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Metal in Water: a Materialisation of War in the Irish Bronze Age?

While violence has always been a reality of human life, the Bronze Age provides evidence of conflict on a new scale in Europe. Depictions of warriors in rock art and stelae, the building of fortifications such as hillforts, and osteological evidence of human fatalities attest to the prevalence of war and militarism during the second millennium BC.¹ The importance of the warrior is emphasized by the development of specialized bronze weapons, including rapiers and swords, throwing and thrusting spears, shields, body armour and helmets. Despite the abundance of these and other weapons, relatively little is known about the conduct of warfare in the Bronze Age. This is a problem of archaeological visibility, created by the dynamic nature of those short-lived intense engagements, and what happened subsequently in terms of disposal of the dead and the gathering of battlefield weapons as *spolia* of war. Understanding the use of those weapons is also complicated by the often ritualised nature of their eventual deposition at different locations.

This paper will explore connections between metalwork finds in the landscape and the conduct and consequences of warfare during the Middle to Late Bronze Age in Ireland, ca. 1600–700 BC. The focus is the deposition of weaponry in rivers, and the hoarding of valuables in bogs. The tendency in modern research has been to interpret these as symbolic deposits ('gifts to the gods') placed in liminal environments with special significance in social and religious terms.² The possibility of direct or indirect connections to conflict and war has received much less consideration, despite being prominent in earlier narratives of Bronze Age weapon finds.³ That perspective is now challenged by new research in many parts of Europe, including the LOEWE project, which is exploring the

materialisation of war and conflict in the archaeological record. This paper contributes to that debate by considering possible connections between the deposition of weapons and valuables in wet contexts in Ireland and the landscape context of war during the later Bronze Age. The challenge is to infer the conduct and consequences of prehistoric warfare from patterns of artefact deposition that are problematic in terms of recovery, taking into account the multi-layered significance of those weapons for Bronze Age societies.

Bronze Age weapons in Ireland

The militarism of the Middle to Late Bronze Age in Ireland is most visible in the considerable output of specialized bronze weaponry. This includes rapiers, first developed during the Killymaddy phase (ca. 1600–1400 BC) of the Middle Bronze Age and used through the Bishopsland phase. These were replaced in the twelfth century BC with the introduction of the leaf-shaped sword from southern England. The first examples were the so-called Ballintober type, short swords 0.4–0.6 m in length, with organic handles riveted to projecting tangs.⁴ The first flange-hilted swords were imported or copied forms of Erbenheim and Hemigkofen swords from the Continent, coming in again through southern England. The use of these weapons in Ireland expanded significantly after 1000 BC, when a native form of the flange-hilted, leaf-shaped sword (Eogan's class 4), known in Britain as the Ewart Park type, was produced in large numbers during the Dowris phase of the Late Bronze Age to around the eighth century BC.

An estimated 733 bronze swords are recorded in Ireland (**Fig. 1**), a density of 8.7 finds per 1000 km² one of the highest in Europe.⁵ Allowing for survival and recovery factors, this must represent a

¹ Reviewed by Osgood 1998; Harding 1999; Thorpe 2013.

² Bradley 1990; 2017.

³ See Keeley 1996 for discussion on the broader 'pacification of the past' in modern archaeology.

⁴ Eogan 1965; Waddell 2010.

⁵ Eogan 1965, revised by Colquhoun 2015.

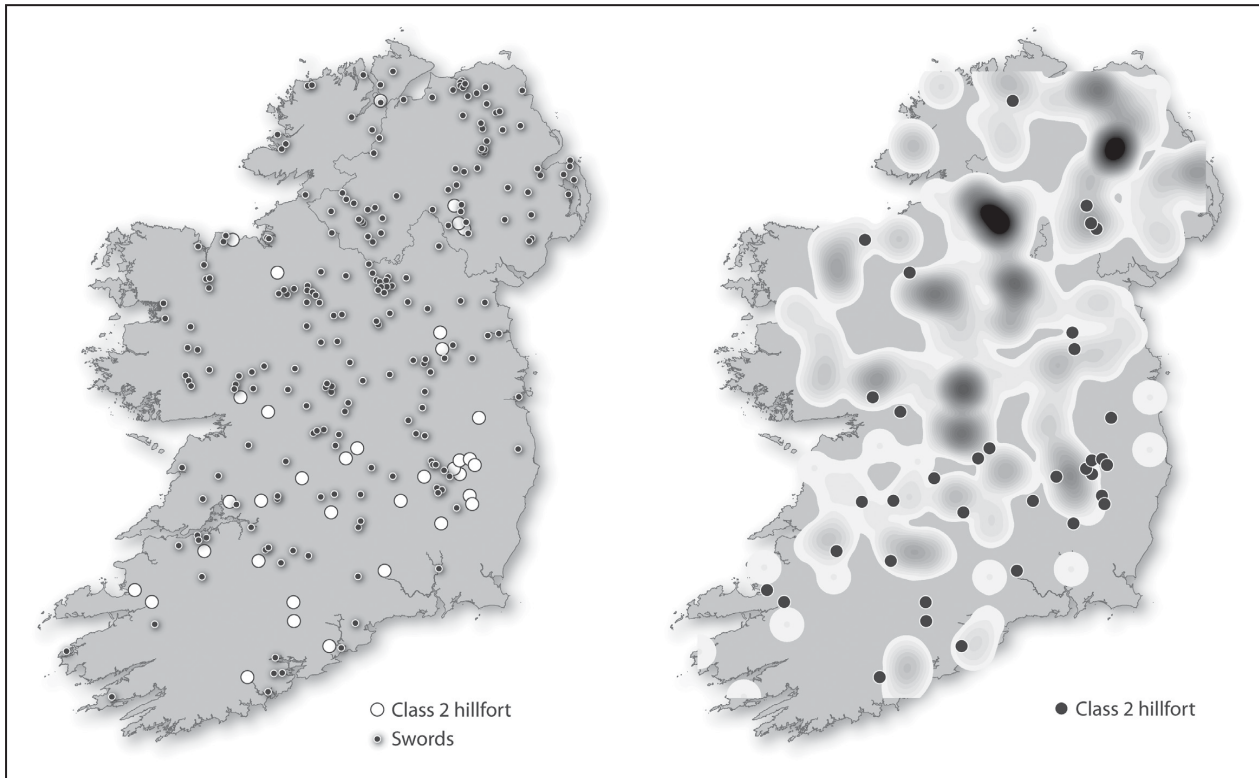


Fig. 1 Distribution and density plot of Class 2 hillforts and provenanced Bronze Age swords in Ireland (source: author; data from Eogan 1965, with additions)

fraction of the total number produced, making it likely that there were tens of thousands of such weapons in circulation. Swords and spears were not usually committed to Bronze Age graves in Ireland, and this added to the amount of weaponry available where they were passed on through the generations. There were also significant levels of loss, through the conduct of war, the recycling of broken items, and the removal of weapons through special depositional practices.

The availability of weapons during the Middle to Late Bronze Age is also attested by the large-scale production of bronze spearheads over many centuries. The earliest examples are tanged and end-looped types dating to the end of the Early Bronze Age, ca. 1700–1500 BC, followed by side-looped, basal-looped and protected-looped varieties of the Middle Bronze Age (**Fig. 2**), with the adoption after 1100 BC of lunate and riveted forms during the Roscommon and Dowris phases of the Late Bronze Age (**Fig. 3**). A recent review identified close to 1800 Bronze Age spearheads in Ireland, approximately half of which have no provenance.⁶ The scale of production is impressive, with records of 45 end-looped, 827 side-looped,

182 basal-looped, 56 protected-looped, 29 lunate, 7 basal-looped/riveted and 639 riveted leaf-shaped forms. Similar to swords, there is a general lack of context information, with only a few spearheads from excavated settlements or graves.⁷

As in other parts of Europe, the adoption of the sword and throwing/thrusting spear in close combat was accompanied by the use of shields. A small number of circular shields made of wood, leather or bronze is recorded in Ireland. Leather shields may have been most common, such as the example from Cloonbrin, Co. Longford, produced using wooden moulds such as those from Churchfield, Co. Mayo, and Kilmahamogue, Co. Antrim.⁸ A radiocarbon date of 1950–1540 BC for the latter suggests that the first use of shields may have been connected to the development of the bronze spear and rapier during the Early to Middle Bronze Age transition. Wooden shields are also known, including examples from Annandale, Co. Leitrim, and an example from Cloonlara, Co. Mayo, dated to around 1200 BC.⁹ Six bronze shields of Late Bronze Age date are recorded in Ireland, in-

⁶ Lineen 2017.

⁷ O'Brien/O'Driscoll 2017, 403.

⁸ Coles 1962; Waddell 2010, 250–254.

⁹ Waddell 2010, 251.

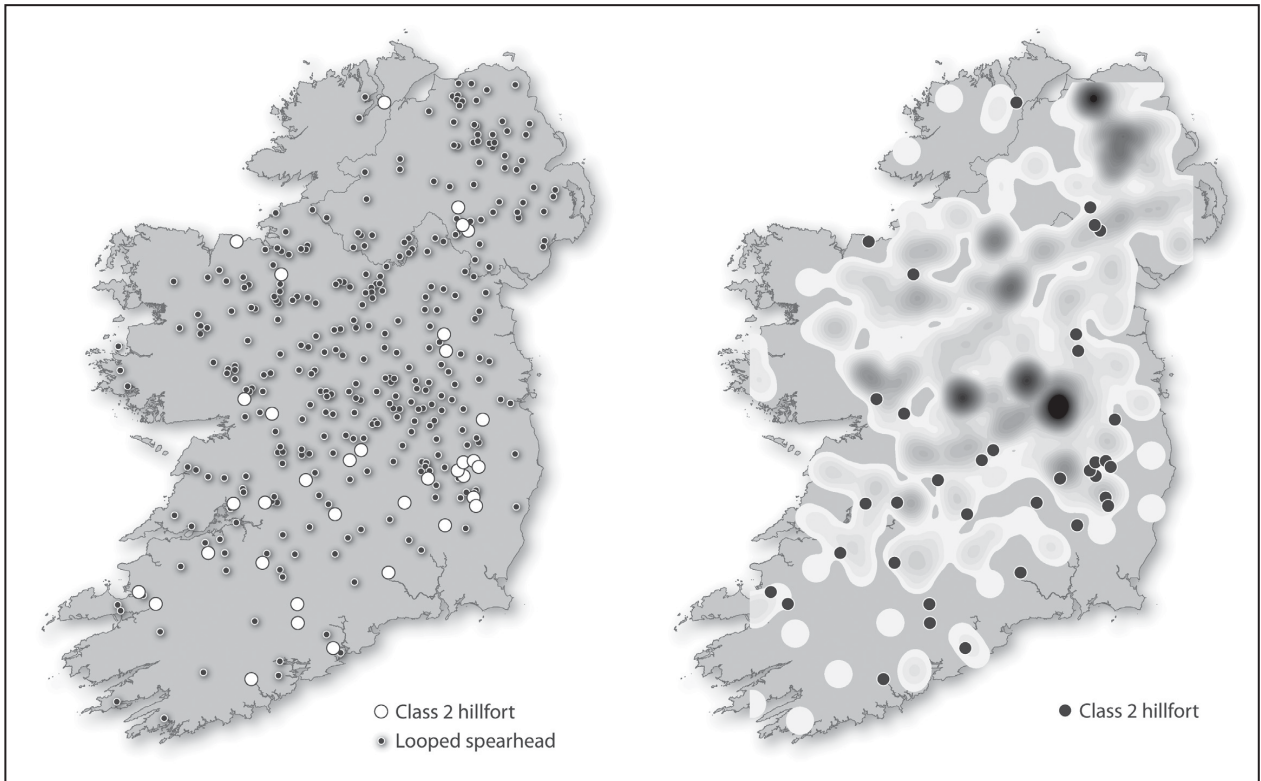


Fig. 2 Distribution and density plot of Class 2 hillforts and Middle Bronze Age looped spearheads in Ireland (source: author; data from Lineen 2017)

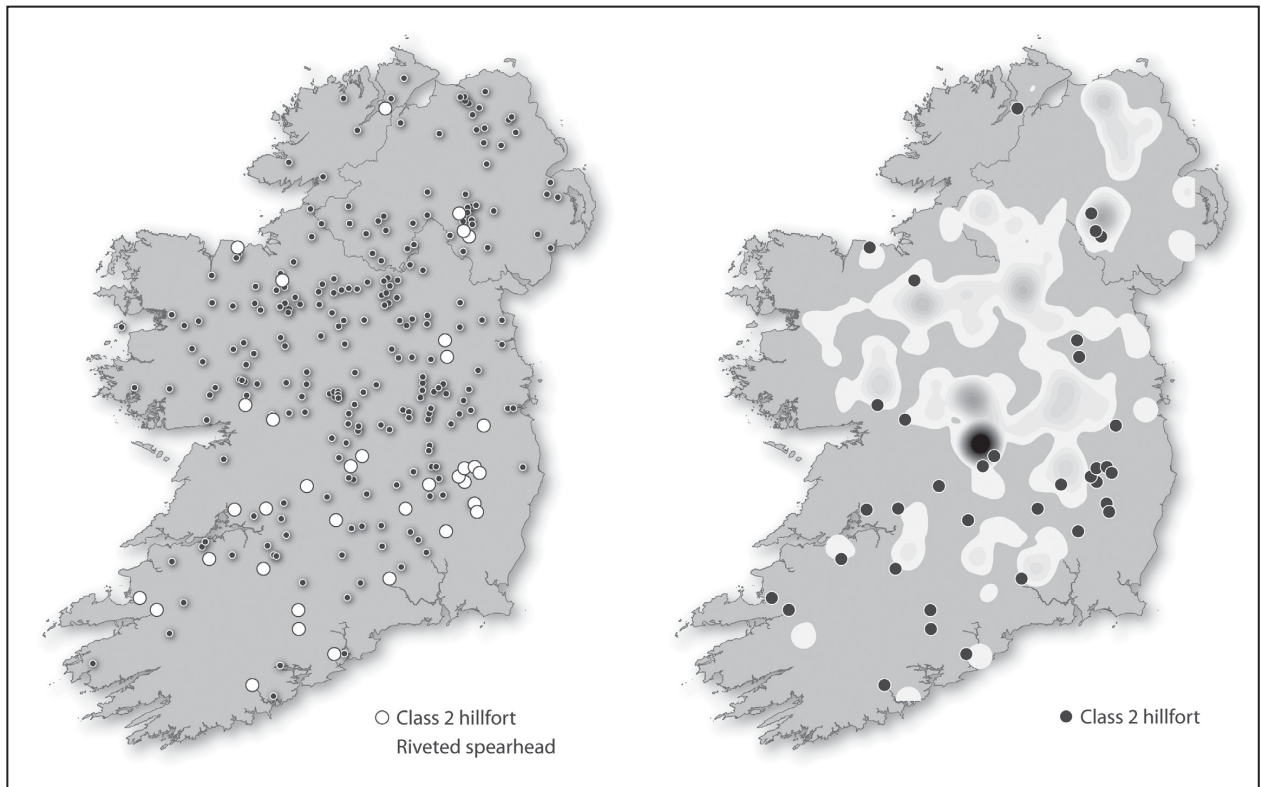


Fig. 3 Distribution and density plot of Class 2 hillforts and Late Bronze Age riveted spearheads in Ireland (source: author; data from Lineen 2017)

cluding three examples of type Yetholm and three of type Athenry/Nipperwiese/Eynsham.¹⁰ One of the latter, from Athenry, Co. Galway, may have been found with a spearhead.¹¹ Interestingly, there are no examples of body armour or helmets from the Irish Bronze Age comparable to finds in mainland Europe.¹²

In addition to these specialised weapons, different types of bronze tool-weapons must also be considered. There are as many as 700 flanged axes and 400 palstaves recorded from the Middle Bronze Age in Ireland,¹³ along with approximately 2000 socketed axeheads from the Late Bronze Age.¹⁴ Generally interpreted as work tools, the potential of bronze axes as weapons is illustrated in the many representations of warrior combat in Scandinavian rock art.¹⁵ Other potential weapons include bronze dirks of the Middle Bronze Age,¹⁶ and socketed knives of the Late Bronze Age.¹⁷ The combined use of such weapons is indicated by a number of hoard associations containing military equipment. Eogan's corpus lists two examples where swords and socketed axeheads occur together, six hoards with spearheads and axeheads, three with swords, spearheads and axeheads, three with swords, spearheads, axeheads and socketed knives, and one hoard containing a spearhead and a socketed knife.¹⁸

The large quantity of bronze weapons and tool-weapons in circulation during the Middle to Late Bronze Age is a strong indicator of the militarism of that era in Ireland. This is consistent with developments elsewhere in Europe, where a stylised weapon panoply can be linked to the emergence of a warrior elite.¹⁹ Those individuals led larger groups of combatants who, in addition to bronze items, used weapons of wood, antler and bone, as well as fire and stone projectiles, which are rarely visible in the archaeological record.

Weapons in water

The majority of Bronze Age dirk/rapiers, swords, spearheads and shields with recorded find locations in Ireland were recovered from watery contexts in the natural landscape, places seemingly removed from contemporary settlements and burial/ceremonial sites. Most were recovered from rivers and lakes, discovered during dredging and diving in the modern era, in shallow or deep water where they could not be easily retrieved. A significant number were found in bogs, where recovery of hidden valuables was feasible despite the impression often given that these are irretrievable contexts.

While river and wetland deposition has an older record in Ireland,²⁰ the weapon phenomenon considered here intensified during the Killymaddy phase of the Middle Bronze Age, with most dirks and rapiers recovered from rivers, lakes and bogs, a pattern that continued with swords into the Late Bronze Age (**Fig. 4**). Where dirks and rapiers have recorded find locations, 62% were in rivers, 21% in bogs, and 8% in lakes.²¹ In the case of swords, 38% were in rivers, 29% in bogs, and 15% in lakes.²² There are few archaeological contexts for swords, and importantly no confirmed grave associations. The 83% of spearheads with recorded find places were in wet environments, including rivers (34%), bogs (33%) and lakes (16%). The pattern for socketed axeheads is somewhat different, with 16% in rivers, 42% in bogs, and 11% in lakes.²³ The higher incidence of dryland finds and settlement contexts reflects the dual use of axes as tools and weapons. That said, the fact that 69% of socketed axeheads were found in wet contexts links those finds to the same depositional practices for specialized weaponry, which it is argued here was rooted in warfare.

A number of studies have been carried out on the condition of the Bronze Age weapon finds from wet contexts in Ireland. Bourke noted that a significant number of dirks and rapiers from major rivers have little or no evidence of damage,²⁴ whereas the majority of swords have evidence of wear and

¹⁰ Uckelmann 2011.

¹¹ Eogan 1983, no. 82.

¹² See Harding 2000, 287–291.

¹³ Ramsey 1989; 1995.

¹⁴ Eogan 2000.

¹⁵ Ling/Cornell 2017.

¹⁶ Burgess/Gerloff 1981.

¹⁷ Eogan 1964.

¹⁸ Eogan 1983.

¹⁹ Harrison 2004; Kristiansen 1999.

²⁰ See Bourke 2001, 33–34; Cooney 2004; Becker 2013.

²¹ From Burgess/Gerloff 1981.

²² Eogan 1965; revised by Colquhoun 2015.

²³ Eogan 2000.

²⁴ Bourke 2001, Fig. 74.

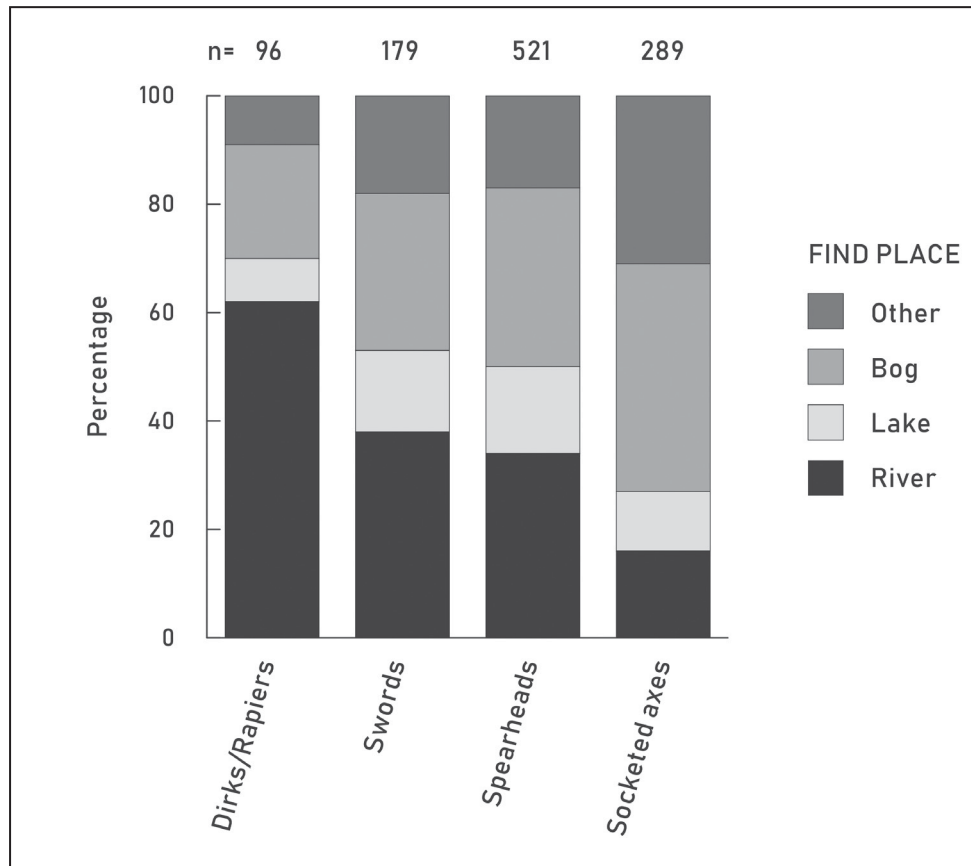


Fig. 4 Find locations for provenanced Middle and Late Bronze Age weapons in Ireland (source: author; data from Bourke 2001)

damage.²⁵ A significant proportion of spearheads also have use wear,²⁶ while some large examples in pristine condition have been interpreted as ceremonial objects.²⁷ Overall, there is much variability, with one-half to two-thirds of these weapons having moderate to considerable use wear, while others are in good condition (Fig. 5). There are examples of deliberate fragmentation, but these are exceptional, with most items deposited in rivers in complete state.

Given this variability, it would be a mistake to consider metalwork finds from rivers, lakes and bogs as a coherent phenomenon, when there must have been different circumstances and motivations behind their accidental or deliberate deposition. The overall distribution of riverine finds is biased by dredging and diving patterns in the modern era. Bog finds are influenced by environmental factors and recent turf-cutting practices,

and like river finds were subject to the vagaries of antiquarian collection and museum acquisition. The history of river finds in Ireland has been discussed by Bourke,²⁸ beginning with discoveries made during public drainage schemes in the nineteenth century, followed by the Shannon Scheme and other drainage projects of the 1920s and 1930s, with a small number of projects in the modern era. The focus has been on major rivers, such as the Lower Bann, Erne, Ulster Blackwater and Barrow, while the most significant in terms of Bronze Age metalwork finds is the Shannon.²⁹

Interpreting these bronze finds from rivers and lakes is problematic, as the absence of controlled excavation means they lack archaeological context in terms of secure association with other material culture or structures, or chronology established through stratification. Rivers are dynamic environments where artefacts are subjected to many post-depositional processes that influence their preservation and find location. In some instances the latter is recorded in detail, while dating can be

²⁵ Bourke 2001, Figs. 75–76; see also Bridgford 1997; Colquhoun 2011; 2015; Molloy 2011.

²⁶ Bourke 2001, Figs. 79–86.

²⁷ Bourke 2001, Pl. 18; see also Lineen 2017 for a review of the condition of spearheads.

²⁸ Bourke 2001.

²⁹ Bourke 2001, 34–70.

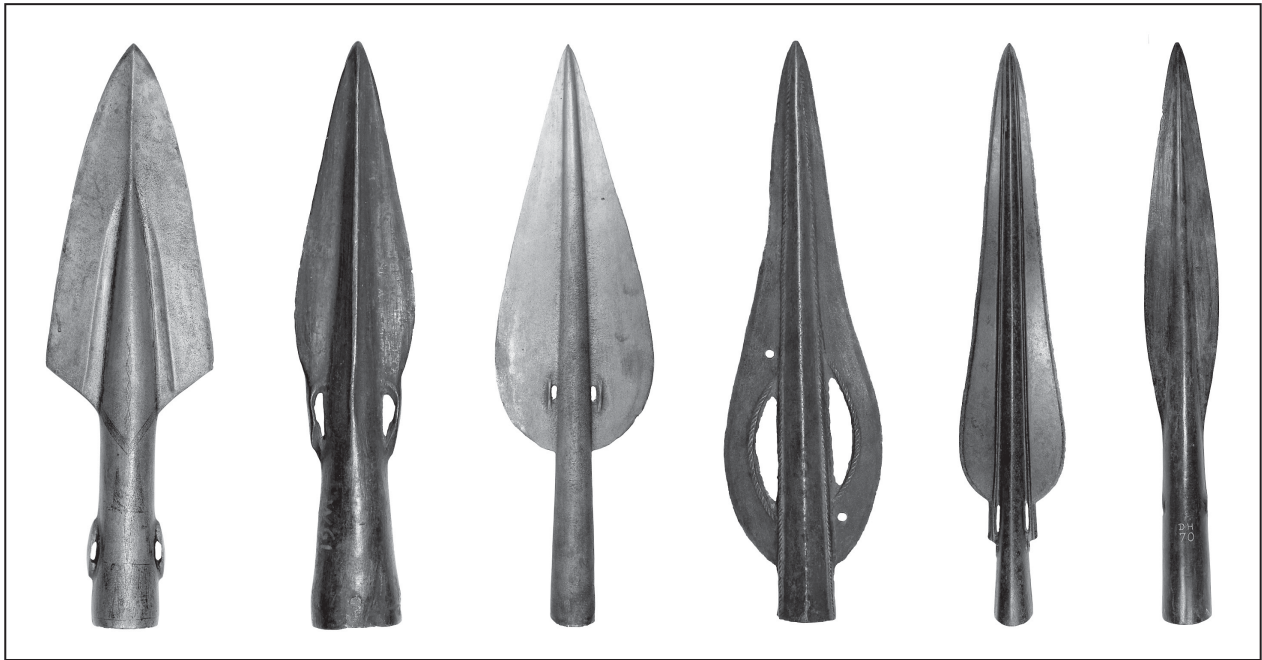


Fig. 5 Selection of Middle and Late Bronze Age spearheads from Irish rivers (source: J. Lineen)

provided by typology or even radiocarbon dating (wooden cores in socketed objects). In most cases, however, objects from the same general location have no direct association, even when there is a predominance of certain types. While the range of the weapons present provides some indication of the temporality of deposition, this is often unclear as many river collections accumulated over a long period, while others are the result of short-lived historical events. That said, the fact that such a significant proportion of Bronze Age weapon finds in Ireland are from watery places cannot be explained by recovery bias or preservation alone. Other factors connected to cultural practice and the historically contingent circumstances of their original deposition must be considered.

Why rivers?

The study of river metalwork finds has a long history in northern Europe.³⁰ The motivation behind what is seemingly an irrational action (the wilful discarding of valuables) is much debated, between those who favour sacred ('gifts to the gods') as opposed to profane interpretations. There is a general tendency to dismiss mundane explanations (e.g. casual loss, boat cargoes, erosion of riverine settlements) in favour of deliberate and highly mean-

ingful deposition as a broader ritual phenomenon in prehistoric Europe. An early concern with warfare and boundaries has been replaced by an emphasis on votive offerings, power and prestige. This is where the river becomes an appropriate setting for conspicuous display, allowing elites to emphasise their power and acquire prestige through the irretrievable deposition of valued objects in a public performance. Torbrügge's important review of river finds³¹ also identified important complementary relationships with funerary practice, while stressing the variability in practice across cultural zones. Environmental factors have also been raised, such as a possible connection between an increase in votive deposition at wet places and a deterioration in climate during the later Bronze Age.³²

The record of metalwork from major rivers in Ireland reveals a general increase in deposits as the Bronze Age progresses, with a strong emphasis on weapon deposition after 1600 BC (Tab. 1). The great majority of these survive in a usable condition, with varying degrees of use wear and repair. As noted, there is relatively little evidence of deliberate fragmentation to render the weapons useless in practical terms or as a form of symbolic decommissioning. It is apparent that weapons were treated very differently from other items of mate-

³⁰ Reviewed by Bradley 1990, 97–154.

³¹ Torbrügge 1971.

³² Burgess 1974.

<i>River</i>	<i>EBA</i>	<i>MBA</i>	<i>LBA</i>
Lower Bann (114 finds)	30 (23 axeheads, 2 ingots, 3 daggers, 2 halberds)	36 (19 dirks/rapiers, 9 spearheads, 8 axeheads)	48 (24 swords, 11 spearheads, 11 axeheads, 2 razors)
Ulster Blackwater (34)	6 (1 axehead, 2 daggers, 2 halberds, 1 rivet)	4 (4 dirks/rapiers)	24 (1 sword, 1 chape, 11 spearheads, 4 axeheads, 1 gouge, 1 razor, 6 rings)
Erne (70)	6 (4 axeheads, 1 dagger, 1 halberd)	21 (10 dirks/rapiers, 9 spearheads, 2 axeheads)	43 (21 swords, 8 spearheads, 11 axeheads, 2 daggers, 1 razor)
Barrow (42)	4 (3 axeheads, 1 dagger)	18 (8 dirks/rapiers, 6 spearheads, 4 axeheads)	20 (8 swords, 7 spearheads, 4 axeheads, 1 dagger)
Shannon (148)	22 (12 axeheads, 7 daggers, 3 halberds)	65 (36 dirks/rapiers, 20 spearheads, 9 axeheads)	61 (18 swords, 15 spearheads, 10 axeheads, 4 daggers, 2 razors, 2 shields, 5 chisels/gouges, 2 sickles, 3 sunflower pins)

Tab. 1 Bronze Age metalwork from five major rivers in Ireland (data from Bourke 2001; see Becker 2013 for data on wider depositional patterns of these artefacts in Ireland)

rial culture, connected no doubt to the special circumstances of their use. This is emphasized by the general absence of personal ornaments or objects of non-martial ceremonial nature of Bronze Age date in Irish rivers, items mostly found in bogs and dryland contexts.³³

³³ See Becker 2013.

Recent research in Ireland has tended to follow that in Britain, where weapon finds from wet contexts are interpreted as highly structured deposits of a symbolic nature, placed in liminal environments with special significance in social and religious terms.³⁴ The possibility of some direct or indi-

³⁴ See Bradley 1990.

rect connection with war has not received adequate consideration, particularly when the objects concerned (mostly weapons) are taken into account. As natural boundaries in the landscape, major rivers were obvious settings for conflict, often concentrated at fording points, as in the Tollense example.³⁵ This is also reflected in the Irish evidence, where significant concentrations of Bronze Age weapons are recorded at well-known fording points on major rivers. Examples include Portora on the River Erne, Keeloge, Athlone and Killaloe on the River Shannon, Monasterevin on the River Barrow, among others.³⁶ Many of these fords with Bronze Age weapon finds had military significance in later periods; for example, Keelogue on the Galway/Offaly border, where defensive batteries were built for defence of the River Shannon in the early nineteenth century. O'Sullivan and Condit drew attention to the long record of deposition at these strategic locations, and how this relates to hillfort territories and movement through the landscape.³⁷ The display and deposition of weapons at those fords may have been a strong assertion of territory, or an act of defiance where the river itself was symbolically charged with political meaning and ethnic identity. It has been observed that the use of weapons in that way "... played a role equivalent to the military posturing associated with fortified sites".³⁸

The following are examples of how accidental or deliberate deposition of weapons in rivers may be connected to the conduct of warfare at those locations, or else to the consequences of those traumatic events. This extends from the physical remains of battles and human casualties, to offerings of a cosmological nature connected to warrior culture. This brings the study of river weapon finds closer to an understanding of the political geography of warfare during the Bronze Age, where many confrontations took place on territorial boundaries.

Rivers as battlefields

There are many circumstances by which weapons were accidentally or deliberately deposited in rivers during the course of a military engagement. This may have included various rituals of aggression,

beginning with the throwing of spears, skirmishes and raids, before escalating to full-blown battles. Those clashes inevitably led to some irretrievable loss of weapons in the river. Tollense again provides an excellent example of the dynamic nature of intense confrontations at river crossings, and also illustrates how different formation processes shape the archaeological record of such events. The evidence from that site confirms that while many weapons used in riverine clashes were collected as *spolia*, a certain number were permanently lost. There is no reason to believe that Tollense was exceptional in this regard, which makes it likely that some proportion of weapon finds from Irish rivers represents loss in battle. This is supported by an apparent concentration of weapon finds at fording points on major Irish rivers,³⁹ where loss through combat would be expected. This does not support the view that "the river was a place of conscious structured deposition, not a locus of warfare".⁴⁰

While many river confrontations were similar to Tollense, other scenarios can also be envisaged. Bourke⁴¹ has drawn attention to the ritualized nature of riverine combat as presented in the early Irish epic, the *Táin Bó Cuailgne* ('Cattle Raid of Cooley'). This work recounts how the hero Cú Chulainn single-handedly defended the territory of Ulster from the advancing armies of Connacht (**Fig. 6**). His valiant defence of the river fords is recounted, including his special skill of fighting in ford water with his terrifying spear, the *Gae Bolga*. The warfare depicted in the *Táin* emphasizes the importance of defending territorial boundaries, in particular river fords, where great warriors engaged in ritualised single combat.⁴² The occurrence of many Bronze Age weapon finds in Irish rivers could easily be interpreted in those terms, as places of strident martial display and the orchestrated engagement of champion warriors. The question of whether early epic literature, such as the *Táin*, provides an insight into Bronze Age practices remains controversial.

In other instances these river deposits may have been linked to de-escalation strategies, involving a form of symbolic disarmament connected to the making of peace and alliances. There is also

³⁵ Terberger *et al.* 2018.

³⁶ See Bourke 2001 for a review of this evidence.

³⁷ Condit/O'Sullivan 1999.

³⁸ Bradley 1990, 139.

³⁹ Bourke 2001.

⁴⁰ Fontijn 2005, 150.

⁴¹ Bourke 2001, 125.

⁴² See Sadowska 1997.



Fig. 6 The great Cú Chulainn in battle, and his slaying of Ferdia in ford combat (source: Rolleston 1911)

the possibility that weapons were placed in rivers in celebration of victory, or as part of a formal surrender. There may have been a deeper significance to this, involving a ritualized destruction of the weapons of the vanquished in a highly public manner. This may have been connected to other acts of punitive destruction in those same conflicts, such as the burning of hillforts and the hoarding of war booty, as discussed below.

Warrior identity and cosmology

The possibility that weapon deposition in rivers was part of the burial or commemoration of warriors deserves greater consideration. This includes the funerals of warriors, whose mortal remains and weapons were cast into the dark waters. While this has been used to explain the discovery of Bronze Age human skulls from the Thames,⁴³ any such remains could as easily be casualties of battle or other fatal circumstances. The pros-

pect of finding warrior interments in Irish rivers is more problematic, as cremation was the dominant funerary practice there during the Middle and Late Bronze Age. The scattering of cremated human remains and personal weapons at places where warriors fell in battle remains a possibility. That might also explain why weapons are rarely found with dryland burials from the same period, because warriors were not buried in conventional ways. Another possibility is that river deposition marked the place where a warrior died in battle, but not the burial place. Where bodies were lost during a riverine battle, as in the case of Tollense, the deposition of weapons may have been part of a grave-less funeral process, to commemorate fallen warriors at that location. The memorializing of those heroes may have led to prolonged deposition of weapons in those special places, rituals that may have been connected to the initiation of young warriors. While those memories were captured in rock art or stelae in other parts of Europe,⁴⁴ the significance of some river offerings

⁴³ Bradley/Gordon 1988.

⁴⁴ See Harrison 2004; Ling/Cornell 2017.

may be an association with a great battle or warrior at that location. The memory of those events would have been kept alive through oral tradition, reinforced by periodic offerings of weapons and the recounting of great deeds.

It is widely accepted that the symbolic meaning of weapons was associated with the construction of warrior identities, with swords having a particular significance in terms of close-range fighting requiring courage and skill and guided by codes of honour. Fontijn suggested that the permanent removal of such symbols through irretrievable deposition in rivers marked the “deconstruction of a martial identity in a ritual act”.⁴⁵ This may have occurred at the stage where great warriors became an elder,⁴⁶ or perhaps more often in the context of a funeral ceremony.

River deposits connected to warfare can also be interpreted in other cosmological terms, as a way of dealing with violence and warfare in sacred settings. The liminal character of rivers, lakes and bogs as places of other-worldly power is widely recognized.⁴⁷ It is not surprising that offerings of an essentially religious character would be deposited in such environments in times of conflict, which can connect the act of deposition to a climate of fear, and ultimately to war. River deposits are often explained in votive terms, as ‘gifts to the gods’, though the underlying intention is rarely apparent. Fontijn argues that these sacrificed weapons are indicative not so much of the importance of warfare, but rather of the central role of weapons in sacrificial practices.⁴⁸ This does not adequately explain the societal context and motivation behind those deposits. The exclusive use of weapons in Irish rivers is significant, as it connects the depositional practices concerned to warrior culture and not to some form of ‘water religion’.

In terms of votive offerings, it is reasonable to assume that at times of war such offerings were made in request of military success or in thanks for its successful outcome. This may have been a way of expiating a perceived transgression, where the use of violence against others was seen as a polluting action that transgressed the boundaries between life and death.⁴⁹ The treatment of weap-

ons in such cosmological terms may have been a way of coping with the consequences of violence. Those potent objects acquired special meaning when used as offerings at liminal locations, as illustrated vividly by the legend of Excalibur.⁵⁰

Again, it is important to recognize that finds of Bronze Age metalwork from rivers do not represent a coherent phenomenon, as there were different historical circumstances and motivation behind individual deposits. Further variability is introduced by the type of conflict concerned, from raids, skirmishes and reprisals to full-blown wars of short or long-term duration. The different scenarios presented here illustrate how the use of weapons as funerary or votive offerings does not preclude a close association with warfare. Rather than exceptional, most weapon finds from rivers were probably connected in some way to the conduct or consequences of warfare. Even if they were not places of battle, the deposits at these river fords were fundamentally linked to warrior culture. Whether the final act of deliberate deposition was religious or political in intent, the symbolism of those weapons was rooted in the terrible reality of their use.

Hillfort connections

The political landscape of Ireland during the Middle to Late Bronze Age was dominated by hillforts. These immense enclosures, up to 20 ha or more, typically occur in prominent landscape positions.⁵¹ The most important are what Raftery termed Class 2 hillforts,⁵² usually comprising two or three concentric circular or oval enclosures, spaced up to 100 m apart, along or across the contours of a hill or ridge. The enclosing elements can include stone walls, earthen banks and ditches, and wooden fencing, used individually or in combination. There are as few as 23 confirmed or probable examples, with 14 additional possible sites. These are distributed across Ireland, with a notable concentration in the north Munster/south Leinster region (**Fig. 1**). Excavation indicates the earliest examples in the Bronze Age were built 1400–1200 BC, with the majority dating 1200–1000 BC, and some examples to a century or so later.⁵³

⁴⁵ Fontijn 2005, 150

⁴⁶ Fontijn 2002, 236.

⁴⁷ See Bradley 2017, 184–189.

⁴⁸ Fontijn 2005, 152.

⁴⁹ Fontijn 2002, 231.

⁵⁰ Discussed by Bradley 1990, 1–4.

⁵¹ O'Brien/O'Driscoll 2017.

⁵² Raftery 1972.

⁵³ O'Brien 2017.

Variably used for high-status residence, ceremony and assembly, these prominent places in the landscape were an important visible display of political and military power in late prehistoric Ireland. Their construction reflects strong leadership and a command of community labour on a massive scale. This can be explained in terms of emergent chiefdoms controlling large regional territories in a competitive environment where territorial and other disputes occasionally erupted into open war. That change in the political landscape coincided with the aforementioned innovations in combat, involving the combined use of the sword, shield and thrusting/throwing spear, all part of a new warrior culture where the ambitions of an elite could have disastrous consequences for individual hillforts. The latter are unlikely to have been destroyed by internal conflicts because of the special significance they held for the exercise of power. This is the same reason they were targeted by external forces and destroyed as a highly visible political action. There may have been a direct attack on the hillfort, though the evidence from excavated sites suggests this more likely followed battles in the wider landscape. Such acts of punitive destruction were designed to subjugate a rival group through the slighting of their power centre, in effect the ritual dismemberment of that symbolic location.⁵⁴

The only confirmed weapon find from a Bronze Age hillfort in Ireland is a broken spearhead found with a sword fragment and a small socketed chisel from Rathgall, Co. Wicklow.⁵⁵ This is perhaps surprising given that the defensibility of those enclosures would have depended on such weapons. Their absence in excavated hillforts is a product of archaeological recovery and survival, and also the history of occupation and abandonment of individual sites, as well as the depositional conventions applied to the objects themselves. This is supported by evidence of weapon manufacture at two hillforts, Dún Aonghasa, Inishmore, Co. Galway, and Rathgall, Co. Wicklow, both having evidence for the casting of swords, spearheads, axeheads, knives and scabbard chapes in the Late Bronze Age.⁵⁶

The most likely reason that bronze weapons were not deposited at hillforts is because military confrontations took place in the wider landscape.

This has obvious implications for the archaeological visibility of warfare, and efforts to understand its territorial expression in different periods. There is a general correlation between the distribution of Class 2 hillforts and Bronze Age swords, with the latter also found in parts of Ireland where hillforts are absent (Fig. 1). These weapons are not found within or close to hillforts, but do occur in small numbers within a 10–20 km radius. Spearheads also occur in the general vicinity of Class 2 hillforts, but again no obvious concentrations close to these sites (Figs. 3–4). These patterns can be explained by the wider landscape context of warfare in the Bronze Age. They also show these weapons in parts of Ireland where there are few hillforts, such as the midlands and Ulster. This is a further indication of the complex political landscape underlying their use.

Hillforts wars and metal hoarding?

The deliberate burial of collections of metalwork for non-funerary purposes is well known in the European Bronze Age.⁵⁷ The interpretation of such hoards is complex, as this was not a coherent phenomenon in chronological, cultural or depositional terms. Some deposits were of economic significance, connected to the supply and recycling of metal, while it is argued that others had a symbolic meaning in terms of social prestige or religious belief. Their varying composition is often attributed to categories of ownership and use (merchant's hoards, founder's hoards, craft tool-kits, personal hoards). Find location is also regarded as significant, with a distinction generally made between those hoards deposited on dry land where retrieval was possible, and those from wet contexts where recovery would be difficult. That distinction is central to a research tradition in northern Europe that regards metal hoards as ritual deposits, representing grave-less funerary offerings or 'gifts to the gods' made with religious intent.⁵⁸ That tends to be supported by the apparently prescribed nature of those deposits, and their irretrievable deposition in wet environments, all of which is open to interpretation.

⁵⁴ O'Brien 2018; O'Brien/O'Driscoll 2017; O'Brien/O'Driscoll/Hogan 2018.

⁵⁵ Raftery 1971.

⁵⁶ Cotter 2012; Becker 2010.

⁵⁷ Bradley 1990; 2013; Eogan 1983 and Becker 2013 for review of Irish evidence.

⁵⁸ Bradley 1990; 2017.

The Bishopsland phase of the Middle Bronze Age, ca. 1400–1100 BC, coincided with an upsurge in metal hoarding in Ireland.⁵⁹ There are 25 hoards from that period, all but two consisting of small collections of gold personal ornaments. These are novel forms, including bar and ribbon torcs, neck rings, penannular bracelets, armlets, earrings and tress rings, which represent new developments in goldworking.⁶⁰ There are find details for sixteen of these ornament hoards, twelve of which were recovered from dryland contexts, with four found in bogs.

The scale and type of metal hoarding increased significantly during the Dowris phase of the Late Bronze Age, ca. 1000–700/600 BC. A total of 130 metal hoards are recorded, representing 80% of such finds for Bronze Age Ireland.⁶¹ These include separate or mixed collections of weapons, tools, ornaments and other objects. This indicates a considerable amount of metal in circulation, with a proliferation of new tool, weapon and ornament types that reflect influences from southern and western Britain, and the European mainland. It was a time of conspicuous wealth, when an elite warrior culture emerged with a liking for the ostentatious display of weapons and other prestige objects.

Find details are available for 89 Late Bronze Age hoards in Ireland, with 52 (58%) coming from wet contexts, mainly bogs, and 37 (42%) from dryland locations.⁶² This has influenced research in Ireland, where bog finds are generally interpreted as votive deposits in liminal settings. That view over-emphasizes the extent to which bogs represent irretrievable contexts of deposition. This is highlighted by Becker, who suggests that sacred objects hidden in bogs were retrieved periodically for ceremonial use.⁶³ What has not received enough attention, however, is that bogs make excellent places for the hiding of valuables and also weapons during periods of crisis and war. The importance of security deposits or 'emergency' hoards is well known for the historic period,⁶⁴ whereas ritual explanations are generally to the fore in consideration of hoarding in the Bronze

Age.⁶⁵ These explanations must be factored into any consideration of bog and dryland hoards, where retrieval was possible if those concerned were willing and able to do so.

An example here is the 'Great Clare Find' of 1854, one of the largest discoveries of prehistoric gold in Europe (**Fig. 7**). This deposit was uncovered near the edge of a small lake, 750 m northeast of the large Late Bronze Age hillfort of Mooghaun in Co. Clare.⁶⁶ As the lake may have been larger in prehistory, the hoard has been interpreted as a votive deposit, with comparisons made to connections between another Bronze Age hillfort, Haughey's Fort, and the King's Stables ritual pond in Co. Armagh.⁶⁷ Contemporary accounts refer to the discovery of this hoard in a cavity behind a large stone,⁶⁸ which is more consistent with deliberate burial on dryland than votive accumulation in the lake. While the intention behind this deposit is unclear, the wealth represented by its hundreds of gold ornaments can be connected to occupation of the nearby hillfort during the tenth or ninth centuries BC. The possibility that this hoard was a security deposit hidden during the hillfort wars of the Irish Late Bronze Age is more plausible than explanations to do with votive offering. The possibility that other bog or dryland hoards represent booty from those conflicts also deserves greater consideration.

The distribution of Bronze Age metal hoards in Ireland reveals a general proximity to Class 2 hillforts (**Fig. 8**). There is a notable occurrence of hoards close to some hillforts; for example, Haughey's Fort, Co. Armagh, and Toor More, Co. Kilkenny. There is also a concentration of hoards in the hinterland of many sites, for example, to the west of Clashanimud, Co. Cork, and near the hillforts of the lower Shannon estuary, namely Ballylin, Mooghaun, and Formoyle. The fact that these hoards do not occur at the hillforts themselves suggests that they were hidden for safekeeping some distance away, but still within the territorial domain of the hillfort. The distribution pattern indicates that this wealth was concentrated near hillforts as the major centres of power, but also dispersed into wider settlement territories.

⁵⁹ Eogan 1983.

⁶⁰ Eogan 1994, 47–63.

⁶¹ Eogan 1983.

⁶² See Cooney/Grogan 1999 Figs 8,10–12; also Becker 2013.

⁶³ Becker 2008.

⁶⁴ E.g. Haselgrove 1984.

⁶⁵ See Maher/Sheehan 2000 for discussion of different approaches to the study of Late Bronze Age and Viking Age metal hoards in Ireland.

⁶⁶ Eogan 1983, 69–72.

⁶⁷ Cooney/Grogan 1999, 156; Grogan 2005.

⁶⁸ Armstrong 1917; see also Condit 1996.

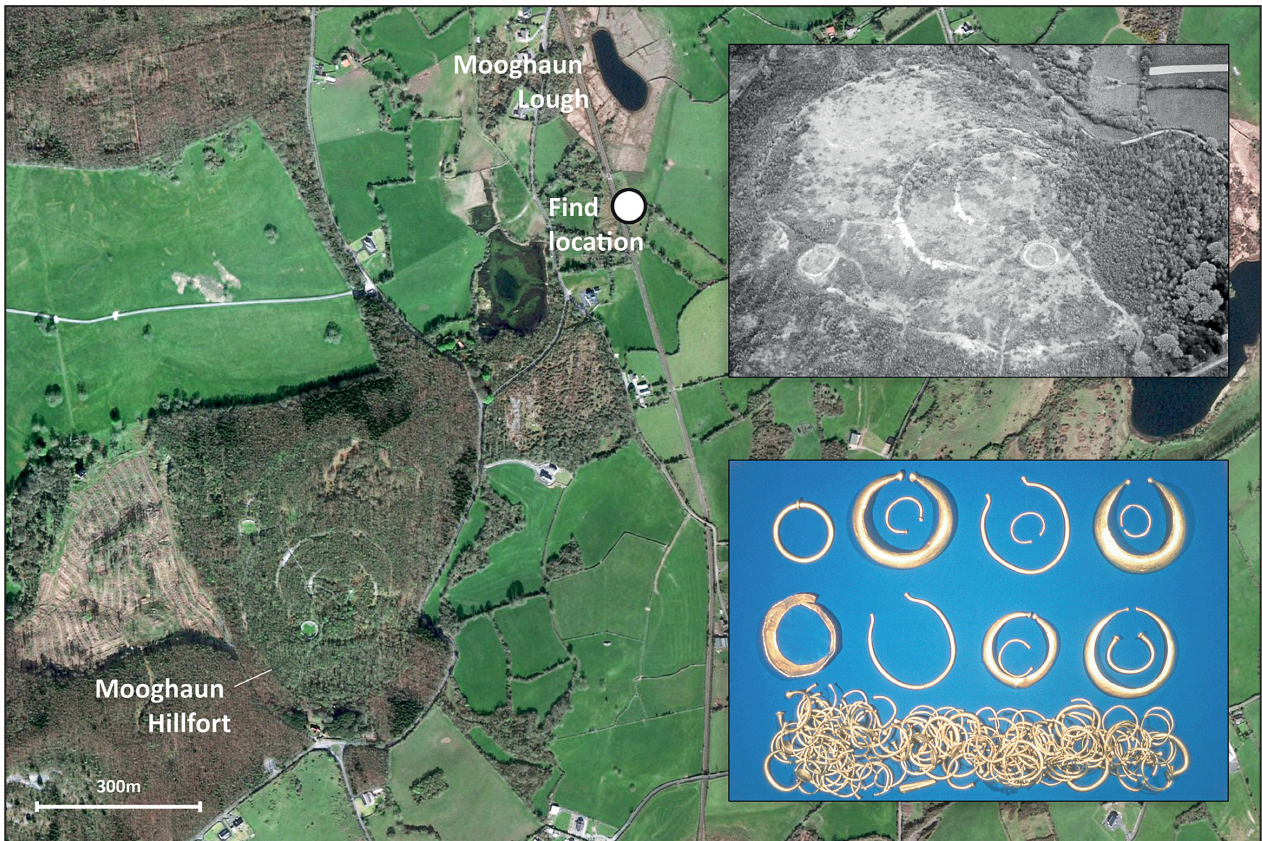


Fig. 7 Hoard of Late Bronze Age gold found in 1854 near Mooghaun hillfort, Co. Clare (source: author, with inset image from National Museum of Ireland)

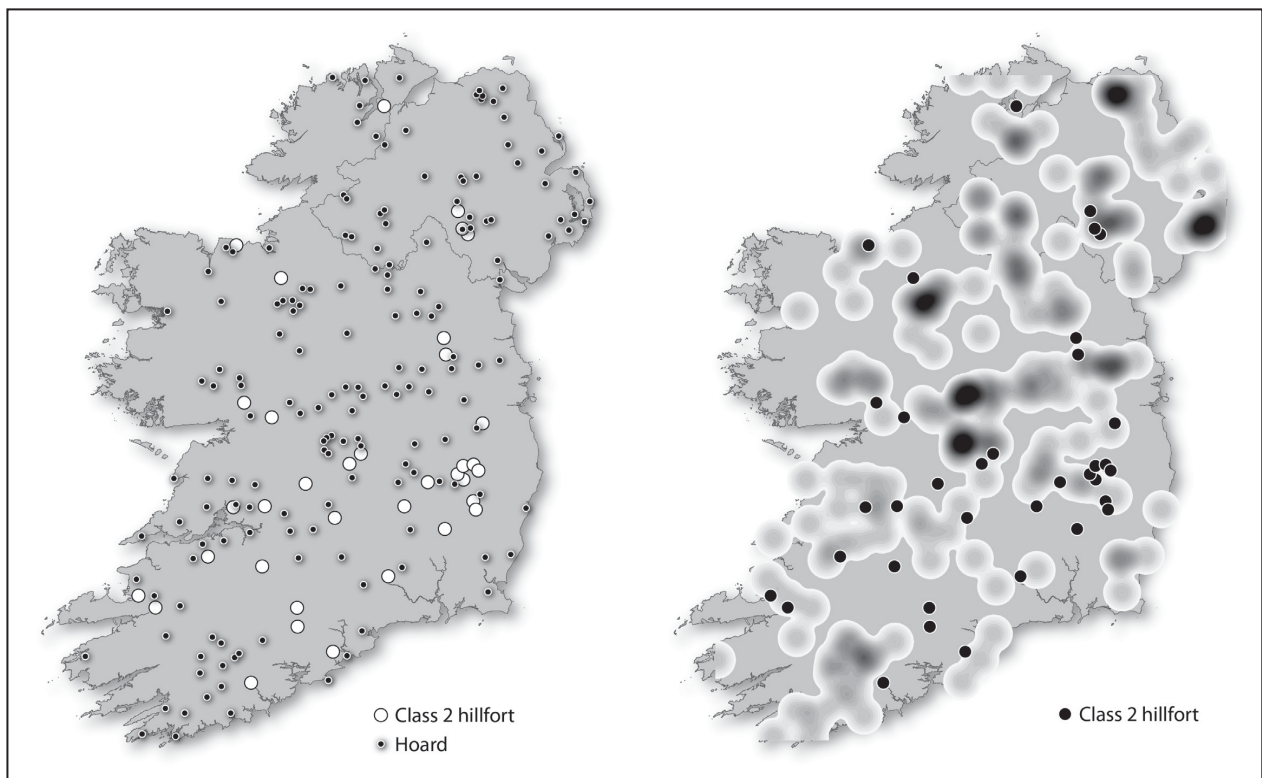


Fig. 8 Distribution and density plot of Class 2 hillforts and Late Bronze Age metal hoards in Ireland (source: author; data from Eogan 1983, with additions)

In conclusion, as with gold hoards of the Middle Bronze Age (Bishopsland phase), consideration must be given to the possibility that many bronze, gold and mixed hoards of the Late Bronze Age (Dowris phase) were buried for safekeeping during periods of turmoil. In so doing, they may have been placed under the protection of the gods, emphasizing again how the sacred can never be separated from the profane in these practices.⁶⁹ Such security concerns and political context were not unique to Ireland in that period. A rise in metal hoarding during the Middle and Late Bronze Age in Britain also coincided with the building of hillforts and large-scale production of specialized weaponry,⁷⁰ with similar patterns in other parts of mainland Europe.

A landscape of war

Research on Bronze Age weapons from wet contexts continues to emphasize ideological and religious aspects of those deposits. The tendency in recent explanation has been to emphasize the symbolic meaning of material culture in social action, as opposed to historicist interpretations of weapons and other manifestations of war. This paper has attempted to balance that approach by considering *why* such deposits were made in specific historical contexts. An analysis of river weapon finds in Ireland and Britain confirms that most were used in combat before being finally deposited,⁷¹ a process that mirrored the lives of their owners.⁷² This paper concludes that many of those finds represent a materialisation of military engagements, or the symbolic representation of different rituals of war and peace. That perspective could be extended to metal hoarding in bogs, which probably had more to do with the political climate in which valuables were concealed than any economic or religious context.

This paper has presented different circumstances where deposition of weapons in rivers was highly meaningful in symbolic terms, suggesting that these practices were linked closely to warfare and martial culture. The use of weapons as funerary or votive offerings does not preclude a close association

with warfare, something that has been lost in 'pacified' narratives of the Irish Bronze Age. This is not a question of 'sacred versus profane', as symbolic meaning and ritual performance can be connected to a narrative of war and martial culture in a manner that is entirely consistent with the type of objects concerned, their condition and find location.

It is now reasonable to connect these depositional practices to episodes of hillfort warfare during the Middle and Late Bronze Age, ca. 1400–800 BC. As places of high-status residence, ceremony and assembly, hillforts were an important part of the visual display of political and military power in Bronze Age Ireland, often explained in terms of emergent chiefdom polities. Political relations broke down on occasion, when the ambitions of warlords led to conflicts of a brief, but intense nature between rival regional polities. The deliberate burning of hillforts was a consequence of these conflicts, representing a ritualised act of punitive destruction and a deliberate slighting of symbolic centres of power. The military engagements themselves occurred in the wider landscape, often at territorial boundaries created by rivers or in the liminal space of bogs. The conducting of these hillfort wars over wide political territories is an important geographical context to understand the subsequent dispersal of metalwork in the landscape, either as valuables hidden in times of trouble or symbolic deposits connected to those traumatic events. This is a plausible, if unproven, interpretation of many river and bog finds of Bronze Age metalwork in Ireland.

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⁶⁹ Bradley 2017, 47; see also Brück 1999.

⁷⁰ Burgess/Coombs 1979; Bradley 1990.

⁷¹ York 2002.

⁷² Bradley 2007, 202.

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William O'Brien, Metal in Water: a Materialisation of War in the Irish Bronze Age?

Research on Bronze Age weapons from wet contexts in northern Europe often interprets those finds as structured deposits of a symbolic nature, placed in liminal environments that had special significance in social and religious terms. Much less consideration is given to direct or indirect connections with war and conflict in the competitive chiefdom polities of the Bronze Age. As territorial boundaries, rivers were obvious settings for conflict, with confrontations at fording points leading to weapon loss in battle. There may also have been intentional deposition connected to the death of a warrior at or near that location. River deposition may also signify the celebration of a military victory, involving a ritualized destruction of the weapons of the vanquished. They may also represent an assertion of territory or an expression of ritualized violence. Such scenarios illustrate how the use of weapons as funerary or votive offerings does not preclude a close association with warfare. The parallel phenomenon of hoarding in the same period may reflect a political climate in which it was necessary to hide valuables. This paper explores possible connections between the deposition of weapons and valuables in wet contexts and the landscape context of war in Ireland during the later Bronze Age, with implications for research in other parts of Europe.

William O'Brien, Metall im Wasser: eine Materialisierung des Krieges in der irischen Bronzezeit?

Bronzezeitliche Waffen, die in Feuchtbodengebieten in Nordeuropa gefunden wurden, werden von der Forschung häufig als strukturierte Depotfunde symbolischer Natur interpretiert, die in einem Übergangsbereich mit besonderer sozialer wie auch religiöser Bedeutung niedergelegt wurden. Viel weniger werden ihre direkten oder indirekten Verbindungen mit Krieg und Konflikt in den konkurrierenden Häuptlingstümern der Bronzezeit in Betracht gezogen. Als territoriale Grenzen waren Flüsse offensichtlich Schauplätze für Konflikte, und bei Auseinandersetzungen an Furten gingen Waffen im Kampf verloren. Es ist aber auch möglich, dass es sich um intentionelle Deponierungen im Zusammenhang mit dem Tod eines Kriegers an oder bei einem solchen Platz handelt. Flussdeponierungen könnten auch mit militärischen Siegesfeiern zusammenhängen, mit denen die ritualisierte Zerstörung der Waffen der Besiegten einherging. Möglicherweise stellen sie auch den Anspruch auf ein Gebiet oder Ausdruck ritualisierter Gewalt dar. Solche Szenarien veranschaulichen, dass die Verwendung von Waffen als Grabbeigaben oder Weihgaben einen engen Zusammenhang mit Krieg nicht ausschließt. Das parallele Phänomen von Horten in der gleichen Zeitperiode spiegelt ein politisches Klima wider, in dem es notwendig war, Wertgegenstände zu verstecken. Dieser Beitrag untersucht mögliche Zusammenhänge zwischen Deponierungen von Waffen und Wertgegenständen in Feuchtgebieten sowie den landschaftlichen Kontext von Krieg während der späteren Bronzezeit in Irland, einschließlich der Implikationen für die Erforschung verwandter Phänomene in anderen Teilen Europas.