use in the time of Polybius himself, who, it should be noticed, was born only about twenty years after the famous victory referred to.

But the nearly direct evidence which he affords, receives illustration and force from the circumstance, that during the Second Punic War, which immediately succeeded the battle of Telamon, the Romans adopted the Spanish sword,<sup>1</sup> whose material we have no difficulty in definitively ascertaining, as Diodorus Siculus<sup>2</sup> particularly alludes to the process by which the Celtiberians prepared their *iron* for the purpose of manufacturing swords, “so tempered that neither shield, helmet, nor bone could resist them.” Now it is Polybius who informs us of the fact of this change; and had it implied a substitution of iron for bronze, he could hardly have failed to say so; but instead of that, it is indicated in a work quoted by Suidas, which is attributed to Polybius by eminent classical critics,<sup>3</sup> that it was the shape and superior manufacture of the Spanish sword which were the inducements to employ it. That no such radical change as from the one metal to the other *then* took place, is also to be inferred from the circumstance already adverted to, that Polybius attributes similar characteristics to the swords used at Telamon and to those of his own time.

But, indeed, that the former were of iron one would have been prepared to believe even in absence of such affirmative testimony, and with no evidence to the contrary; as many centuries prior to the event in question, that metal, we have proof, was in common use, and apparently not in very limited quantity, in the classical regions of Europe. I need hardly repeat what is so generally known, that before the days of Homer the Greeks were acquainted with it, and

extensively, attained to such a wonderful degree of excellence in its manufacture, that they produced blades, such as that of a dagger in the Berlin collection, which, to quote Sir Gardner Wilkinson, “retained its pliability and spring after a period of several thousand years, and almost resembles steel in elasticity.” (Ancient Egyptians, vol. i., p. 360). A saw which I procured at Thebes likewise evinces remarkable skill in the treatment of bronze. Nor are similar examples altogether wanting among the archæological relics of Western Europe. In the Museum of the Royal Irish Academy there is a bronze sword, which I was told was possessed of very considerable flexibility; but I need not observe that this is a very rare characteristic of primeval weapons of the same class.

• <sup>1</sup> It is this fact, not fully considered, which seems to have induced M. Mauduit's opinion.

<sup>2</sup> Lib. v., c. 2.

<sup>3</sup> Cassaubon and Justus Lipsius, cited by Mongez, *Memoires de l'Institut de France*, vol. x., 1803, p. 194.

that Hesiod represents himself as living pre-eminently in the "age of iron;" while the Romans themselves were in full possession of it, there is every reason to believe, at least as early as the Expulsion of the Kings.<sup>1</sup> The contents of Etruscan tombs, too, remarkably confirm this fact, since in them objects have, of late years, been discovered which clearly evince that their fabricators, who were conterminous neighbours, and latterly vassals, of the Romans, were no novices in the art of manufacturing iron. It is unnecessary to refer to various articles not of a military character, or even to certain paintings on the wall of one sepulchre which, from their colouring, represent, in Ottfried Muller's opinion, figures in iron armour;<sup>2</sup> but it may be well to specify one instance in which "*swords and bows of steel*"<sup>3</sup> were found in a necropolis near Bomarzo, which, as Mr Dennis informs us, is supposed, on competent authority, to date from a period somewhat synchronical with the Roman conquest of Etruria.

But M. Mauduit, and after him Mr Wright, admitting an early acquaintance with iron on the part of the Romans, urge that, by a treaty with Porsenna, who reigned in Etruria when Tarquin was driven from the City, they became bound to use that metal only for agricultural implements; and these authors, from their method of stating it, would seem to wish us to regard this as a reason for their assertion that the Roman swords were bronze at Telamo. Now, the fact of the existence of so extraordinary a stipulation rests only on the statement of Pliny, who wrote about six hundred years after its alleged date; but even if such a very improbable treaty ever was entered into, surely it would be rather credulous to believe that up to the battle of Telamon—for the space of nearly three centuries—it was kept inviolate, and that, too, in times

" When Europe's trade was arms,  
And the lov'd music of her youth, alarms."

In such a case direct proof can scarcely be required; but should any sceptically wish it, it may be met with, for instance, in the description by Polybius<sup>4</sup> of the singular piece of mechanism invented by the Romans during the First Punic War, for grappling the vessels of the enemy, which owed its success to the iron of which it was chiefly constructed. Nor, perhaps, as having more immediate connection with the subject in hand, should I omit noticing two passages in Plutarch's Life of Camillus, in one of which that general is said to have armed his soldiers with iron-headed pikes and helmets in the war with the Gauls about

<sup>1</sup> Worsaae's *Zur Alterthumskunde des Nordens*, p. 63.

<sup>2</sup> Berlin Academy Transactions, quoted by Prichard, *Researches*, vol. iii. p. 257.

<sup>3</sup> Dennis's *Cities and Cemeteries of Etruria*, vol. i., p. 224.

<sup>4</sup> *Lib. i., c. 2.*

390 years B.C., therefore 165 years before the battle of Telamon ; and in the other of which is attributed to him the bold declaration to Brennus, that " Romans were accustomed to deliver their country not with gold but with steel." We must not, of course, forget that Plutarch lived four hundred years after those events which he professes to chronicle, and that his account of the sack of Rome is not altogether to be relied upon ; but for us to suppose that Camillus *might* have so spoken of steel, would be quite in accordance with probability, as the swords found at Bomarzo, which have been already alluded to, testify ; and as Aristotle,<sup>1</sup> who was a contemporary of Camillus, distinctly specifies the *modus operandi* by which the Greeks were in the habit of converting iron into steel. I might also, were this a more comprehensive inquiry, advert to a much older civilization, to another, but not distant, land, Egypt, where iron and steel were in the hands of the warrior and the artizan probably a millennium or two before the period in classical history which has been named. But any such discursive allusions would lead far beyond the scope of the present paper, which I have wished to restrict to the question at issue.

I conceive, then, that inferential reasoning and direct evidence combine to show that the swords of the Romans at Telamon were of iron, and that the assertions to the contrary, being erroneous, can afford no colour to the theory that the bronze leaf-shaped swords were the weapons in use by the conquerors of the world at the comparatively late period implied.