An Eighteenth-century Find of Four Late Bronze Age Gold Discs near Enniscorthy, County Wexford, Ireland

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WHEN THE DISCS were found, an adequate report was published almost immediately by Ralph Ousley (1797); since then the find has been virtually ignored. The four discs "were exactly alike, quite circular and four inches and three quarters in diameter, very thin, weighing about one ounce each, ornamented handsomely at one side and quite plain on the other, except for a kind of cap or screw for the purpose of being affixed to a handle." Ousley stated that two of the discs were melted down shortly after discovery and two were sent to the President of the Royal Irish Academy, the Earl of Charlemont.[1] Until recently it was not known if any of the discs survived. The find was mentioned incidentally by William R. Wilde (1862, p. 87). He "believed" that a circular sheet gold object with a hole in the center, on one side of which there was a flange, was one of the Enniscorthy objects. Subsequently, E. C. R. Armstrong (1933, p. 46) quoted Wilde's statement. There the matter rested until March 1974. At that time I found that Ousley's publication contained an excellent illustration of one of the discs, showing a highly decorated piece that differed completely from the object published by Wilde and Armstrong (Figures 1, 2). Ousley's object had some decorative features that appeared familiar, but an examination of the appropriate publications failed to produce anything like it. It occurred to me to check my notes on, and photographs of, a gold disc in the Metropolitan Museum, an object I had examined in 1965. According to the Museum's records, it was found at Ballyjamesduff, county Cavan. However, comparison of the Museum's photographs (Figure 3) with Ousley's illustration showed that the discs were similar in decoration and size. I concluded that the "Ballyjamesduff" disc is one of the Enniscorthy discs. Further inquiries established that this disc was once at Johnstown Castle, in southeast county Wexford, within recent centuries the home of the Grogan family. The disc was seen at the castle by Mr. and Mrs. John Hunt prior to the sale of the contents of the castle in 1944.[2] Before the commencement of the sale it was

1. James Caulfeild first Earl of Charlemont (1728–99), was descended from a family of English origin. A patron of learning and the arts, he was a founder of the Royal Irish Academy; the first meeting of that institution took place in his Dublin townhouse, Charlemont House, in 1785 (M. J. Craig, *The Volunteer Earl* [London, 1948]).

2. The present building of Johnstown Castle was constructed by the Grogans during the earlier part of the last century. The castle and estate were presented to the nation in 1945 by Captain M. V. Lakin and Dorothy Violet Jefferies, who, through their mother, descended from the Grogan family. It has not been possible to trace Grogan family papers or any documentation about the disc.

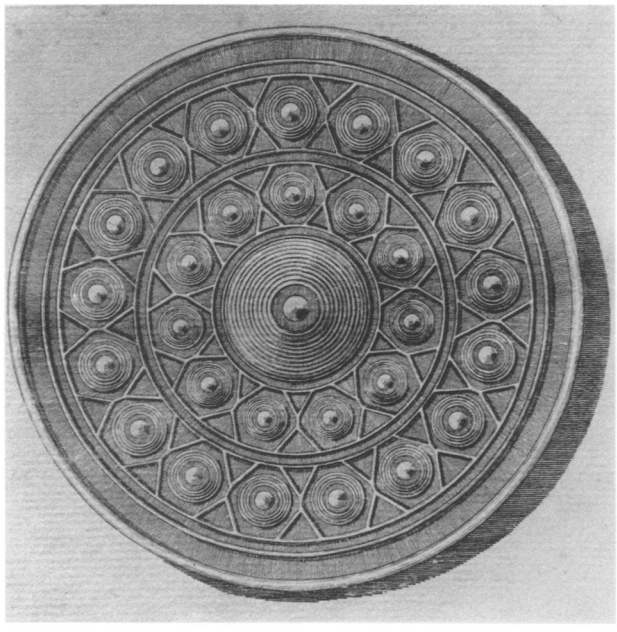
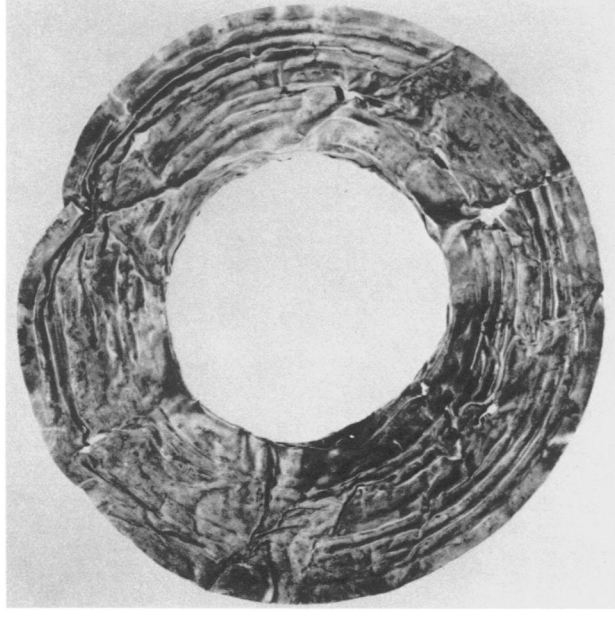


FIGURE 1
Ousley's illustration of one of the Enniscorthy discs. "Diameter 4¾ in." (121 mm.) (Ousley 1797)

FIGURE 2
Gold object of uncertain use. Diameter 128 mm. National Museum of Ireland, W 276 (photo: National Museum of Ireland)



acquired by a Dublin dealer, Harold Naylor. The Metropolitan acquired the disc from Patrick O'Connor, Dublin, who, it may be assumed, acquired it from Naylor. If Ousley's statement that two of the discs were melted down is correct, then this disc must have been one of the pair that was in Lord Charlemont's possession.

It was now established that at least one of the Enniscorthy discs was extant. When I spoke of this to Ruaidhrí de Valera, University College, Dublin, he mentioned a similar disc that he had seen in the library of Trinity College, Dublin, in 1949. My inquiry revealed that Trinity College had no record concerning the acquisition of the disc or about its find place. The disc, together with other objects, had been transferred by the Board of Trinity College to the National Museum in 1963. I examined it in the National Museum and found it similar to the Metropolitan Museum's disc and to Ousley's illustration (Figure 4). In view of the similarities it appears likely that this is the second of the surviving discs.[3]

The four discs were found near Enniscorthy in October 1795 by an unknown peasant while ploughing. The precise find place was not recorded. Since it appears that the four were found at the same time, it seems reasonable to conclude that they were deposited together and that they constituted a hoard. According to Ousley, the finder sold them to a silversmith of Enniscorthy, a Mr. Gurly, "who melted two of them down and sent the other two for sale to the Earl of Charlemont, President of our Academy."

In structure, technique of manufacture, decoration, and size the two surviving discs are similar. They consist of three separate sheet-gold pieces: face plate, back plate, and binding strip. The decoration consists of concentric bands of repoussé work. The face plates, slightly convex, are more richly decorated than the back plates.

DISC NO. 1 (Figure 3). In the center of the face plate there is a conical boss surrounded by fourteen concentric ridges of equal size. Outside the outermost of these is a larger ridge. The next band, bounded inside and outside by a ridge, contains eleven motifs con-

3. This disc was incidentally mentioned by Adolf Mahr in his Presidential Address to the Prehistoric Society in 1937 (*Proceedings of the Prehistoric Society* 3 [1937] p. 371, note 1).

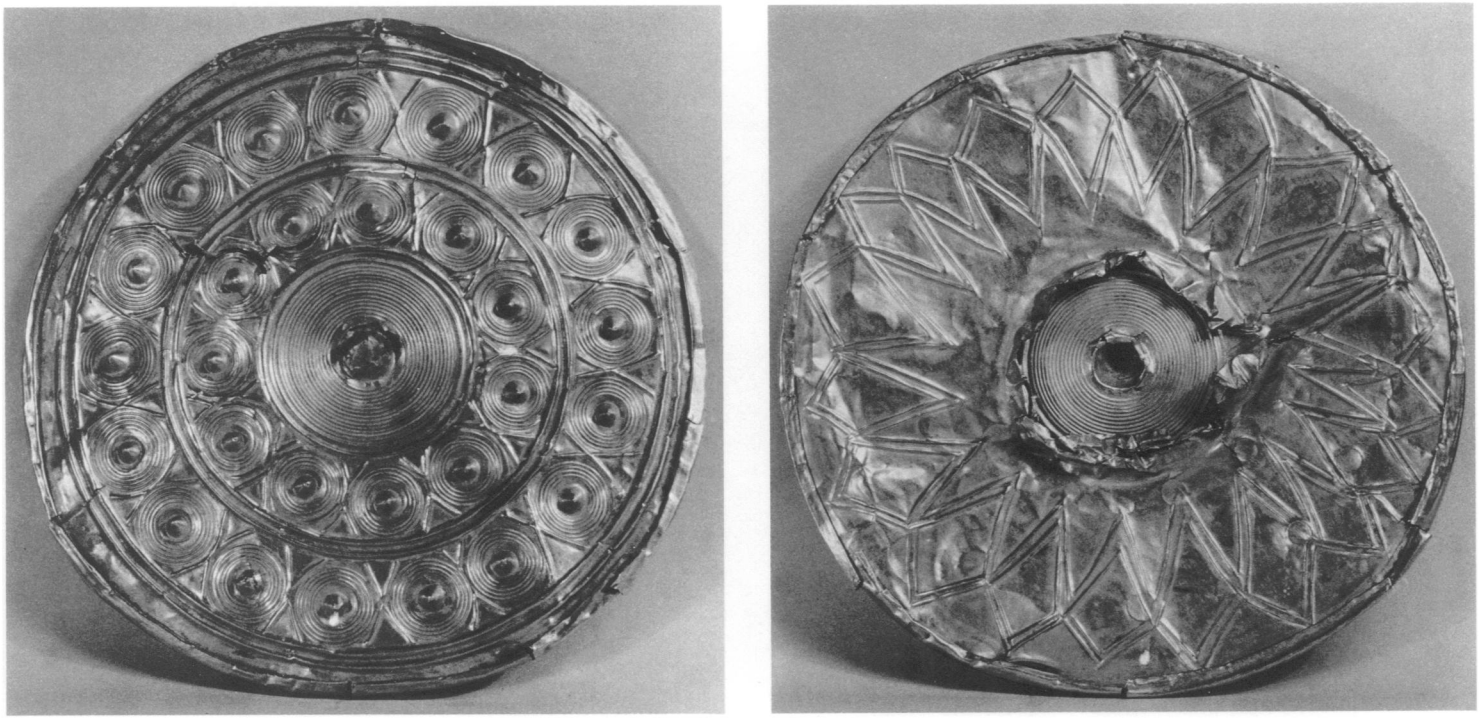
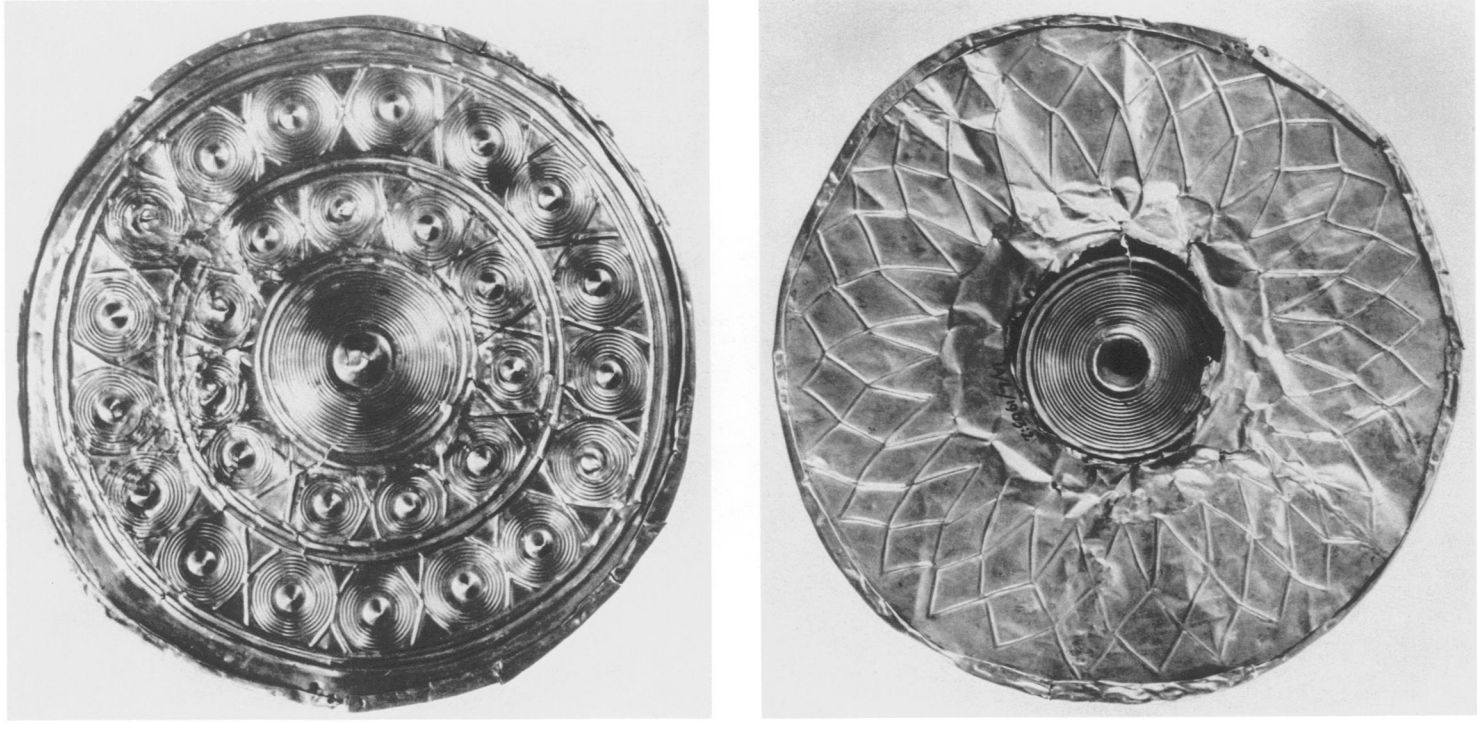


FIGURE 3
Disc No. 1 from the Enniscorthy hoard. Diameter 117 mm. The Metropolitan Museum of Art, Fletcher Fund, 47.100.14

FIGURE 4
Disc No. 2 from the Enniscorthy hoard. Diameter 121-124 mm. National Museum of Ireland, IA L 1963:2 (photo: National Museum of Ireland)



sisting of a conical central projection surrounded by five concentric ridges. Each of the motifs is separated from the next by two triangles, each pointing inward from the ridges that enclose the band, their apexes meeting to form an X. The result is that the individual motif is enclosed within a "compartment." The next band contains seventeen similar motifs, somewhat larger in size. A short distance out from the outer ridge to this band there is a similar ridge.

In the center of the back plate there is a hole, 40–60 mm. in diameter, with jagged edges. The decoration on the back plate consists of twenty kite-shaped areas, each outlined by a double ridge. The broad end of the "kite" is toward the outer edge of the plate and each motif adjoins its neighbor at the shoulder. The overall effect is that of a double row of chevrons in double outline.

The binding strip, which grips the edges of the plates together has a C-shaped, or penannular, cross section.

Apart from slight damage, especially to the binding strip, the disc is well preserved. Diameter: 117 mm. Weight: 1.213 oz. troy (37.73 grams).[4]

DISC NO. 2 (Figure 4). The decoration on the face plate is nearly identical to that of No. 1, the difference being in the shape of the "compartments" in the outer row. The majority are hexagonal but some are pentagonal and others octagonal.

The decoration on the back plate, differing slightly from that of No. 1, consists of adjoining areas that are either kite-shaped or lozenge-shaped. The lozenges are on the outside, and the inner sides of each are formed by the upper sides of two adjoining lozenges, producing a continuous zigzag. The outer zigzag is broader and shallower than the inner one. The central hole is 39 mm. in diameter. Its edges are slightly frayed. The binding strip is similar to that of No. 1. The disc is only slightly damaged. Diameter: 121–124 mm. Weight: 1.214 oz. troy (37.75 grams).

While it seems reasonable to accept these two discs as part of the Enniscorthy hoard, nevertheless, there are minor discrepancies in Ousley's description. He said that one side was "quite plain." By this he may have meant that the back plates did not have the pronounced repoussé work of the front plates. The "kind of cap or screw for the purpose of being affixed to a handle" could simply have been Ousley's cumbersome description of the central opening in the back plates.

The find place of the circular gold object published by Wilde (1862, p. 87) and Armstrong (1933, p. 98, no. 463, pl. 14, no. 274) is not recorded. Its size is roughly comparable to that of the Enniscorthy discs: diameter 128 mm. It has been slightly damaged. The decoration (Figure 2) consists of two groups of four concentric rings separated by a plain area. The diameter of the hole, one side of which is flanged, is 62 mm. Differing in decoration and having a larger hole than the other discs, it is unlikely to have been part of the Enniscorthy hoard.[5]

The purpose of the Enniscorthy discs is unknown. The opening in the back plate indicates that they were attached, or were intended for attachment, to something. Either singly or collectively, in other words, the discs were part of a composite object. They might have been attached to a belt, for instance, like the Danish circular bronze belt plates of Period II–III (Randsborg 1968, p. 130, fig. 67, top), or they may have been part of a more elaborate object, something similar to the Iron Age "Petrie Crown," where repoussé discs are attached to a "body" (Lucas 1973, pl. 13). Or they may have been the terminals of gorgets, although the largest terminal discs so far known are smaller. Furthermore, as Dr. Joseph Raftery has pointed out to me, the opening on a gorget terminal into which the end of the body

4. This disc was analyzed by Pieter Meyers, Research Laboratory, Metropolitan Museum. He reports that "the composition of the three parts was determined by thermal neutron activation analysis on minute samples, obtained by the 'streak' method—rubbing on pure etched quartz tubing."

Sample	*Description*	*Composition* (Approximate, based on assumption that gold, silver, and copper are the only elements present in significant amounts)		
		% Au	% Ag	% Cu
BG 7	Front disc, on raised circles of decoration	83.6	10.7	5.7
BG 8	Back disc, on raised relief	78.6	14.9	6.5
BG 9	Binding strip	82.9	12.1	5.0

5. The Enniscorthy discs constitute Enniscorthy Hoard No. 2. Another hoard found in the neighborhood (Enniscorthy Hoard No. 1) also consists of gold objects: a bar torc with recurved terminals and untwisted body of square cross section, and a penannular neck ring or armlet with solid body of rounded cross section and unexpanded terminals (Eogan 1967, pp. 139–140, fig. 2).

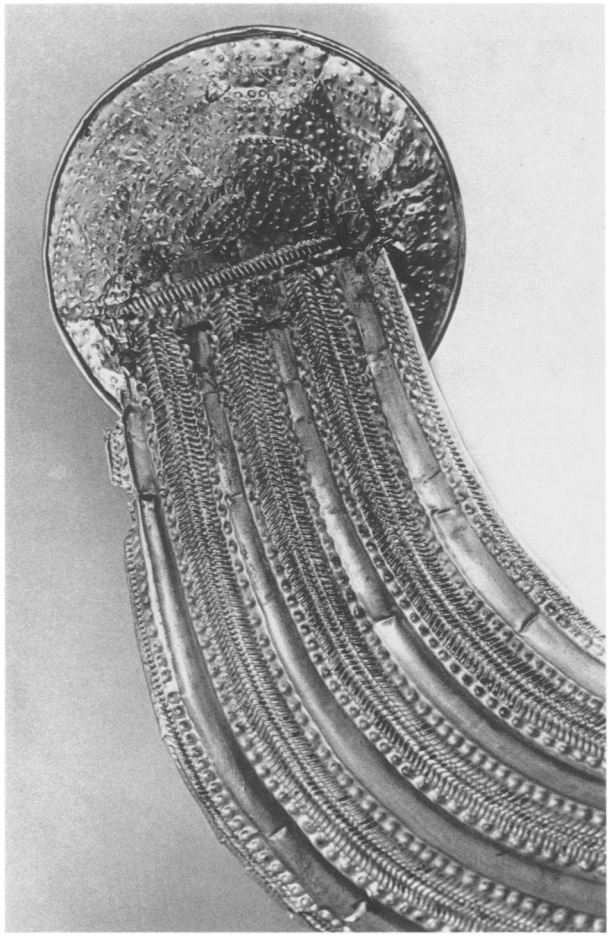


FIGURE 5
Gold terminal and part of body of gorget, Borrisnoe, county Tipperary. Diameter of disc 90 mm. National Museum of Ireland, W 17 (photo: National Museum of Ireland)

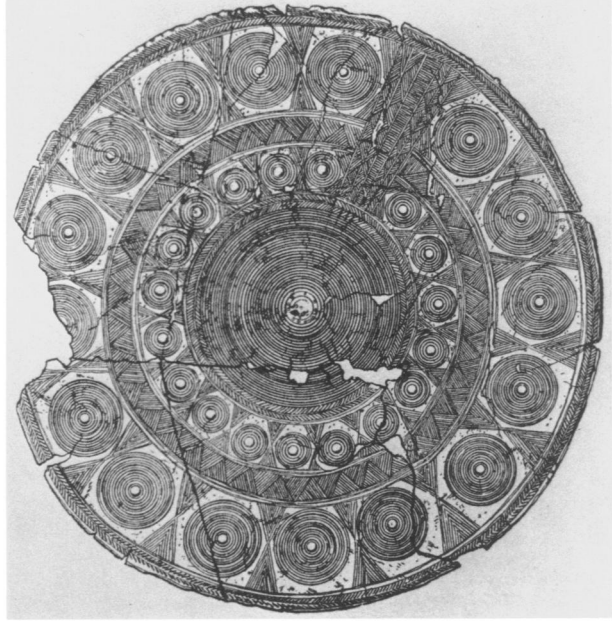
was inserted was elongated (Figure 5), not circular as in the Enniscorthy discs. The only object that compares in size with the Enniscorthy discs is the disc from Lattoon, county Cavan (Armstrong 1933, p. 47) (Figure 6), and structurally this disc is entirely different: a single sheet of gold with no attachment for mounting. If the hypothesis that all four Enniscorthy discs were part of a complete object is correct, then this object was something not hitherto known from Late Bronze Age Ireland. Such an object could hardly have served any practical purpose, and would have been too elaborate to have been an item of personal adornment. One might speculate that it was part of religious or ceremonial trappings.

A number of features help to place the discs in their technological and chronological contexts: material, structure, and technique and type of decoration.

The material, sheet gold, was the material from which the earliest gold objects that were used in Ireland were made: the "sun discs" and the basket-shaped earrings (Armstrong 1933, pp. 84–85, pl. 19, nos. 425–439; p. 86, pl. 18, nos. 413, 423–424). At the end of the second millennium B.C. (the Bishopsland Phase) goldsmiths started to work in bar gold in addition to sheet gold. During the final stage of the Irish Late Bronze Age (the Dowris Phase, eighth century and later) both techniques were used again. It was at this time, too, that the technique of sheet-bronze working was first practiced, and in this connection the numerous buckets and cauldrons provide clear evidence for the skill of the craftsmen (Leeds 1930; Hawkes and Smith 1957).

Structurally, as has been noted, each disc consists of two sheets held together with a C-section binding strip. The terminals of a gorget from Shannongrove, county

FIGURE 6
Gold disc from Lattoon hoard, county Cavan. Diameter 121 mm. National Museum of Ireland (after Armstrong 1933, fig. 17.5)



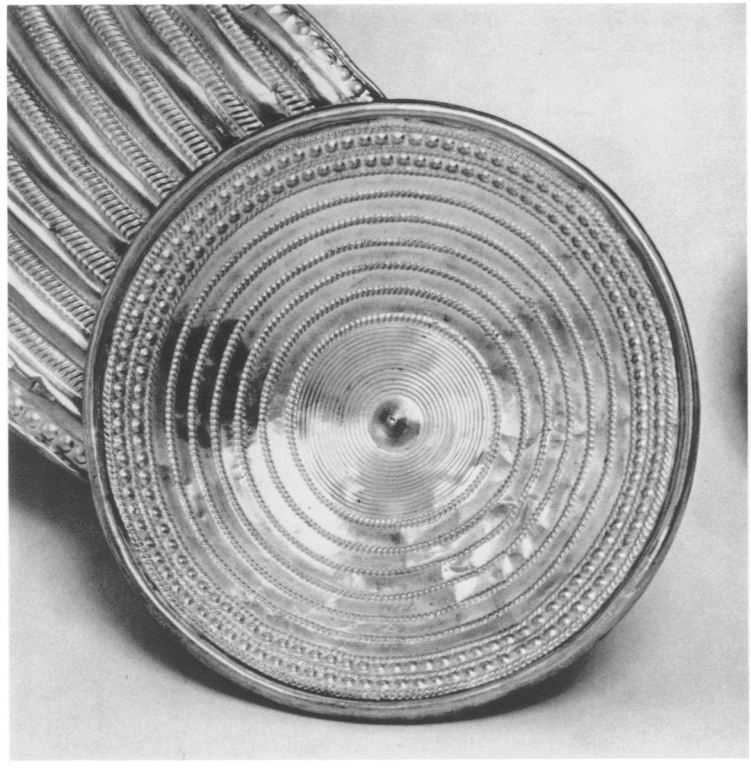
Limerick (Gogan 1931, p. 99, pl. opp. p. 87, top; Powell 1953, pl. 26, right) have a similar binding strip (Figure 7). This type of edging is most frequently found on "lock-rings" (Eogan 1969, esp. p. 105) (Figure 8). Twenty of these rings are known from Ireland; apart from one definite exception (Eogan 1969, no. 3), all have a C-section binding strip. A similar strip occurs on some of the "lock-rings" that have been found in the north of Britain.

Repoussé work was but one of the decorative techniques practiced by goldsmiths. Compass work and graving were also used during the Dowris Phase (Maryon 1938). Repoussé has a long history of use in Ireland. It was first used, but faintly, at the beginning of the Metal Age, as its occurrence on "sun discs" shows (Armstrong 1933, pp. 84–85; Maryon 1938, p. 197). During the Bishopsland Phase, about the twelfth to tenth century, repoussé work was prominent on ribbed bracelets (Eogan 1962, p. 51; 1964, p. 279), but it was during the Dowris Phase that craftsmen produced the finest goldwork in that technique. The Dowris Phase gorgets are the outstanding examples (Figures 5, 7).

The main types of decoration on the Enniscorthy discs are linear and curvilinear. Linear ornament was used from the beginning of the Irish "Bronze" Age but curvilinear ornament was not introduced until the Dowris Phase. Six motifs are present on the discs:

1. A conical boss surrounded by multiple concentric circles—either a large central boss or small "satellite" bosses.
2. X-shaped motifs.
3. Kite-shaped motifs.
4. Lozenge-shaped motifs.
5. Large ridges to separate the bands of decoration.
6. Hexagonal, pentagonal, and octagonal "compartments."

The large central conical boss with multiple concentric circles is a decorative feature of disc-headed pins of both the straight-stemmed and bent-stemmed or "sunflower" varieties, and the terminal discs of gorgets. The "satellite" boss (or central dot) with multiple concentric circles has parallels on the terminal discs of gorgets and occasionally on "sunflower" pins. The motif also occurs on other gold objects such as the Lattoon disc, boxes, bowls (?), bullae, and the "dress-fastener" from



near Clones, county Monaghan (for the last, Lucas 1973, pl. 10). Single conical bosses are found on horns of Class 2, while rivets with conical heads occur on bronze cauldrons of Class B.

Conical bosses are known on various objects in Bronze Age Europe. In central Germany they are found at the beginning of the Bronze Age on metal-hafted halberds (von Brunn 1959, p. 69, pl. 97, from the Welbsleben hoard). Incipient conical bosses are found on an early form of the Transylvanian bronze battle-ax with disc head (Type A 2), but as the form developed during the Middle Bronze Age the bosses become more pronounced (Nestor 1938). A central cone is also found on the copper discs of the central European Early Bronze Age Aunjetitz and Straubing cultures; it is often surrounded by concentric ridges (Gimbutas 1965, pl. 393, 4; fig. 163: 1, 2).

Rivets with conical heads developed in central Europe during late Urnfield times (c. 1000–700 B.C.). From there they spread to other areas, especially to Italy and to southern Scandinavia (Hawkes and Smith 1957, p. 186).

A boss or dot surrounded by multiple circles is a

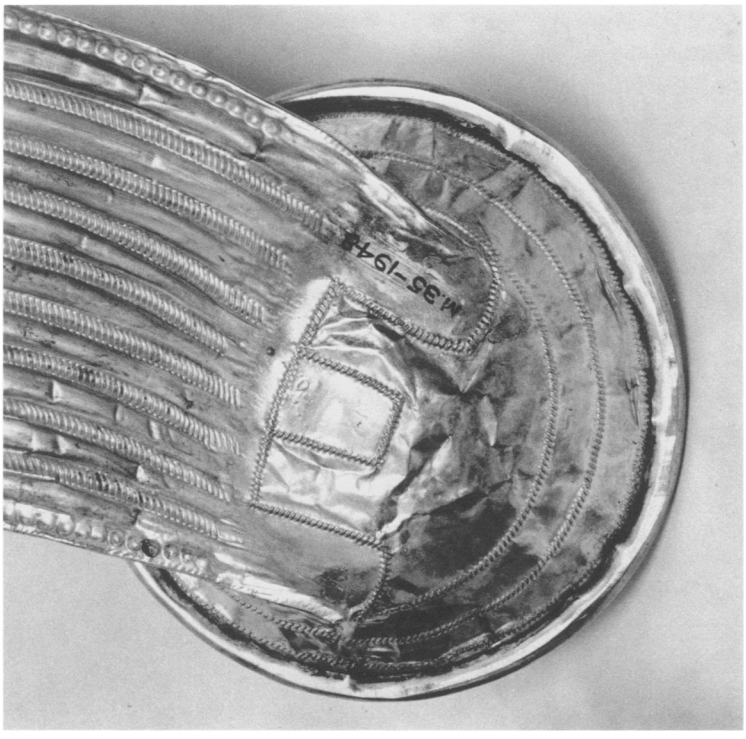
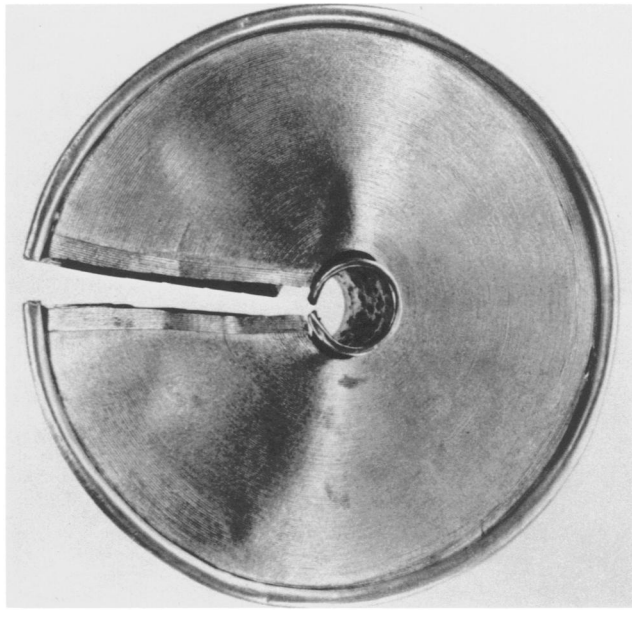


FIGURE 7
Terminal of gold gorget, Shannongrove, county Limerick. Diameter 95 mm. Victoria and Albert Museum (photo: Victoria and Albert Museum)

common motif throughout Bronze Age Europe. During the Early Bronze Age it was found on the gold bowls of the Transylvanian Hajdúsámson horizon (Mozsolics 1965–66, p. 48, pl. 12, from Biia [Magyarbénye]). In fact, a feature of the metalwork of this horizon, and of the Ottomani culture in general, is its decoration, and this appears to have been strongly influenced by the Mycenaean world during the shaft-grave stage (Mozsolics 1965–66, 1967, also Vladár 1973). The boss or dot with surrounding circles is found in the west Baltic area during the Mosbaek stage of the Early Bronze Age (Hachmann 1957, pp. 45–46): it appears to have been introduced to this region from southeastern Europe. At least the Mosbaek group was much indebted to the Hajdúsámson stage in Transylvania, as was first clearly demonstrated by Forssander (1936) and amplified by Hachmann (1957) and Lomborg (1959). The boss motif became popular in southern Scandinavia and northern Germany, and had a long life, occurring on such Period V pieces as the "plastic" decorated bronze hanging-bowls and the terminals of fibulae (Bandou 1960, p. 71, fig. 14, no. XXII C [bowls], p. 76, fig. 15, no. XXIV E4 [fibulae]; Sprockhoff 1956, I, pp. 241–242; II, pl. 67:7 [bowls]; I, pp. 215–216, pl. 49, 4–9 [fibulae]).

A boss surrounded by multiple concentric circles was also used in west-central Europe. It occurs on a looped bronze "disc" with gold foil covering from a grave at Mühlau in the north Tyrol, datable to around Bronze Age D (von Merhart 1969a, pp. 9, 11–12, pl. 1:6), on the gold "sun disc" from Worms (Kossinna 1913, pl. 16), and on the magnificent gold diadem and discs from Velemszentvid, Hungary (Mozsolics 1950). A fragment of a sheet-gold plaque decorated in repoussé technique, from the Lanrivoaré hoard, Finestère, Brittany (Hawkes 1961, pp. 472–473, pl. 2:13) shows that the motif was current in Atlantic Europe during the last centuries of the second millennium B.C. The motif is also found south of the Alps, in Italy (Hencken 1971, pp. 79–81, figs. 53, 54 [bronze crested helmet and flask from a burial at Bisenzio, Viterbo, dating from late eighth

FIGURE 8
Gold "lock-ring," Gorteentreagh, county Clare. Diameter 97 mm. National Museum of Ireland, 1948:237 (photo: National Museum of Ireland)



century]; Müller-Karpe 1959, fig. 56:8 and 20, dating from Tarquinia II, eighth century).

There is no evidence for the use of the conical boss and circles in Ireland before the Dowris Phase.

The second and third of the motifs on the Enniscorthy discs—the X-shaped and kite-shaped motifs—cannot be precisely paralleled, but the lozenge-shaped motifs are known on lunula (Armstrong 1933, pl. I). The fifth motif, the large ridges to separate bands of decoration, occurs on gorget terminals. The "compartment" arrangement, the sixth motif, can to some extent be paralleled on the Lattoon disc.

All of the foregoing evidence shows that the Enniscorthy discs were manufactured during the Dowris Phase. During that phase a great expansion in goldworking took place.[6] Hundreds of gold objects survive and hundreds more were melted down (E. Cllbborn, *The Athenaeum*, 1669 [October 22, 1859], p. 533; Wilde 1862, p. 4; Wood-Martin 1895, pp. 480, 486; Armstrong 1933, p. 2). The large number of individual items as well as large hoards is clear evidence for the abundance of gold.

Two main forms of goldworking were practiced during the Dowris Phase, sheet and bar. Hollow goldwork was also practiced, but probably the most complicated technique of all was the soldering together of tiny individual wires to make the face plates of "lock-rings" (Eogan 1969, pp. 103–104). There is also evidence that gold foil was skillfully attached to a metal backing. Thus, by hammering, casting, and soldering, the goldsmiths of the Dowris Phase manufactured a wide variety of ornaments. Like the Enniscorthy discs, some of these were lavishly decorated. A range of motifs, both concentric and linear, were used and in its application two main techniques, repoussé and incision, were used. Other techniques, less frequently used, were twisted wires (to give a filigree effect) and inlay. The latter, usually of silver solder, is found on the "hair-rings."

The restriction of certain types of objects to a region is especially noticeable in Munster and in Ulster (Eogan 1974). The closest parallels for the Enniscorthy discs are provided by gorget terminals and "lock-rings." Now, both of these have a limited distribution in Ireland,[7] both occurring in the province of Munster, in the counties that border on the lower Shannon valley. This area was the center of a regional industry during the Dowris Phase (Eogan 1964, pp. 13–14; 1974, p. 322, fig. 80:A), and apart from individual finds, the content of the massive assemblages of metal objects—Askeaton (Eogan 1969, pp. 130–131), Cullen (Wallace 1938), Dowris (Eogan 1964, p. 344), Mooghaun (Armstrong 1917), and what has been described as a "great gold find" from the Athlone neighborhood[8]—shows that gold and bronze were in plentiful supply. As gorgets and "lock-rings" are found in this area, it seems reasonable to assume that they were made there. The finding of both types of ornaments together in the Gorteenreagh hoard, county Clare (J. Raftery 1967) confirms their contemporaneity. Both ornaments share structural features, notably the C-section binding strip on the Shannongrove gorget and the similar binding on the "lock-rings" (compare Figures 7, 8). It may be mentioned that there is a piece of twisted wire attached to the end of the body (from which the terminal is missing) of the gorget from Ardcrony, county Tipperary (Armstrong 1933, p. 57, no. 40). Another object that

6. Axel Hartmann, in a curious publication (*Prähistorische Goldfunde aus Europa* (Berlin, 1970), has put forward the view that the bulk of the gold used in Ireland during the Bronze Age was imported. This view is mainly based on the assumption that no gold, other than that from Wicklow, was available in Ireland during the Bronze Age. Hartmann's view has been challenged, justifiably, by Peter Harbison (*Journal Royal Society of Antiquaries of Ireland* 101 [1971] pp. 159–60).

7. It is recorded that two gorgets were found outside the north Munster area, but the information is inconclusive. A disc considered to be the terminal of a gorget was purchased by the National Museum (1911:229) from "the late Mr. Talbot Ready of London." Its find place is given as county Armagh (Armstrong 1933, p. 58, no. 45). The find place of part of a gorget in the British Museum (1871.4-1.14) is given as Ballycotton, county Cork. It is recorded in the Museum Register that the gorget was found near Ballycotton in 1867 and that it was broken up by a country man. It should be noted, however, that this gorget was in the possession of Sir Thomas Tobin, Director of the Ballincollig Powder Mills (Gogan 1931, p. 90). Tobin may have been a collector; at least he had one other gold object in his possession, a penannular ring of uncertain date (*Journal Royal Society of Antiquaries of Ireland* 4 [1856–57], pp. 254, 320).

8. Secrecy surrounds this find, which was made before 1859, and no records of the contents were kept. It may have been a large Dowris Phase assemblage like Mooghaun. Objects from the find were sold to different goldsmiths in Dublin and were most likely melted down. The sums paid for the pieces sold in Dublin totaled over £27,000 (E. Clibborn, *The Athenaeum*, no. 1669 [October 22, 1859] p. 553).

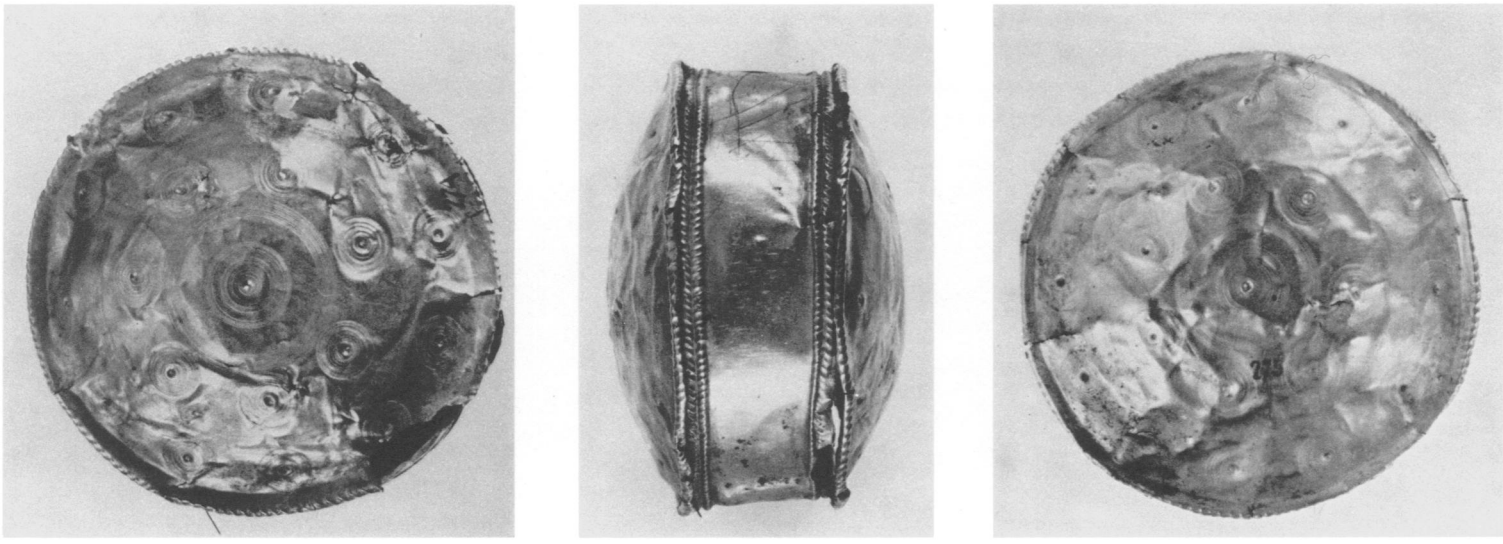


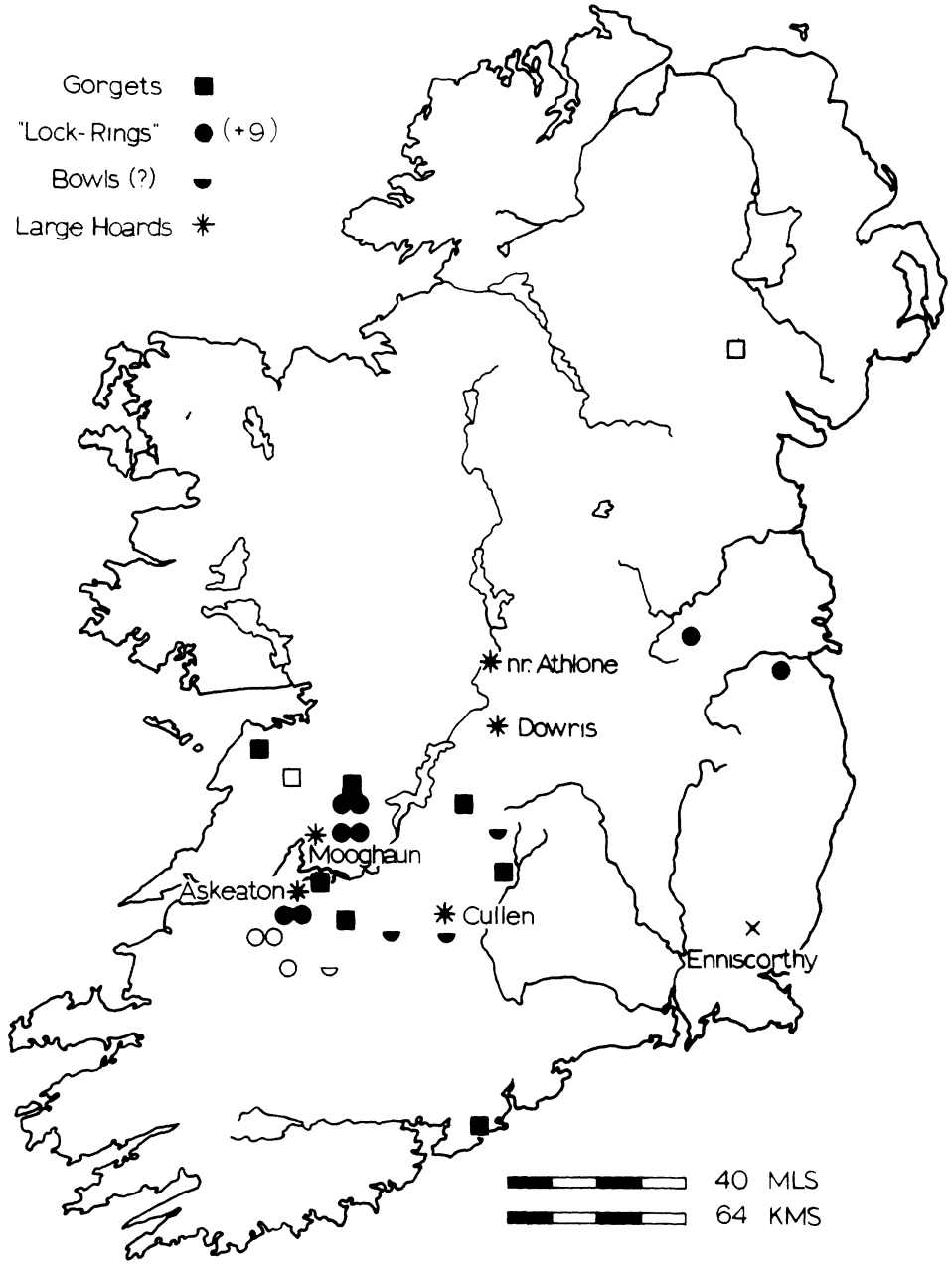
FIGURE 9
Gold box. Ireland. Diameter 63 mm. National Museum of Ireland, W 274, 275 (photo: National Museum of Ireland)

may have been made in north Munster is a gold box (Figure 9) (Armstrong 1933, pp. 88–89, nos. 371–375). Precisely where any of the boxes have been found is not known, but in form and technique the decoration on the "lids" is close to that on the outer face of gorget terminals. In addition, the method of attaching the "lid" and "base" to the sides by lapping over the edge is also found on some gorget terminals. Gold bowls (?) also have a north Munster distribution. As yet there is no evidence for the occurrence of gold naturally in north Munster, so the material used must have been acquired from another part or parts of the country. The gorgets and "lock-rings" are the most outstanding pieces of craftsmanship known from any area for any part of the Bronze Age. It therefore seems that skilled and versatile goldsmiths were working in the lower Shannon valley of north Munster during the Dowris Phase. Indeed, we must consider that there was a "school" of goldworking in that region. But the artist-craftsman could hardly have worked without patrons. At present it is not possible to say if these were wealthy and powerful chieftains or if they were religious leaders. While it is clear that there was a plenitude of gold ornaments in north Munster during the Dowris Phase, it is not clear how the industry emerged. Definite prototypes for the leading types—gorgets, "lock-rings," boxes, and bowls (?)—are not known. The decoration, especially the conical and rounded bosses with multiple concentric circles, occurs widely, particularly in central Europe during Urnfield times (for boss decoration, von Merhart 1969b, pp. 335–344) and northern Europe during Periods IV and V. Indeed, from the point of view of elaborateness of decoration a good comparison for the Enniscorthy discs and the terminals of gorgets is the gold diadem from Velemszentvid, Hungary (Mozsolics 1950, p. 8, pl. 1). The technique of making the face plates of "lock-rings" by soldering the individual wires together suggests Mediterranean influence. However, it should not be forgotten that Urnfield goldsmiths were also skilled workers in fine wire (Mozsolics 1950, pp. 31–32, pl. 9). Bronze neck-rings, boxes, and bowls were used in northern Europe during the later stages of the Bronze Age (Sprockhoff 1956, pp. 132–164, 241–248; Baudou 1960, pp. 54–59, 69–71). On the other hand, the limited Munster distribution suggests contacts with Atlantic Europe.

The indication is that the Enniscorthy discs were made in north Munster by goldsmiths of the north Munster "school," or by craftsmen trained in that school. If, however, they were made in the Enniscorthy

region, they were made not far from county Wicklow, an important gold-producing area. In this regard it is relevant that in 1970 James Brennan found gold while panning in the Slaney River near Enniscorthy (Briggs 1973, p. 18). It may also be noted that there was an important Dowris Phase industrial site at Rathgall in southwest county Wicklow where bronzework was carried out (B. Raftery 1970, 1971).

These discs from Enniscorthy are some of the great treasures of Ireland's past and they stand out as a testimony to the devotion, skill, and competence of an anonymous artist-craftsman nearly three thousand years ago. But they should also be seen against the wider background of a period when Ireland's gold production and manufacture reached its peak and when its produce was welcomed in other lands (see bracelet from Jahlsdorf, northwest Germany, Hawkes and Clarke 1963).



REFERENCES

Armstrong 1917
E. C. R. Armstrong, "The Great Clare Find of 1845," *Journal Royal Society of Antiquaries of Ireland* 47 (1917) pp. 21–36

Armstrong 1933
Catalogue of Irish Gold Ornaments in the Collection of the Royal Irish Academy (Dublin, 1933)

Baudou 1960
Evert Baudou, *Die regionale und chronologische Einteilung der jüngeren Bronzezeit im Nordischen Kreis* (Stockholm, 1960)

Briggs 1973
Stephen Briggs, James Brennan, and George Freeburn, "Irish Prehistoric Gold-Working; Some Geological and Metallurgical Considerations," *Bulletin Historical Metallurgy Group* 7 (1973), pp. 18–26

Eogan 1962
George Eogan, "Some Observations on the Middle Bronze Age in Ireland," *Journal Royal Society of Antiquaries of Ireland* 92 (1962) pp. 45–60

Eogan 1964
"The Later Bronze Age in Ireland in the Light of Recent Research," *Proceedings of the Prehistoric Society* 30 (1964) pp. 268–351

Eogan 1967
"The Associated Finds of Gold Bar Torcs," *Journal Royal Society of Antiquaries of Ireland* 97 (1967) pp. 129–175

Eogan 1969
" 'Lock-rings' of the Late Bronze Age," *Proceedings of the Royal Irish Academy* 67 C (1969) pp. 93–148

Eogan 1974
"Regionale Gruppierungen in der Spätbronzezeit Irlands," *Archäologisches Korrespondenzblatt* 4 (1974) pp. 319–327

Forssander 1936
John Elof Forssander, *Der Ostskandinavische Norden während der ältesten Metallzeit Europas* (Lund, 1936)

Gimbutas 1965
Marija Gimbutas, *Bronze Age Cultures in Central and Eastern Europe* (The Hague, 1965)

Gogan 1931
L. S. Gogan, "The Ballycotton Gold Collar or 'Gorget'," *Journal Cork Historical and Archaeological Society* 36 (1931) pp. 87–100

Hachmann 1957
Rolf Hachmann, *Die frühe Bronzezeit im westlichen Ostseegebiet und ihre mittel- und südosteuropäischen Beziehungen, Chronologische Untersuchungen* (Hamburg, 1957)

Hawkes 1961
C. F. C. Hawkes "Gold Ear-rings of the Bronze Age, East and West," *Folklore* 72 (1961) pp. 438–474

Hawkes and Clarke 1963
C. F. C. Hawkes and R. R. Clarke, "Gahlstorf and Caister-on-Sea: Two Finds of Late Bronze Age Irish Gold," in I. L. Foster and Leslie Alcock, eds., *Culture and Environment: Essays in Honour of Sir Cyril Fox* (London, 1963) pp. 193–250

Hawkes and Smith 1957
C. F. C. Hawkes and M. A. Smith, "On Some Buckets and Cauldrons of the Bronze and Early Iron Ages," *Antiquaries Journal* 37 (1957) pp. 131–198

Hencken 1971
Hugh Hencken, *The Earliest European Helmets* (Harvard, 1971)

Kossinna 1913
Gustaf Kossinna, *Der Goldfund von Messingwerk bei Eberswalde und die goldenen Kultgefässe der Germanen*, Mannus-Bibliothek Nr. 12 (Würzburg, 1913)

Leeds 1930
E. Thurlow Leeds, "A Bronze Cauldron from the River Cherwell, Oxfordshire, with Notes on Cauldrons and Other Bronze Vessels of Allied Types," *Archaeologia* 80 (1930) pp. 1–36

Lomborg 1959
Ebbe Lomberg, "Donauländische Kulturbeziehungen und die Relative Chronologie der Frühen Nordischen Bronzezeit," *Acta Archaeologia* 30 (Copenhagen, 1959) pp. 51–146

Lucas 1973
A. T. Lucas, *Treasures of Ireland* (Dublin, 1973)

Maryon 1938
Herbert Maryon, "The Technical Methods of the Irish Smiths in the Bronze and Early Iron Ages," *Proceedings of the Royal Irish Academy* 44 (1938) pp. 181–228

Mozsolics 1950
Amália Mozsolics, *Der Goldfund von Velem-Szentvid*, Praehistorica I (Basel, 1950)

Mozsolics 1965–66
"Goldfunde des Depotfundhorizontes von Hajdúsámson," *46–47 Bericht der Römisch-Germanischen Kommission 1965–1966*, 1-76

Mozsolics 1967
Bronzefunde des Karpatenbeckens: Depotfundhorizonte Hajdúsámson und Kosziderpadlás (Budapest, 1967)

Müller-Karpe 1959
Hermann Müller-Karpe, *Beiträge zur Chronologie der Urnenfelderzeit Nördlich und Südlich der Alpen* (Berlin, 1959)

Nestor 1938
Ion Nestor, "Die verzierten Streitäxte mit Nackenscheibe aus Westrumänien," in Ernst Sprockhoff, ed., *Marburger Studien* (1939) pp. 178–193

Ousley 1797
Ralph Ousley, "Account of four circular plates of gold found in Ireland," *Transactions of the Royal Irish Academy* 6 (1797) pp. 31–33

Powell 1953
T. G. E. Powell, "The Gold Ornament from Mold, Flintshire, North Wales," *Proceedings of the Prehistoric Society* 19 (1953) pp. 161–179
B. Raftery 1970
Barry Raftery, "The Rathgall Hillfort, County Wicklow," *Antiquity* 44 (1970) pp. 51–54
B. Raftery 1971
"Rathgall, Co. Wicklow: 1970 Excavations," *Antiquity* 45 (1971) pp. 296–298
J. Raftery 1967
Joseph Raftery, "The Gorteenreagh Hoard," in Etienne Rynne, ed., *North Munster Studies* (Limerick, 1967) pp. 61–71
Randsborg 1968
Klaus Randsborg, "Von Periode II zu III," *Acta Archaeologia* 39 (Copenhagen, 1968) pp. 1–142
Sprockhoff 1956
Ernst Sprockhoff, *Jungbronzeitliche Hortfunde der Südzone des Nordischen Kreises (Periode V)* I, II (Mainz, 1956)
Vladár 1973
Josef Vladár, "Osteuropäische und Mediterrane Einflüsse im Gebiet der Slowakei während der Bronzezeit," *Slovenská Archeológia* 21 (1973) pp. 253–357
von Brunn 1959
Wilhelm Albert von Brunn, *Die Hortfunde der Frühen Bronzezeit aus Sachsen-Anhalt, Sachsen und Thüringen* (Berlin, 1959)
von Merhart 1969a
Gero von Merhart, "Urnengrab mit Peschierafibel aus Nordtirol," *Hallstatt und Italien* (Mainz, 1969) pp. 7–15
von Merhart 1969b
"Studien über einige Gattungen von Bronzegefässen," *Hallstatt und Italien*, pp. 280–379
Wallace 1938
J. N. A. Wallace, "The Golden Bog of Cullen," *North Munster Antiquarian Journal* I (1938) pp. 89–101
Wilde, 1857, 1861, 1862
William R. Wilde, *A Descriptive Catalogue of the Antiquities of Stone, Earthenware, and Vegetable Materials (1857), Bronze (1861), Gold (1862) in the Museum of the Royal Irish Academy* (Dublin, 1857–62)
Wood-Martin 1895
W. G. Wood-Martin, *Pagan Ireland* (London, 1895)

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