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## Ways of Death: Cremation and Belief in first-millennium AD Ireland

Patrick Gleeson

Archaeology and Palaeoecology, SNBE, Queen's University Belfast, Belfast, BT71NN,  
p.gleeson@qub.ac.uk

Rowan McLaughlin

Department of Scientific Research, The British Museum, London, WC1B 3DG  
rmclaughlin@britishmuseum.org

### *Abstract*

*A database of radiocarbon dates from first-millennium AD Ireland is used to identify new patterns in early medieval (AD400–1100) mortuary practices, including a significant new phase of cremation. The continuation of cremation far beyond the 5<sup>th</sup> C AD-threshold associated with conversion and Christianisation has remained absent from discussions of belief, ideology or commemorative strategies in Ireland and elsewhere in European archaeology. We discuss archaeological and historical implications, demonstrating how data-driven approaches significantly enhance established metanarratives with fresh perspectives. We also highlight serious methodological and interpretative issues this data poses for current narrative frameworks and their influence on post-excavation strategies.*

### **Introduction**

While archaeology is widely recognised as a powerful tool for assessing social, religious and cultural developments, diachronic accounts of burial have always posed considerable methodological and conceptual challenges. Poorly powered data, chronological uncertainty, and the predominance of explicatory frameworks borrowed from narrative history (e.g. migration, Christianisation) represent key issues. Nevertheless, Ireland presents a data-rich case study in addressing these problems due to a 'tidal wave' of recent excavations producing a volume of radiocarbon dates capable of resolving radical new patterns outside of and in opposition to traditional paradigms (e.g. Armit et al. 2014; Hannah and McLaughlin 2019). The first millennium AD is particularly well resolved in this dataset, encompassing a quarter of all radiocarbon dated samples. This presents a significant empirical basis for questioning dominant views of burial rites and their socio-religious imperatives, but that potential remains heretofore underexploited.

Specifically, evidence for human cremation across the first millennium AD has steadily accumulated. Despite many recent syntheses, there has been little re-appraisal of general models and the basic principles narrating the evolution of burial rites, with *a priori* assumptions surrounding the link between burial, religion, ideology and commemoration, remaining established since the 1990s (O'Brien 1992; 2003; 2009; 2017; O'Sullivan et al. 2013, 320-1). This paper identifies newly recognisable phenomena in the radiocarbon data, reviewing their nature, and establishing a new chronology for the evolution of burial practices in Ireland. It presents a new model for how ideologies and commemorative strategies evolved within a crucial period of social flux and religious transformation in northern Europe.

### **Archaeological background**

The study of the dead in first-millennium AD Ireland has transformed significantly through the upsurge of new excavations, scientific dating of legacy material, and new theoretical departures (e.g. Seaver 2011). Alongside the publication of large-scale cemetery excavations in developer-led contexts (e.g. Corlett and Potterton 2010), two projects have contributed a step-change to the empirical basis of funerary archaeology: the *Breaking Ground, Finding Graves* publication (Cahill and Sikora 2012); and *Mapping Death Project* led by Elizabeth O'Brien. O'Brien particularly has provided a synthesis and transformative re-appraisal that builds on but corrects earlier scholarship (Raftery 1981; O'Brien 1990; 1992; 1993). O'Brien (2003; 2009; 2017) presents an influential new model for how burial evolved throughout the first-millennium AD. Despite the firmer basis for dating contexts of change, with few exceptions (e.g. McGarry 2010; Ó Carragáin 2009), this wider interpretive framework has remained relatively unchallenged.

There is general agreement that cremation was the dominant burial practice in later prehistoric Ireland until the 4<sup>th</sup> century AD (McGarry 2008). A limited phase of Iron Age crouched and flexed inhumation has been identified (McGarry 2008; 2010, 193; O'Brien 2009; Eogan 2012, 13–44), but was limited to a small number of high status, exotic burials (mainly east midlands). O'Brien (2003; 2009; 2017) argues that crouched inhumation developed in Ireland under influences from Britain, and likewise, that from the 4<sup>th</sup> century AD a new rite of east-west extended inhumation developed under influences from Roman Britain, before becoming dominant thereafter. Significant diversity is, however, now recognised within inhumation practices across Ireland, more comparable to diversity recognised elsewhere (Maldonado 2013;

Petts 2009; Williams 2006; Price 2008; Seaver 2011). Extended inhumations might be found in simple dug graves, stone-lined cists, sometimes with pillow stones, laid upon planks of wood, charred, or accompanied by cuts of prime meat, antler tine or burnt grain (O'Brien 2009; 2017; *Mapping Death*). Grave-goods are rare, and generally dress items representing a funerary costume or burial shroud, rather than material offerings. O'Brien (1999; 2003) argues that some such seemingly early examples of non-normative and/or 'furnished' burials were exotic or 'intrusive', representing individuals from northern or eastern Britain (i.e. 'Pictish', 'Anglo-Saxon'). Isotopic research subsequently has often failed to confirm this, whilst also suggesting non-local origins for other burials accorded established, local and normative mortuary treatment (Cahill-Wilson and Standish 2016; Cahill-Wilson et al. 2014). Likewise, in Britain east-west extended inhumation has been shown to encompass a heterogeneous group of commemorative strategies that defy normative classifications, specific ethnic or religious descriptors (Maldonado 2013; Petts 2009; Williams 2006). More research is needed to clarify this evidence, but certainly, specific burial practices can no longer be regarded as 'intrusive' within such ostensibly culture-historical frames of reference.

This diverse heterogeneity is increasingly appreciated in Ireland, particularly regarding the locus of burial. Inhumations are known from flat cemeteries, sometimes highly ordered (i.e. rows), sometimes enclosed within ring-ditches, penannular enclosures or inserted into older monuments (O'Brien 2009; 2017, 263-5). Enclosed burial complexes seemingly proliferate c.AD400-600, while a variety of associated activities (e.g. crop-processing) has led to their classification as 'cemetery-settlements' (O'Sullivan et al. 2013; Ó Carragáin 2009). Some such complexes expanded with further enclosures added accommodating larger numbers through later centuries. Until recently, evidence for cremation after AD400 was limited (McGarry 2008; O'Sullivan et al. 2013, 285). Only with the development of methods for radiocarbon dating cremated bone (Lanting and Brindley 1998) has the number of early medieval cremations otherwise assumed to be prehistoric become apparent. Correspondingly, cremation has been theorised globally as a complex and refined mortuary technology through both focused analysis and synthetic, cross-cultural and diachronic studies (e.g. Cerezo-Román et al. 2017; Kujit et al. 2014; McKinley 2013). Nevertheless, in Ireland and early medieval European scholarship a general consensus persists that post-conversion cremations remain isolated, pagan and exceptional rather than commonplace practices.

Few have challenged the idea in Ireland that east-west extended inhumation became the overwhelmingly dominant mode of burial relatively quickly in the 5<sup>th</sup>–6<sup>th</sup> centuries, being widespread by AD600 (O’Sullivan et al. 2013, 285 and 320–1; McGarry 2010, 174). Following trends in British scholarship, O’Brien (2003; 2009) has been reticent about assigning ideological labels like ‘pagan’ or ‘Christian’ to specific inhumation practices. While this seems prudent, the earliest radiocarbon dates for east-west extended inhumation span the later 3<sup>rd</sup> to early 6<sup>th</sup> century. We cannot, therefore, be certain that this practice originates before AD400. Consequently, some scholars suggest an origin in conversion-period Ireland more closely aligned to Christianising contexts (Gleeson 2017, 307–8; Ó Carragáin 2009; McGarry 2010, 196–7). O’Brien, however, remains insistent (2009; 2017, 261) that the origin of east-west extended inhumation lay in late Roman, as distinct from Romano-Christian, practices, in Northern and Western Britain particularly. Instead, she suggests, a signal of ‘Christianisation’ is stronger from the later 7<sup>th</sup> century, when ‘ancestral’ cemeteries fall out of use because burial was being removed to churchyards. The archaeological evidence for this, however, is limited, and post-excavation bias must be factored in: stratigraphically early burials have tended to be dated to establish foundation dates, with phasing in many cases determined arbitrarily through changes in burial orientation or overall site morphologies.

Similarly, few large-scale excavations have occurred within ecclesiastical precincts, while the slim body of radiocarbon data from these sites gives little indication of an 8<sup>th</sup>-century burial expansion; the number of dated burials is relatively frequent after the 10<sup>th</sup> century, but not currently during the 8<sup>th</sup>–9<sup>th</sup> centuries. Likewise, a growing number of non-ecclesiastical sites with relatively large numbers of dated burials show continuity spanning AD800–1200 and beyond (e.g. Lehané et al. 2010). Nevertheless, it does appear that non-ecclesiastical cemeteries were not generally *established* after the 8<sup>th</sup> century, a factor potentially indicative of wider socio-cultural trends, like changing group identities, or demographic decline (Gleeson 2017; Hannah and McLaughlin 2019). Other explanations are plausible, but this overview clearly highlights major empirical issues with established models and the culture-historical paradigms surrounding them. We have much yet to unravel about changing contexts of burial, and concordantly, the role of mortuary theatre in religious transformation. Holistic analyses of radiocarbon data can help resolve this, with chronologies for cremation one key example.

## **Methodology**

We have thus collected radiocarbon data from various published sources, a review of ‘grey’ literature and online databases (e.g. Chapple 2019; *Mapping Death*). Radiocarbon dates pertaining to cremation were identified by reviewing excavation reports and other metadata, with background data provided by Hannah and McLaughlin (2019; Ireland) and Bevan et al (2017; Britain). Radiocarbon data were calibrated using IntCal13 (Reimer et al. 2013). Because our interest lies in modelling the temporal frequency distribution of cremation events as a continuum without prior knowledge of their distribution in time, we utilised kernel density estimation (KDE; see Bronk Ramsey 2017). Using Monte Carlo simulation (the *MCdensity* algorithm; see McLaughlin 2019) and a Gaussian kernel with a 50-year bandwidth, our KDE models estimate the temporal frequency of dates from cremations whilst simultaneously expressing calibration uncertainty.

## Results

Table 1 catalogues the radiocarbon dates for directly dated cremated bone, or grain found within cremation material, specifically spanning 200BC–AD1200. This includes 27 dates before AD400, and 26 dates for the period AD300–1200. Of these 21 dates spanning AD300–1200 come from cremated human bone at 7 sites (Figure 1): Carrickmines (Dublin); Mullaghbane, Annaghilla and Armalughey (Tyrone); Ask (Wexford); Dún Aonghasa (Galway); and Prumplestown Lower (Kildare). Additionally, cremations from six further sites are likely early medieval due to directly associated material, including: five examples dated by grain in pits containing cremated human bone at Castletown-Tara (Meath); one from Knoxpark (Sligo), where animal bone stratified below cremated bone was dated to AD559–663 and AD716–971; charcoal from a cremation at Glebe South (AD232–531); and charcoal associated with cremated bone within a ditch at Ardsallagh 2 (AD643–774). Similarly, cremations associated with a ring-cairn at Furness (Kildare) were dated from a central stakehole to AD430–591 (Grogan 1984, 304), while several cremations were stratigraphically contemporary with 8<sup>th</sup>- to 10<sup>th</sup>-century AD inhumations at the Rath of the Synods, Tara (Burials V and W: Grogan 2008, 42–53 and 142–3; *Mapping Death*). This gives a minimum of thirty-four likely cremations AD300–1200 at thirteen widely dispersed sites. Of these, two are perhaps unsecure (Tara, Furness), but only one certainly pre-dates AD400 (Armalughey); date ranges at Mullaghbane, Prumplestown and Carrickmines span the 5<sup>th</sup>–6<sup>th</sup> centuries.

It should be noted that further cremations at many sites are as yet undated. Hence, this is a minimum dataset. Nevertheless, analysis reveals two largely discrete periods of peak visibility:

an Iron Age tradition 200–0BC, and an early medieval peak during the 7<sup>th</sup>–8<sup>th</sup> centuries (Figure 2). However, a degree of continuity may be postulated: some cremations clearly date to the centuries between both ‘phases’, while others are later (e.g. Mullaghbane: samples dated AD334–532 and AD1023–1153). No significant breaks seem apparent, although relative differences in visibility might be reflected if changes in depositional contexts occurred (spreads, instead of pits). Equally, a discontinuity of <25 years would not be clearly visible in radiocarbon data that is still a relatively small sample size.

Figure 3 displays the frequency of radiocarbon dated inhumations against cremations for Ireland. To assess this data, we might consider early medieval cremations (34) against total dated inhumations: 409 examples from 113 sites. Clearly, dated inhumations are more numerous, but considering taphonomy and post-excavation bias where cremations have not systematically been dated (below), this evidence is significant. Even with only 34 likely examples of cremation from 13 sites, this frequency is still comparable to the earlier, late Iron Age cremation peak, with more dated cremations c.AD400–1200, than AD0–400, in a period when cremation is widely regarded as the principle archaeologically-detectable mode of burial.

The kernel density estimation model represents these data as a continuous time series, and compares the temporal frequency distribution of cremations from Ireland with those from Scotland, and Britain more generally (Figures 3 and 4). Numerical analysis can reveal with 95% certainty that the available data suggests a peak in Ireland AD688–718, before declining through the 8<sup>th</sup>–9<sup>th</sup> centuries. A minor 5<sup>th</sup>-century peak is interesting, but not particularly statistically significant. This Irish material begins to peak when cremation was no longer a dominant practice in early medieval Britain (Figure 4). However, there are several isolated but important Scottish examples of cremation. These include Sanaighmhor, Islay (AD257–536); Stromness, Shetland (AD390–600); Balnauran of Clava, Inverness (AD250–900; AD600–980); Rhiconich, Sutherland (AD400–640); Forteviot, Perthshire (8<sup>th</sup>–9<sup>th</sup> century); King’s Cross, Arran (mid-9<sup>th</sup>-century coin); Ardnave, Islay (AD721–980); Baliscate, Mull (AD725–967); and Cleigh, Lorn (AD541–771). At least five further sites have cremations that are not directly dated, but where an AD400–1100 date seems likely: Machrins; Hallow Hill, Fife; Hermisgarth; Ostro Broch, Orkney; and Easterton, Moray (Maldonado 2011, 87 and 106–8; 2013, 11–12; 2017, 337; Ó Riagáin 2016, 156–60). Many examples have problematically long date ranges, but a 7<sup>th</sup>–9<sup>th</sup> century phase similarly stands out. In general, as the KDE analysis

reveals (Figure 3), traditions of cremation in early medieval Scotland are contemporary with those in Ireland.

#### *Other potential sites in Ireland*

In Ireland, a survey of *Mapping Death* and *Excavations.ie* identifies a further 32 sites where cremations have been excavated. Of these, 22 are assumed to be prehistoric in date, despite early medieval material often being present. Some examples are likely to be Bronze or Iron Age, principally ten where associated finds or (indirect) radiocarbon dates support that hypothesis, but in only four cases do radiocarbon dates demonstrate this assumption to be true. Relatively large and complex sites where cremation has been identified alongside early medieval material, and where a later prehistoric origin can no longer be assumed, include Bellinstown; Cahircalla-More; Carrigaline Middle; Cush; Cappydonnel Big, Carbury Hill; Ardreich; Balrigan 1; Corbally2/3; Cross; Grange 2; Haynestown; Holdenstown 1; Kilree 4; Kiltullagh Hill 2; and Ratoath (*Mapping Death; Excavations.ie*). At many sites (e.g. Kiltullagh, Rath of the Synods), cremains associated with early medieval inhumations were assumed to be prehistoric solely because cremation was perceived to be pre-Christian (i.e. pre-400) (McCormick et al 1995; Grogan 2008). However, both practices were used contemporaneously at 7<sup>th</sup>- to 8<sup>th</sup>-century Annaghilla (Dunlop and Barkley 2016, 126–31). This demonstrates a precarious situation, where *a priori* assumptions about cremation terminating during the 5<sup>th</sup> century AD are no longer tenable. There is a pressing need for specialist analysis (McKinley 2013), and direct dating of cremains from all contexts, whether by clear stratigraphic reasons or direct radiocarbon sampling. This must be a future research priority. Cremation was clearly much more common across the Irish Sea region than currently acknowledged. It is almost certainly still under-represented in Ireland and Scotland, and one may wonder whether early medieval cremation has similarly been overlooked because of dominant culture-historical frameworks in Wales, southwestern Britain and elsewhere.

The context of cremation has also been debated at many sites. Kelly (2009) identifies Knoxpark, Sligo, as a Viking *longphort*, while Stevens (2012, 46) implies similarly ethnocentric understandings at Ask. However, radiocarbon dating demonstrates that these cremations pre-date the Viking Age (animal bone below cremains, Knoxpark, AD559–663, AD716–971; cremated bone, Ask, AD665–768), and align with the 7<sup>th</sup>- to 9<sup>th</sup>-century peak identified above. In Atlantic Scotland, cremated human bone at Ardnave, Baliscate, King's Cross and Cleigh, has also tentatively been mooted as Scandinavian-style burials within a



colonial context (Ó Riagáin 2016). Excepting Cleigh, this is plausible. Yet, the date ranges agree with Forteviot and elsewhere, and the peak now recognisable across Ireland, making such assertions unnecessary.

## Discussion

Within established, traditional paradigms, 7<sup>th</sup>- to 8<sup>th</sup>-century Irish society was firmly Christianised, with churches widespread during a ‘golden age’ of ecclesiastical art, metalwork, sculpture and illuminated manuscript production. The widespread transformation of burial that began AD400 saw east-west extended inhumation become the dominant rite for normative burial by c.AD600, with the foci of inhumation shifting from rural cemeteries to churchyards from the 8<sup>th</sup> century. Notwithstanding whether one regards instances of inhumation as ‘Christian’ from the 5<sup>th</sup> century, or only the 7<sup>th</sup>–8<sup>th</sup> centuries, on the basis of the foregoing, such models are highly equivocal. Evidence for inhumation being removed to churchyards from c.AD700 is lacking, while a significant upsurge of cremation as a viable and appropriate burial practice occurred at this point too. This challenges assumptions about changes in inhumation practices embodying the culmination of ‘slow-burn’ Christianising trajectories. One may choose to see data for cremation as evidence of persistent paganism, perhaps even a reaction against a Christianising spectre at play in society. Alternatively, cremation might be regarded as indicative of plague, whereby communities burned the bodies of victims ravaged by disease, or for transportation of a cadaver ahead of burial (e.g. Oestigaard 2013). Plague affecting burial visibility might be demonstrable for the Black Death, where 14<sup>th</sup>-century changes to patterns of dated inhumations are apparent (Figure 3). Yet, for our earlier peak in cremations, persistent paganism or disease seem insufficient explanations when considered within wider landscape and social contexts. Cremations do not cluster or correlate with any single period, or specifically documented outbreaks of plague. Likewise, notwithstanding that closer analysis of the treatments afforded cremains is a pressing issue for future consideration, cremains were nevertheless clearly used carefully and meaningfully.

Many 7<sup>th</sup>- to 8<sup>th</sup>-century cremations were near churches, in a period when Ireland had one of the Europe’s densest concentrations of churches. This includes Castletown-Tara, where the cremations were contemporary with renewed activity at the major royal centre of Tara. Inhumations and cremations at the nearby Rath of the Synods (V and W: Figure 5; Grogan 2008, 141–8) were perhaps associated with a nearby church, *Tech Cerpan*, while contemporaneously, the 7<sup>th</sup>–9<sup>th</sup> centuries also saw a new monumental focus constructed in *Tech*

*Cormaic* and *An Forrad* (Gleeson 2017, 305). Much like high-status inhumations (O'Brien 2017, 263–5), cremations were inserted into prehistoric monuments elsewhere, including the major Scottish royal centre, Forteviot (Maldonado 2013; 11–2; 2017, 337; Ó Riagáin 2016). At Annaghilla or Mullaghbane cremation occurred alongside inhumation, albeit with interesting spatial differences. At Annaghilla, inhumation was largely confined to the complex's southeast corner, but cremains were deposited in graves within the cemetery, an earlier ring-barrow, and in postholes and gullies of buildings (Figure 6; Dunlop and Barkley 2016, 126–31). These buildings are unlikely to be domestic structures: habitation evidence at comparable complexes is equivocal (Gleeson 2017; Ó Carragáin 2009). Rather, they may illuminate an emerging class of purpose-built architecture within mortuary contexts (Walsh 2011), perhaps used for cult, bodily display, transformation or excarnation. Alongside cremation, these facets of funerary rituals have yet to be systematically explored. Disarticulated remains from different individuals were combined in cave burials at Cloghermore (Kerry) (Connolly et al. 2005, 165), or deposited in the passage tomb chambers at Knowth (Meath) (Eogan 2012, 45–82), suggesting excarnation was practiced. Being also known from 7<sup>th</sup>-century Scotland (Cille Pheadair: Maldonado 2013, 12), this underlines more diverse burial practices than previously admitted remaining acceptable in post-conversion contexts. The scale of cremation, moreover, further challenges narratives of a dominant, even formalised and regulated, east-west extended inhumation rite.

Indeed, one of the most striking examples of cremation is Ask (Wexford). Here, an early medieval penannular enclosure delimited by a palisade contained seven pits with cremated remains, including one with a gilded copper-alloy cross-shaped mount (Figures 7 and 8). The highly fragmented cremains precluded certain identification as human, though the excavator justifiably regarded this as likely, interpreting the unique find as a pagan burial of Viking Age date (Stevens 2012, 46). However, the dated cremation, AD665–768, precedes the Viking Age, let alone evidence for a Scandinavian presence hereabouts. Cremation is common in Scandinavia during this period (Price 2008), but sparse from Viking Age colonies. In Ireland or Britain Viking cremation is only certain at Heath Wood, where cremation burials under mounds also differ in character from the examples considered here (Richards et al. 2004). Of course, we cannot rule out some cremations being colonial expressions of Scandinavian practices (Ó Riagáin 2016; Kelly 2009). Yet, such ethnically-centred ascriptions seem unnecessary when these examples are situated within established local and regional practices.

The Ask cremations and associated cross caution against dichotomous oppositions between ‘pagan’ and ‘Christian’ burial practices, especially when recognisable within wider contemporary phenomena. The iconography and symbolism of the cross suggests an intentional and meaningful expression for communities performing the ritual, arguably in no way incongruent with expressions of Christian belief. If so, this has profound implications for wider European scholarship. Both an implicit and explicit assumption of scholarship across Europe is that cremation was antithetical to Christian belief in the incorruptibility of the corporeal remains in order to facilitate resurrection on the Day of Judgement (e.g. Meaney 2003, 238; Lucy 2000, 121). The development and spread of east-west inhumation, or presence of grave goods, have been separated out from the respective spread of Christian belief or declining paganism more recently, but cremation often remains steadfastly regarded as ‘pagan’. For instance, cremation (often in cinerary urns) was commonplace in 5<sup>th</sup>- to 6<sup>th</sup>-century England alongside inhumation. Both practices could be furnished, but because they largely differed from previous late Roman practices, their appearance was commonly regarded as evidence of pagan ‘Germanic’ belief and ethnicity (Hills 2003; Meaney 2003, 238; Williams 2002). Despite recent analysis convincingly demonstrating that cremation and inhumation are complimentary practices (Williams 2014; Nugent 2017), a 7<sup>th</sup>-century decline in cremation is often regarded as a barometer for declining paganism and chronological marker for Conversion (Hoggett 2007; Meaney 2003; Geake 1997; for recent chronologies: Lucy and Hills 2013; Hines and Bayliss 2013). Yet, the recognition of cremation within later 7<sup>th</sup> or early 8<sup>th</sup> century, conversion-period contexts like St Mary’s, Southampton (Stoodley in Birbeck 2005, 76), demonstrates such assumptions are problematic. Indeed, within Continental scholarship such culture-historical ethnic and religious assumptions are tellingly illustrated by burials that combine inhumation and cremation, known from limited 7<sup>th</sup>–8<sup>th</sup> century contexts (Wamers and Périn 2013, 179). Under Frankfurt Cathedral, for example, the lavishly furnished 8<sup>th</sup>-century inhumation of a young female was accompanied by the cremains of another child, positioned next to the inhumed female’s hand (Wamers and Périn 2013, 161–81). Despite both burials being covered by a sheet with a woven gold cross, like at Ask, the cremation is interpreted as an expression of persistent pagan belief (Wamers and Périn 2013, 172–6). Femke Lippok (2017) also encourages critical reflection on these assumptions, identifying a corresponding corpus of cremation burials from contexts and periods where a Christian ideological milieu seems likely in the Low Countries. Lippok (2017, 37–8) also critically assesses the source material seemingly regulating burial practices, arguing that, in fact, there is little evidence that cremation was in fact antithetical to Christian belief, or widely prohibited by the Church.

Recognising this has profound implications for archaeologies of religious transformation and commemorative strategies across European archaeology, but related is an issue surrounding standards of recording and the absence of specialist analysis when cremains are encountered on excavation sites (further McKinley 2013). Particularly in Ireland, these could represent small deposits of cremated bone within contexts not conventionally regarded as funerary (post-holes, gullies, spreads). In some instances, cremated human bone was associated with burnt animal bone, charcoal or grain (Castletown, Knoxpark). The chronological patterning in these samples alongside the nature of deposition makes it unlikely that this material derives from the accidental burning of remains disturbed within funerary contexts. Grave goods are known even if rare, while deposition also occurs in pits or spreads, as with conventional cremation burials. These recognised practices are complemented by equally intentional deposits within or surrounding buildings perhaps embodying mortuary functions. If we recognise these deposits as meaningful and intentional, therefore, this raises issues regarding whether (i) cremated human bone on early medieval sites has been mistaken for burnt animal bone; (ii) is generally overlooked within burnt and mixed deposits (e.g. ‘midden’ material); or (iii) burnt spreads/soils within settlement contexts could represent funerary pyres. Pyres are extremely rare, but could perhaps have been within ditches (cf. McGarry 2008 for Iron Age examples), and have been identified at Cloghermore Cave (Connolly et al. 2005), albeit where the (redeposited) material did not contain human bone. Clearly, therefore, acknowledging cremation as a widespread early medieval funerary practice poses conceptual, interpretative and methodological issues that must be addressed by future analysis, recording and post-excavation strategies.

## **Conclusions**

In identifying cremation as a crucial but neglected aspect of early medieval burial practices, we suggest that established narratives of burial in relation to ethnic and religious identities are problematic. This new data has implications for wider European scholarship, and assumptions regarding religious transformation and commemorative strategies. Cremation must now be acknowledged as a meaningful element of diverse mortuary technologies, remaining viable long after conversion and Christianisation. This is not to say that all cremation burials must be understood as ‘Christian’, and nor should we exclude the possibility that they are, in fact, ‘pagan’; arguably such categories are unhelpful. That cremation intensified in periods of plague may be one plausible scenario, albeit perhaps less probable given its currency at sites like

Mullaghbane from the 4th–12<sup>th</sup> centuries. Similarly, the contexts of deposition considered above indicate that these interpretations are not consistent with the data. In some cases, it is highly probable that these mortuary rituals were being conducted by Christian communities. Indeed, most striking is the evidence for contemporaneous use of cremation and inhumation, by the same communities at several sites. Utilising the same sites for inclusive practices of community burial authorised a diverse range of commemorative strategies for treating bodies in death. At least for Ireland, previous discussions have been biased towards the analysis and interpretation of extended inhumation for AD400-1100, with evidence for cremation often dismissed or ignored, alongside other diverse mortuary strategies. These analyses open up new avenues for analysing ways of death, namely the fluid relationship between belief, commemorative strategies and burial practices during a crucial period of religious transformation and social differentiation. Moreover, they also highlight a fundamental problem, whereby post-excavation strategies have been biased by culture-historical paradigms. This poses significant methodological issues that must be rectified by future analysis.

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## Captions

Figure 1: Map of dated early medieval cremations.

Figure 2: Number of radiocarbon dates from cremations in Ireland per century. The error bar represents uncertainty introduced by laboratory error and calibration, calculated through resampling from the posterior probability distribution of radiocarbon dates (McLaughlin 2019).

Figure 3: Graph showing relative frequency of radiocarbon dated inhumation and cremations burials.

Figure 4: Kernel Density Estimates (KDE) for the distribution of radiocarbon dates of cremations from Britain and Ireland, calculated using a Gaussian kernel and bandwidth of 50 years.

Figure 5: Plan of Rath of the Synods burials showing inhumation and cremation (after Grogan 2008, figure 3.5)

Figure 6: Plan of complex at Annaghilla, showing location of cemetery and key features (after Dunlop and Barkley 2015, 126)

Figure 7: Drawing of cross-mount from cremation burial at Ask (© Paul Stevens)

Figure 8: Plan of Ask cemetery showing cremations and enclosure (after Stevens 2012, illustration 6)