

*Of the Roman Hasta and Pilum ; of the Brass and Iron  
used by the Ancients.*

*To Mr James Cummyng, Secretary to the Society of Antiquaries,  
Edinburgh.*

SIR,

MANSE OF DUNDURCAS, near Elgin.

A FEW years ago, some copper antiquities were found in a moss at *Inchoch*, three miles east of *Nairn*, in the parish of *Auldearn*. These I obtained, and now transmit them to you, as Secretary to the Society of Antiquaries, that they may be placed in their repository.

I take the two sharp pointed pieces of copper, to be heads of *Roman Hastæ*, or spears.

Hh

Varro

Varro informs us, that the *Haſta* was at firſt the peculiar weapon of the *Haſtati*. In Polybius's time, they had adopted the *Pilum* or javeline, and the *Haſta* was given to the *Triarii*, but more particularly appropriated to the *Velites* or light infantry, each of whom had *ſeven* of them. The ſhaft was round, an inch in diameter, and three feet long. The head was from *ſeven* to *eleven* inches in length, and had a ſocket for receiving the wood. Their remains, which I have ſent, correſpond to this deſcription of Polybius †.

The *Pilum* was a weapon of the ſame kind as the *Haſta*, and each of the *Haſtati* and *Principes* had *two* of them. The wooden ſhaft was from *three* to *three* and a *half* inches in diameter, and *four* feet and an *half* long. The metal head was of the ſame length with that of the *haſta*, and at the middle an *inch* and a *half* in diameter ; one half of it was inſerted into the ſhaft, or fixed to it with rings, and two feet three inches of it remained without the ſhaft. This head varied in form, being either round, or ſquare, or three ſided.

Theſe weapons were not peculiar to the Romans. All nations had ſpears. The Celtae had their *Lancea*, *Sparum*, and *Matara*, to which the Roman *Haſta* was ſimilar. The *Pilum* correſponded to the Celtic *Geffum*, *Gefum* or *Gaeſum*, and *Lateia*, which *Lateia* was ſometimes made red hot, and thrown at the roofs of houſes covered with ſtraw, to ſet them on fire, being the *Jacula ſerveſacta* of Caefar.

It is not to be queſtioned that the Romans borrowed theſe, and their other offensive and defensive arms, from the Celtae, as the Celtic

† Polybius, Lib. VI.

tic language ſupplied them with names to war, and the things of ruſtic life. That illuſtrious people afterwards altered and improved them, by their intercourſe with the Hetruſcans and Greeks, as they borrowed whatever they eſteemed an improvement in the military art, from every nation with whom they became acquainted.

As the name *Securis* was given to a figure in plates of antiquities, of a ſhape ſimilar to the two pieces with broad edges, ſent with this, I was led to conſider them as ſmall ſized axes, and gave them that appellation, in a Preface to ſome collections relative to the ancient hiſtory of Britain, which is now at Edinburgh. On ſecond thoughts, I find, that neither their form nor magnitude are adapted to the uſes of a *Securis*. At laſt my miſtake was rectified by Joſephus, in his account of the Roman armour and weapons\*. He mentions that the Roman cavalry had, not only a long pole headed with metal, or, an horſeman's ſpear, but alſo, in a quiver, *three* or more darts, with *broad points*, of the ſize of an *Haſta*.

Theſe now ſent anſwer to this deſcription ; and may be conſidered peculiar to the cavalry, as the ſharp pointed are heads of the *Haſta Velitaris*.

They are all made of that ſpecies of copper which Pliny † names *Caldarium*, or caſt in a mould ; and thoſe with the broad edge have the mark where the two parts of the mould were united.

Some Antiquaries ſay, “ That it is a miſtake to imagine that all “ the braſs ſwords, ſpears, &c. found in Scotland, are Roman, as the

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“ Goths,

\* De Bell. Judaic. Lib. iii. Cap. iii.

† Pliny, Lib. xxxiv. Cap. viii.

“Goths, Danes, and Angli, used such instruments, and these were frequently buried or thrown into the fire with the dead; and that we cannot pretend to judge with any certainty what of them are truly Roman, except where urns with Roman letters, or the neighbourhood of some Roman station, offered us some foundation for conjecture.” Nay some, not satisfied with this, assert, “That the Roman authors never mention the use of brass weapons among them; that they very well understood how much preferable iron was to brass for the making of arms; and so well how to forge it, long before they set foot in Britain, that it seems strange how any body can imagine those brazen spear heads, and swords, and other implements to have belonged to them, where the same in iron would have been much more commodious.”

There can be no doubt that iron, as now treated, is a metal preferable to copper, for weapons and many other purposes; but we are not to judge from modern practices and improvements, of what actually did take place among the Romans and other ancient nations. The question then is, did the Romans use copper for their weapons? or was it limited to the more northern and modern nations? Upon a candid investigation it will appear that the Romans did use it, nay for a long time preferred it to iron, a metal more stubborn to manage, and less in request.

Before metallurgy was practised, sticks with their ends burned in the fire, were usual weapons; then arms of stone, and heads of spears and arrows of that substance were introduced. The cabinets of the curious are filled with such. They are found over Europe; and, in Scotland, what our country people call *Elf-Arrow Heads*, which some use as amulets, are the arming of our ancestor's arrows, made of flint, before they knew the use of metals.

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When attention was turned to metals, the easiest smelted and wrought would first come into use. Of these *aes*, copper, was, from remote antiquity, applied to every civil, military, and religious purpose. It was late before iron came into general practice, as it is a difficult and tedious process to extract it from the ore, and render it malleable.

The Romans were early acquainted with copper. When Servius Tullius divided the inhabitants of Rome into classes, he fixed the armour and weapons of each class, and appointed them to be of copper. Livy says\* of the first class, “*arma his imperata, galea, clypeus, oecae, lorica; omnia ex aere; haec ut tegumenta corporis essent, tela in hostem, hastaque, et gladius,*” &c. This ascertains, that copper was then universally employed in their armour and arms.

It appears from Caesar †, that *Aes* was the metal he used in refitting his shattered fleet, though no doubt they by this time had become acquainted with the uses of iron, as Dio Cassius informs us ‡, that Caesar's troops, in the engagement with Ariovistus, found their daggers of great avail, not only as they were shorter than the Gallic or German broad sword, but as their points were made of iron or steel, which implies that the remainder of the blade of that weapon was made of another metal, probably copper.

Pliny § gives an account of *aes* or copper, which he distinguishes into three kinds: “*Coronarium,*” which was beat into thin plates, “*tenuatur in laminas.*” “*Regulare,*” which endured the hammer, “*obsequitur malleo.*” “*Caldarium,*” or cast copper, which was brittle, “*malleis fragile.*”

In

\* Livy, Lib. i.

† De Bell. Gall. Lib. iv. Cap. xxxi.

‡ Hist. Rom. Lib. xxxviii.

§ Pliny, Lib. xxxiv. Cap. xx. Ed. Hard.

In the same book \* he describes the different qualities of the various kinds of *Ferrum* or iron. "Aliae molle tantum, plumboque vicinius subministrant; aliae fragile et aerofum—aliud brevitate sola placet." Among these are properties that do not belong to the metal we call iron; so that I suspect, even in Pliny's time, they either had not sufficiently distinguished between the two metals, *aes* and *ferrum*, or in many instances used these two words synonymously and promiscuously, when applied to the materials of armour and weapons, as brass had been originally employed before iron was in common use.

It is uncertain when iron came into general use among the Romans, and in any degree superseded copper. Plutarch, in his life of Camillus, towards the end, says, that he ordered his troops to provide iron helmets, that the large swords of the Gauls might either be turned aside or broken on them. This I take to be only a transient effort; and that iron was but little used until after they became acquainted with Spain; and the iron mines of Cantabria, which were easily and successfully wrought. At least, in the time of the second Punic war, they adopted the short Celtiberian sword, which was made of iron, and for pushing, but never could attain the temper and goodness of the inventors. At the same time the Spanish dagger of twelve inches in length, and of iron, was introduced among them.

But it must be observed that, long after that period, *aes*, copper, was chiefly employed by them; so much, that all the arms, armour, and tools of that illustrious people, that are extant, are of copper. The beaks of their ships of war were of that metal, and Virgil mentions *aerata securis* †, as a weapon, and *aerata acies* ‡.

Pliny

\* Pliny, Lib. xxxiv. Cap. xli.

† Virgil, *Æn.* vii. v. 703. &c.

‡ Virgil, *Æn.* xi. v. 656.

Pliny informs us\* that they melted copper and iron into one mass; and, if he describes the making of steel, he also mentions the mixing of alloy with copper, to harden it †. From modern experiments it appears, that copper, by undergoing certain processes, can be made to have most of the properties of iron. This the Romans were certainly acquainted with, as they applied copper to purposes that required a hard and well tempered metal; and, after they had acquired the knowledge of iron, gave the preference to copper, either pure or mixed with alloy, and duly tempered.

There can be no doubt then, that many of the antique copper arms discovered on the Continent, were made by the Romans. They answer to the description given by their writers, and to the figures of them upon their ancient monuments. They were also manufactured after their own peculiar style and manner, that distinguished them from those of other nations. The swords of the Gauls and Germans were long and broad, without sharp points. The Roman swords were short, sharp pointed, and made for pushing. The blade was substantial, about two feet in length, generally straight, though sometimes a little curved; but the point was uniformly sharp.

When weapons are found in countries, where that people once were, of the same metal, form, and characteristic style of workmanship, with those that are truly Roman, we cannot but ascribe them to the same people. This argument holds good, in regard to the copper arms discovered in Scotland, as the Romans pervaded the island, and occupied stations in it to the north of the Grampian hills. To this we must add, that the copper swords found in this country agree to the description of that weapon among the Romans, and  
neither

\* Pliny, Lib. xxxiv. Cap. xl.

† Ibid. Cap. xx.

neither to the large and pointless Gallic or German, nor modern Scots broad swords.

The inhabitants of Britain, Gaul, and Germany, for a long time, had only small quantities of any metal; yet I can entertain no doubt, that the same reasons that influenced the Romans, operated with them to employ copper. The management of this metal, they had learned in the east, before their emigration to Europe; but mines of it were scanty in the countries they occupied, and they found greater plenty of iron. Arms and utensils of copper have been discovered over Europe, of a design and fashion different from what prevailed among the Romans. *Ferrum*, iron, was also used by these northern nations, and probably in greater proportions than *aes*, copper, if we limit the name *ferrum*, and contrast it to *aes*. This is established by the testimonies of Tacitus, Caesar, and Plutarch.

Tacitus reports of the Germans\*, "Ne ferrum quidem superest, sicut ex genere telorum colligitur. Rari gladiis, aut majoribus lanceis, utuntur; hastas, vel ipsorum vocabulo, frameas gerunt, angusto et brevi ferro:" &c. And of the *aes* †, "Rarus ferri, frequens fastium usus." And of the *Fenni* ‡, "Sola in sagittis spes, quas inopia ferri ossibus asperant." In his Annals §, he describes the German arms; "Enormes hastas—non lorica Germano, non galeam; ne scuta quidem ferro nervove firmata—primam utcumque aciem hastatam, ceteris, praeusta aut brevia tela."

Caesar † relates of the Britons, "Nascitur—in maritimis ferrum, sed ejus exigua est copia; aere utuntur importato."

Plutarch,

\* Tacitus, De Mor. Germ. vi.

† Ibid. xlvi.

‡ Caesar, De Bell. Gall. Lib. v. Cap. xii.

† Ibid. xlv.

§ Lib. ii. Cap. xiv.

Plutarch, in his life of Marius, writes that the Cimbri applied copper to religious purposes, as they swore the captives they dismissed, on a *brazen bull*; and used *iron* for their weapons and armour, as they were armed with breast plates of that metal, and had large and weighty swords, the reverse of the Romans.

If this investigation does not fully answer, at least it weakens the objection against copper weapons being Roman. That people, in every period of their empire, employed copper in their armour, arms, and tools. Many such are found, that accurately resemble the descriptions, and representations on Roman monuments. The other ancient nations of Europe had not plenty of that metal. They rather gave the preference to iron, for warlike purposes, and, when they used copper for weapons, their style of workmanship and fabric distinguishes them from the characteristic manner of the Romans.

I know not what to make of the round piece of their copper, which was found among the others, if it was not for the end of a *Pilum*, as a cross stop where the metal head was inserted into the wood.

I forgot to mention, after the last quotation from Plutarch, that Diodorus Siculus\* describes the breast plates, or coats of mail of the Gauls, "as being made of iron rings joined to each other;" and such pieces of armour I have seen, that were used by our ancestors the Caledonians.

I also send you a *silver coin*, that, with a number of other silver coins, was lately found in digging the foundation of a kirk at

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Dyke,

\* Diod. Sic. Lib. v.

Dyke, two miles west from Forres. There were only two different kinds of them, as was reported to me, of which I have as yet procured only this *one*, but hope soon to procure some of the other kind, when they shall be transmitted to you.

I am so little satisfied with my attempt to decypher the inscription on this coin, that I cannot resolve to mention it, but will be much obliged to you for the opinion of the Society.

The institution of the Society of Antiquaries at Edinburgh, reflects honour upon the promoters, and meets with the perfect approbation of those who put the proper value upon the history and antiquities of their native country. Every Scotsman is called on to favour the design, and contribute his share of information to them, that, under their eye, our ancient history may be rescued from the reveries of the theorist, and the dictates of national vanity, and as just information be obtained, as the state of facts and the nature of the inquiry can admit.

Influenced by these sentiments, I have given the present trouble, and flatter myself that this apology will be received as a good one by the Society and you.

It will be most obliging, if, at a leisure hour, you shall write to me, and let me know that the antiquities now sent come safe to hand; and, if you did not consider it as levying too great a tax on you, I would beg you would inform me when any important discovery, or object of curious research, comes before your Society.

I ask

I ask your forgiveness for this trouble; and have the honour to be,

SIR,

Your most obedient,

Most humble Servant,

JOHN GRANT.