

IRISH BRONZE AGE WEAPONS

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The ancient Irish, needless to say, were fighters. They were active in tribal wars, in contests between kings, and in campaigns or forays carried on in Wales and England. Their weapons and shields were cast of bronze, the weapons being tempered, and it must have required a large number of molders to supply them. They were as beautiful in shape and proportion as those which have come down to us from the classic period of Greece and Rome.

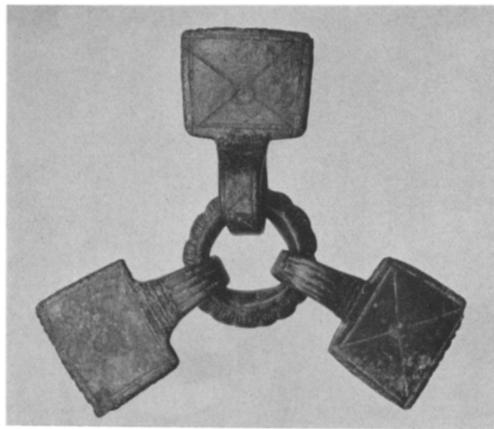
This article deals with six ancient Irish bronze objects, recently purchased by the Museum, that belong to the stage of civilization when metal had become known to the Irish and was used for weapons, tools, and personal ornaments. They are: three axes, or celts—a decorated flat axe, a palstave, and a socketed looped axe; a leaf-shaped sword; a dagger; and a harness ornament. The decorated celt is of the Early Bronze Age and came from Howth in Dublin county. The other pieces are later and were found in Rath Carrick, Sligo.

The early Irish smiths were accomplished in the manufacture of such weapons and implements. They knew how to make alloys, how to chase metals, how to color them. The earliest Irish molders worked with copper for some time before they learned to make bronze, the copper being easy to melt from the native ores and readily shaped after the rough casting. Later on when the use of tin was discovered, tin was combined with copper to make bronze, and the most skillful work was done in producing

such objects as axes, chisels, daggers and swords, spears, shields, ornaments for harnesses and chariots, and articles for personal adornment.

Although the art of forging the heated metal was unknown to the Irish, they were masters of casting. At first only solid castings were made, in which the cast was composed throughout of metal. Such a cast is not only heavy but uses up

a considerable quantity of metal. Stone molds were used for making solid casts, as is known from various prehistoric finds. It was an advantage that they did not have to be broken after the cast had solidified but could be used over and over. When the implement was taken out of the mold it was made elastic by means of dipping in cold water, and very often the surface was ornamented by means of bronze punches.



Harness ornament. Irish, about 250 B.C. Part of the breeching. The linear design was stamped with a tracer. 4 inches across; weight 3 ounces. Rogers Fund, 1948

Molds were also made from clay and sand, which were baked. One of these, found on the site of a prehistoric foundry, is in the Dublin Museum.

The first metallic axe retained the form of the stone axe. In some regions of scarce metal bronze axes were copied in stone, but this was apparently just a case of the poor man copying the rich man's weapon in a cheaper and more easily obtainable material. Bronze axes, like stone axes, served both as tools and weapons as occasion demanded. With them one might fell trees and dress timber or split the heads of one's enemies.

The gradual development of the axe from the flat casting made in an open mold to the



Flat axe, with flanges made by hammering up the sides of the blade. Irish, about 1700 B.C. The axe was lashed to the handle by thongs that fitted over the cabling on the sides. The herringbone pattern was also used on early Irish monuments, pottery, and gold ornaments. Length 8 inches; hardness on Shore's scleroscope 17-25; weight 1 pound 13 ounces. Rogers Fund, 1948

well-balanced, decorated celt cast with a socket, has often been traced and the different forms classified as flat celts, flanged celts, winged celts and palstaves, with and without loops, and socketed celts. Our acquisitions represent the three principal types of Irish axes: 1, the flat axe with incipient flanges made by hammering on the sides after casting and cable pattern on the sides; 2, the axe with flanges and stop-ridge; and 3, the axe with socket and ring.

In the earliest type of metal axe the mold made but one side of the casting, and the opposite side was finished by hammering. The early flat axe shown above was cast in stone molds made in two parts, both the cope and the drag. Already it shows a number of advanced features. The cutting edge has a wide-curved, thin outline caused by hammering to harden and sharpen it and has itself become an ornamental feature, with the curved points adding greatly to the elegance of the shape. The thickest part is in the center of the blade, where there is a slight transverse stop-ridge to prevent the axe from being driven through the handle when a blow was struck, and the edges are cabled to

grip the thongs of the handle more securely.

In the beginning metal axes were hafted much as stone axes had been. The early flat celt was attached to the wooden handle with thongs; the handle was perforated, or split at the end, to receive it, or it was lashed to one side. In the case of our flat axe, which has side flanges, a handle was made from a branch with an elbow-joint; its shorter limb was split and the metal slipped in; a lashing of sinew which fitted over the cabling of the sides secured the axe to the haft.

During the Middle Bronze Age (1700-1000 B.C.) a characteristic form of axe developed, our second type, in modern times called the palstave. The term palstave (paalstab) comes to us from the Scandinavian antiquaries and means a kind of spade or "spade staff." It refers to the winged celts which have their wings hammered over to form external sockets to the blade and with a stop-ridge on each face.

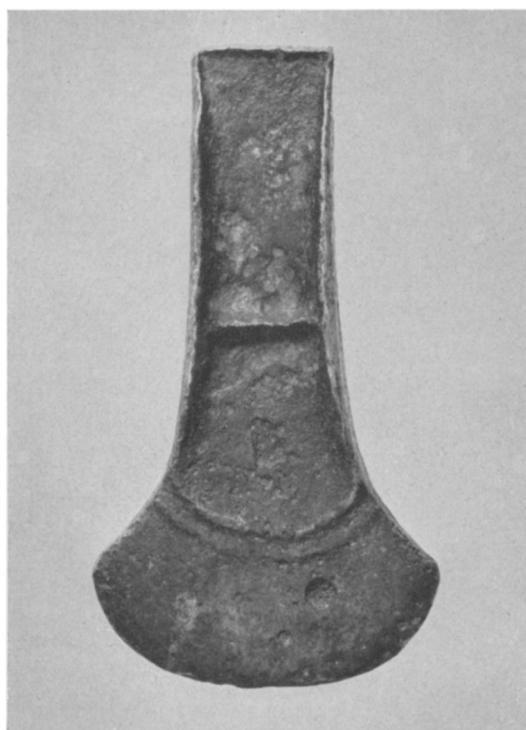
The last type of celt was one with a handle socket and beside it a ring through which thongs were passed and tied to the handle, to prevent the celt from flying off during vigorous use. The

diminishing size of the socketed axe corresponds with the increase in variety of other tools such as chisels, gouges, saws, and hammers. Wherever we should now use the spade, the crowbar, or the pick-axe, the ancients used the palstave or the hollow celt fastened to a straight wooden shaft.

Irish axes, with the exception of the early ones made of copper, show a great variety of ornament—lozenge, chevron, herringbone, zig-zag, triangle, cross-hatching, together with volutes, concentric circles, and spiral lines. These are the same ornaments which appear on the earliest Irish stone monuments and clay urns as well as upon the earliest and simplest gold ornaments. The flat axe acquired by the Museum is stamped on both faces with a repeated herringbone pattern which covers most of its surfaces



Socketed and looped axe. Irish, 1000-500 B.C. A wooden shaft was set in the socket and tied with thongs that passed through the ring. Height $2\frac{1}{8}$ inches; hardness 15-20; weight $3\frac{3}{4}$ ounces. Rogers Fund, 1948



Palstave. Irish, 1000-500 B.C. The sides of this axe were hammered up to form a groove into which the handle was wedged. A stop-ridge on either side prevented it from being driven back through the handle. Height $3\frac{3}{8}$ inches; hardness 15-25; weight $4\frac{3}{4}$ ounces. Rogers Fund, 1948

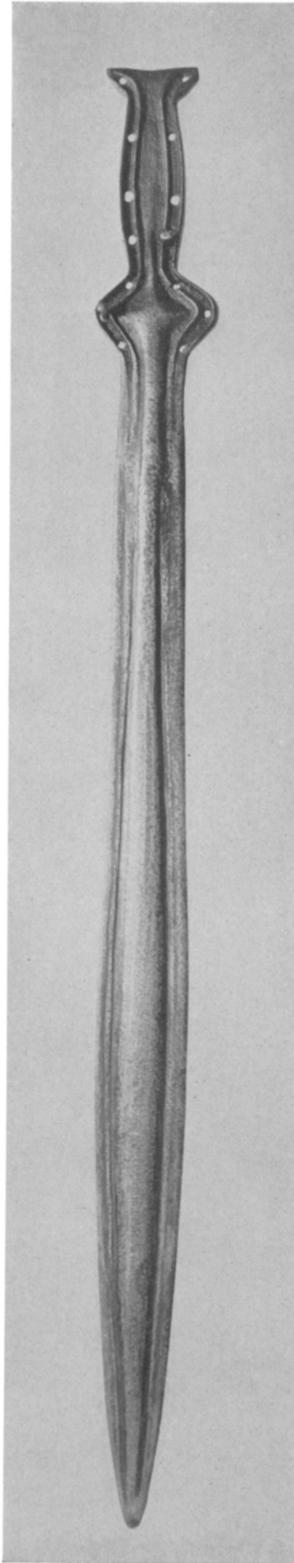
except the crescentic cutting edge area and the central area above the transverse ridge which was covered by the prongs of the haft. There was no need to decorate surfaces which were either covered or subject to wear from use. The decoration was made with a chisel-like tool resembling the modern metalworker's tracer, which made an incised line. This was the usual procedure, for it is believed that in the Bronze Age in the British Isles there are no examples of true engraving, a procedure implying the removal of that part of the metal which originally occupied the groove. The cable pattern on the edges was produced by a hammer. Some of the ornamentation is very well preserved and the surface has become thickly coated with a dark sage-green patina, which, unfortunately, has been removed in some places.

To provide a long weapon for mounted horsemen, the dagger was lengthened to become a short, straight, double-edged sword. The length of our dagger blade is a shade under nine inches. Unfortunately it has neither hilt nor rivets to indicate how it was fastened. In fact, to determine whether such an Irish weapon

is a dagger or a halberd is sometimes difficult. The halberd is a pointed metal blade affixed at or near the end of a shaft and transversely to it, a sort of tomahawk with a pointed blade. The halberd preceded the sword and was used until the craftsman was sufficiently skilled to fashion so large a casting as a sword. In time the sword blade was widened toward its point to make a "leaf-shaped" sword which could be used for slashing as well as thrusting. The leaf-shaped sword has been traced to an origin on the Hungarian plain during the second millennium B.C.

A sword of this kind is one of our principal acquisitions. It is of the simple type used by the lesser nobles. The more ornate type with bronze hilt decorated with incised patterns, used by the greater chieftains, is not very common outside Hungary. The Museum's sword is beautifully balanced and well tempered, and its excellent condition is apparently due to its having been embedded in dry peat. It was cast in one piece, apparently in sand, for no stone molds for casting leaf-shaped swords have been found in Ireland. After removal from the mold it was scrubbed clean with a piece of gritstone. Its edge was hardened

Leaf-shaped sword. Irish, 1000-500 B.C. Apparently cast in a sand mold. The guard and rivets differ from the usual types of bronze swords. Length $25\frac{7}{8}$ inches; hardness 23-30, which indicates cold working; weight 1 pound 15 ounces. Rogers Fund, 1948



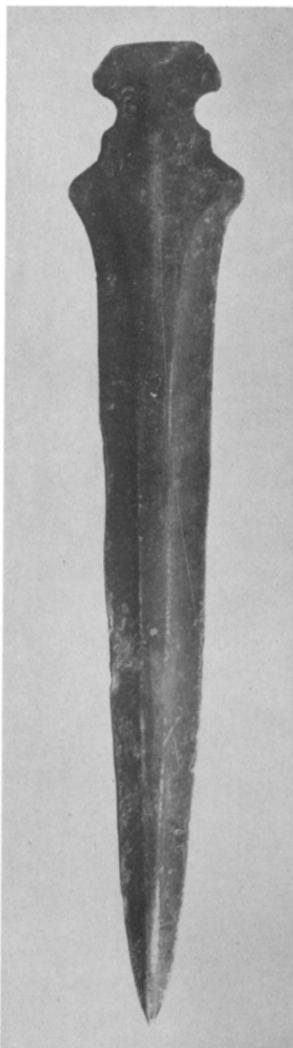
and sharpened by hammering, and its whole surface ground smooth with a whetstone. It was then polished till it shone like gold. This golden appearance of polished bronze is of particular interest since these objects actually belong to Ireland's Golden Age. During the Bronze Age Ireland was an enormously rich country having produced an astonishing quantity of works of art in gold.

From certain structural details it would appear that our sword could have been an independent Irish development. The archaeologist Harold Peake in his book *The Bronze Age and the Celtic World* distinguishes seven main types of sword (beginning about 1500 B.C. and ending about 875 B.C.) and classifies them in accordance with the shape of the guard (junction of blade and hilt). Neither the guard of our sword nor the disposition of the hilt rivets corresponds with any of the seven main types of bronze sword. The edges of the guard blend into both the hilt and the blade instead of into the hilt only as occurs in all the seven main types of sword. Furthermore, the rivets on either side of the grip are differently disposed. In the main types the rivets appear in the center of the grip. In the Museum's Irish sword, on each face of the grip and on each side is an inner ridge following the contour of the grip. Between the inner and outer ridges of the grip are sunken areas pierced with seven holes on each side through which passed the rivets which secured the grip plaques of wood, bone, or horn. One of

the rivets is still in place on either side.

Leaf-shaped swords which have been found in Ireland are divided into two groups, those with notches just below the blade and above the grip and those that are plain. The latter type, to which our sword belongs, is the earlier, and belongs to the Late Bronze Age (1000-500 B.C.). The former correspond to the continental swords of the Hallstatt period. It must be recalled that Ireland during the Bronze Age was not isolated but stood in direct communication with the Continent.

Our horse trapping ornament, which was apparently a portion of the *Tierach*, or breeching, consists of a ring and three looped tabs. They are cast, riveted, and stamped with linear ornaments. The horse was all-important at this early period and played a prominent part in the intercourse of peoples. The steppe horsemen dominated the Slovakian region, and they defended its copper and gold resources with the battle-axe, the sacred emblem in Baltic mythol-



ogy of the god Thor. During the latter half of the second millennium B.C. the steppeland warriors, with the advantage of the use of horses and a knowledge of metal for making weapons, were conquering far and wide. There may be some truth in the tradition of the Irish that their remote forefathers who migrated from Spain to Ireland were of Scythian origin.

These early Irish weapons are valuable to us in making a comparison with the bronzework of other ancient civilizations. Not only in his bronzework but also in his many Bronze Age golden ornaments does the ancient Irish metalworker show that he was a creative as well as a distinguished craftsman. His work is evidence of a remarkable civilization.

Dagger or halberd blade. Irish, 1000-500 B.C. A halberd was fixed at right angles to the shaft. Without handle or rivets it is difficult to distinguish a halberd from a dagger. Length 9 inches; hardness 17-23; weight 3½ ounces. Rogers Fund, 1948