Second only to swords, halberds are one of the most prolific of all Bronze Age weapons (Brandherm 2011, 23), with the National Museum of Ireland alone holding almost 100 of these squat triangular blades in its Dublin collection. Between c. 2300 BC and 1900 BC they were relatively common from Scandinavia to southern Iberia, with over 600 known examples (O’Flaherty 2002, 423). For many, however, halberds do not sit comfortably in the panoply of prehistoric armament and have been described variously as ‘peculiar’ (Childe 1930, 41), clumsy and inefficient (Butler 1963, 11), ‘puzzling’ and ‘problematic’ (Harbison 1969, 35), ‘enigmatic’ (O’Kelly 1989, 164), ‘extraordinary’ and ‘remarkable’ (Fontijn 2002, 71, 73), ‘intriguing’ (Waddell 2010, 139) and ‘unwieldy-looking’ (Thorpe 2013, 235). Indeed, Wilde (1861, 449–52) did not even recognise a substantial number of them as constituting a class of object in their own right. When he came to compile his illustrated catalogue of the bronze antiquities then held by the museum of the Royal Irish Academy, he employed the term ‘broad scythe-shaped swords’ to describe what are now recognised as a peculiarly Irish variant of this weapon.

While Coffey (1909) considered the role of the halberd in Ireland, largely as a vehicle to support his claim for an Irish Chalcolithic, the first major pan-European study was undertaken by Ó Riordáin (1937). The six types identified under his classification were later rationalised by Harbison (1969) to four: Type Breaghwy was preceded by Types Clonard and Cotton, then by possibly the earliest, Type Carn, which account for about 26% of the total listed in his catalogue. Ó Riordáin’s subject-matter has been revitalised more recently by Lenerz-de Wilde’s (1991, 25) comprehensive reflections on the function of early Bronze Age halberds.

The townland of Carn sits in the parish of Lackan, near Ballina in north-east County Mayo. It takes its name from an ancient monument which is marked on the first edition of the six-inch Ordnance Survey map and was used as a triangulation point. Later editions show that this site was also the location of an enclosure and a souterrain, which perhaps in turn attracted the establishment of a burial ground, or cillín, for unbaptised infants. Carn Monument, as this collection of features came to be known, is the highest point in a boggy region where peat-cutting had been practised for many years. Shortly before the outbreak of the Second World War, while working approximately a metre below what was then the surface of one of these bogs, in strata which had preserved substantial remains of fir branches, Thomas Farrell came across what would eventually become known as Harbison’s (1969, 39–41) eponymous Type Carn halberd. The blade remained attached to its intact wooden shaft, which had been driven vertically down into the bog during deposition (McCormick 1939; Raftery 1942, 54). Unfortunately, however, Farrell considered the shaft to be of no value and, after tearing it from its metal blade, promptly discarded the splintered remains (Raftery 1939).

By June of 1939, the blade had come to the attention of a local National School teacher, Austin Cunney, and thence, along with a retrieved portion of shaft, into the possession of Henry Morris, an active member of the Royal Society of Antiquaries of Ireland. When the Director of the National Museum, Adolf Mahr, became aware of the existence of this ‘magnificent bronze halberd’ and its ‘very much shrunked wooden shaft’, he characteristically instigated the immediate pursuit of their acquisition (Herity and Eogan 1977, 14), recommending to the Education Secretary the purchase price of nine pounds (Mahr 1939). Mahr’s assistant, Joseph Raftery, was duly dispatched to County Mayo to conclude the matter and finally brought back to the museum, at a cost of only six pounds, the Carn blade together with ‘the shrivelled remains’ (Raftery 1939) of its wooden shaft, which he regarded as being ‘comparatively short’ (Raftery 1942, 54). These were eventually examined at
the museum’s Natural History Division and pronounced to be of oak (*Quercus*) (*ibid.*). The whereabouts of any part of this original shaft are, unfortunately, no longer known (M. Cahill, pers. comm.). What does survive, however, is a modern reconstruction.

This is likewise fashioned from oak and is 1,067mm long and subrectangular in section. It is slightly curved along its length and, at about the midway point towards the blade, widens from approximately 20mm to 34mm. The shaft’s thickness, on the other hand, is relatively uniform at approximately 16mm. The 45° chamfering at the hafting point remains crisp. The far end of the shaft terminates abruptly and the surface of the wood shares the same smoky hue as the blade. Although it appears to have been crudely cut from a section of ⅜in. flat stock and darkened over a peat fire, the whole looks and feels entirely sound, with no obvious evidence of natural decay or insect, woodworm or vermin damage. Illustrations of this piece by both Harbison (1969, pl. 8) and Raftery (1942, 55) show an unhafted blade with a roughly semicircular butt. Raftery includes longitudinal detail of one of the three large, dome-headed fastening rivets, suggesting a shaft head thickness of approximately 20mm. Presumably Harbison’s drawing was based on Raftery’s work, executed prior to the fitting of the reproduction shaft.

Raftery (1951, 143) published an illustration of the ‘complete’ Carn halberd with the caption, ‘Bronze halberd mounted on a copy of its original wooden handle’. Harbison reproduced this illustration twice: in 1969 (fig. 4B), describing it as ‘showing a copy of the original wooden handle’ which ‘has only survived’ in this single instance, and again in 1988 (fig. 70), referring to it as an ‘intact example’. Vandkilde and Northover (1996, 194) also reproduced Raftery’s illustration, describing it as ‘showing a copy of the original wooden handle’ and extrapolating that Danish halberds may have been hafted in a similar fashion. Writing of Dutch halberds, Fontijn (2002, 71) referred to Harbison’s 1988 illustration of Raftery’s ‘completely preserved’ Carn halberd and noted that such weapons ‘do not seem to be very practical’. Skak-Nielsen (2009, 355) also reproduced Raftery’s illustration for his work on Danish halberds, stating that ‘one of Ireland’s halberds still retains its wooden shaft’. In reference to Italian halberds, Cornaggia Castiglioni (1972, 252–4) reiterated, on the basis of the Carn example, Ó Riordáin’s (1937, 241) views regarding the fragility of these weapons. More recently, Brandherm and O’Flaherty (2001, 58) also refer to Raftery and the Carn halberd’s ‘surviving shaft’.

The relatively large, asymmetric Carn blade has a prominent, slightly curved midrib and terminates in a rounded point. It is complete, with only some minor corrosion damage manifesting as a slight ‘bread-knifing’ (York 2002, 80) at several points along the hollow-ground cutting edges. A number of notches are present at the hafting point and these appear to indicate use-wear rather than corrosion. Several small areas of pitting could be manufacturing flaws, damage or the result of corrosion, further analysis of these features being hampered by a uniform deep brown film. This does not appear to be any form of natural accretion but rather is reminiscent of prolonged exposure to peat smoke, which now completely obscures any underlying patina. This has been scratched in a number of places, revealing a glimpse of bare metal beneath the surface.

Prior to the discovery of the Carn halberd, Ó Riordáin (1937, 241) was already predisposed to the
view that, while they may originally have been developed as practical weapons, halberds were inherently impractical owing to their structural weakness. In particular, he was of the view that the blades of wooden-shafted examples, such as those found in Ireland, could easily have been detached, while German metal-shafted halberds were manufactured from bronze with levels of tin that rendered them impractically brittle. Since its discovery, the Carn halberd has been held to validate the ‘ritual use’ hypothesis, with Ó Riordáin (1946, 155) proposing that ‘the slender shaft shown in the reconstruction of the Carn halberd also argues against its effectiveness’. He then goes on to dismiss any discussion of how halberds might have been used against or in conjunction with shields, on the grounds that the latter did not make their début in the archaeological record until the late Bronze Age. This would appear to be a direct rebuttal of Raftery’s (1942) suggestion that the halberd might have been wielded with one hand while a shield was held in the other. While it has become clear that shields came into use in Ireland well before the beginning of the late Bronze Age, there is still no evidence for their use early enough to match conclusively the current dating of Irish halberds to the third and the very beginning of the second millennium BC (Uckelmann 2012, 158).

Many more have relied directly or indirectly on the proportions of the Carn halberd to demonstrate this class of weapon’s inherent weakness (Harbison 1969, 39–41; Cornaggia Castiglioni 1972, 252–4; Vandkilde and Northover 1996, 194; Fontijn 2002, 71; Skak-Nielsen 2009, 355). Some have argued for a purely ceremonial or ritual use (Butler 1963, 11; Mallory and McNeill 1991, 102). Others have made more practical use of its form in the field of experimental archaeology. Although the morphology of metal-shafted halberds from central Europe and rock-art illustrations were also taken into consideration, this particular halberd, notwithstanding the known shortcomings of its reconstructed handle (O’Flaherty, Rankin et al. 2002, 32; O’Flaherty 2002, 166), was considered during the design of a replica produced by O’Flaherty (2007, 424) to assess the practical effectiveness of this style of weapon. While many appear to have lost sight of the fact that the shaft of the Carn halberd held by the National Museum was actually a replica, remarkably few can have appreciated a much more fundamental error in turning to this piece as any sort of blueprint for practice or principle relating to real halberds.

During his time on the staff at the National Museum, Etienne Rynne appended a note, dated February 1962, to the file of the Carn halberd recording his concerns over the veracity of its
reconstruction (Barry 2012). This followed his conversation with Austin Cunney regarding the circumstances of the halberd's discovery in County Mayo over twenty years earlier. Cunney recalled that the finder had described the original shaft as being 'as thick as the handle of a pickaxe', or more than twice as thick as the remake (see Tables 1 and 2). When Rynne subsequently put these discrepancies to Raftery, he received the explanation that the reproduction had been a slavish copy, based on the original 'without making any allowance for shrinkage'. Furthermore, as these events had taken place during the early years of the Second World War, it had not been an opportune time to remedy the matter.

The shafted halberd currently stored in the vault of the National Museum in Dublin, which has been of significant influence in interpreting the use of this class of implement, is indeed a faithful reconstruction, as stated above, but not of any weapon as it actually existed in the Irish Bronze Age. Perhaps the only reliable information that it conveys is the material from which it was constructed and, to a lesser extent, its length. European oak produces a heavy, hard and strong timber (Davies and Jokiniemi 2011, 317); unless carefully maintained, however, it tends to become unyielding and brittle as it ages and could be prone to shattering on sudden heavy impact (D. Brown, pers. comm.). Depending on the species, waterlogged wood can swell from 8% to 12% when it is fully saturated (Rodgers 2004, 40). On drying out, waterlogged wood tends to twist and warp, in extreme cases shrinking to perhaps a tenth of its former diameter, although woods such as yew and oak can better withstand many of the detrimental effects of extended periods of saturation. Owing to its cellular structure, shrinkage tends to occur over the transverse section of wood, which during the lifetime of a round handle could see it becoming distorted to an oval shape (Cronyn 1990, 243–54).

Coffey (1909, 102–3) studied examples of halberds from south-eastern Spain on which fragments of the original wooden shaft could still be identified. Both the arid climate and early Bronze Age funerary architecture in that area have favoured the preservation of wooden remains. As most of the relevant finds were made during the late nineteenth or early twentieth century, however, determination of wood fragments to
the species level remains the exception rather than the rule.

Based on the limited data available, a striking variety of different types of wood seems to have been used for Iberian halberd shafts, including olive (Olea) from Grave 1 at El Rincón de Almendricos (Ayala Juan 1991, 101), willow, sallow or osier (Salix) from El Tabayá (Badal 1990), and apparently some wood of the apple (Maloideae) or rock rose (Cistaceae) family from Grave 3 at Los Cipreses (Martínez Rodríguez et al. 1999, 168). The only secure instance of the use of oak, most likely holm oak (Quercus ilex), for a halberd shaft among the Iberian material is found in Grave 10 from the Cerro del Culantrillo (García Sánchez 1963, 80).

The small dimensions of the halberd blade (98mm long) from this last burial make it seem likely that this particular piece had a symbolic rather than a practical function (cf. Brandherm 2007, 203), and it is interesting to note that, in contrast to most other burials from south-eastern Iberia accompanied by halberds, here we are dealing with a juvenile and probably female individual (García Sánchez 1963, 76).

In terms of Irish specimens, the only case of a wooden shaft purportedly having survived attached to a halberd other than the piece from Carn comes from Altmackin, Co. Armagh. Unfortunately, this completely disintegrated when the find was lifted from the ‘sticky yellow clay’ in which it was encased. Subsequent forensic examination failed to produce any additional information regarding the nature of the original wooden shaft (Flanagan 1966, 95). In neither case was the species of wood identified. A recent halberd find from Lough Ree, Co. Westmeath, however, now in the collection of the National Museum in Dublin, retains a small portion of wood between its fastening rivets whose most likely species identification is also oak (Quercus) (D. Brown, pers. comm.).

Oak is no longer widely used for such utilitarian products as tool handles, with those for modern pickaxes being fabricated from a variety of alternative hardwoods, including beech (Fagus) and hickory (Carya). Ash (Fraxinus) is the only species native to the British Isles that is currently recommended for the manufacture of handles used for striking tools such as sledgehammers, axes and pickaxes. BS 3823:1990 sets out the density, annual ring count, grain configuration and number of permissible blemishes acceptable in any handle. These weigh approximately 1.5kg, the combined weight of O’Flaherty’s (2007, 424) blade, c. 500g, and a somewhat longer but thinner shaft. A pickaxe-sized shaft made from oak would probably result in a slightly greater overall weight. In any event, a shafted weapon weighing approximately 2kg would almost certainly require a double-handed grip for any
sustained amount of use. Furthermore, the robustly utilitarian construction of these powerful weapons should eradicate any doubts as to their ‘fitness for purpose’ as practical weapons.

The fitting of a replacement shaft to the Carn halberd in the 1940s, replicating the then shrunken and distorted original, and its subsequent display in the National Museum in Dublin undoubtedly led many to believe that this was how these weapons would have appeared in the Bronze Age. Many of the subsequent assumptions that halberds were capable only of use as some form of ceremonial standard were therefore clearly predicated upon a fundamental misapprehension regarding the details of their construction. It has more recently been suggested, however, that, if they served any practical function at all, halberds were used as pole-arms, perhaps in a similar manner to the much later poleaxe (Osgood et al. 2000; Mercer 2007, 127; Thorpe 2013, 235). Indeed, experiments by O’Flaherty, Rankin et al. (2002) have persuasively demonstrated that, in sustained assaults, a well-constructed halberd might be perfectly capable of delivering a mortal blow to the head (Mercer 2007, 127; Shulting 2013, 27).

The more recent experimental work of O’Flaherty et al. (2008; 2011) has seen a refocusing of interest in how these weapons might have been used rather than simply questioning their basic practicality. At the heart of this is an examination of the impact damage that can be clearly seen on a large number of Irish halberd blades. A repertoire of use-marks, including various classes of denting, bowing and notching, has been identified and their probable causation explored.

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