

ON THE CURIOUS DATE OF THE RYLSTONE LOG-COFFIN BURIAL

Nigel D. Melton¹, Janet Montgomery¹, Benjamin W. Roberts¹, Gordon Cook² and Susanna Harris³

¹Department of Archaeology, Durham University, South Road, Durham, DH1 3LE, UK.

Email: n.d.melton@durham.ac.uk; janet.montgomery@durham.ac.uk; benjamin.roberts@durham.ac.uk

²Scottish Universities Environmental Research Centre, Rankine Avenue, East Kilbride, G75 0QF, UK

Email: Gordon.Cook@glasgow.ac.uk

³Archaeology, School of Humanities, Gregory Building, Lilybank Gardens, University of Glasgow, Glasgow, G12 8QQ, UK

Email: susanna.harris@glasgow.ac.uk

ABSTRACT

Radiocarbon dates have been obtained from a log-coffin burial excavated in 1864 by Canon William Greenwell from a ditched round barrow at Scale House, near Rylstone (Rilston, Rylston, Rylestone), North Yorkshire. The oak tree-trunk coffin had contained an extended body wrapped in a wool textile. The body had entirely decayed and there were no other extant grave goods. Fragments of the coffin and textile are curated in Craven Museum and Gallery, Skipton. Additional textile fragments are curated at the British and Ashmolean Museums. In the absence of other grave goods, Greenwell attributed the burial to the Bronze Age because it lay under a ditched round barrow and had similarities with log-coffin burials from Britain and Denmark. This attribution of a Bronze Age date has not been questioned since 1864 despite a number of Early Medieval log-coffin burials subsequently being found in northern Britain. Crucially, the example excavated near Quernmore, Lancashire in 1973, was published as Bronze Age but subsequently radiocarbon dated to AD 430-970. The Rylstone coffin and textile were radiocarbon dated to confirm that the burial was Early Bronze Age and not an Early Medieval coffin inserted into an earlier funerary monument. Unexpectedly, the dates were neither Early Bronze Age nor Early Medieval but *c.* 800 BC, the cusp of the Bronze Age-Iron Age transition in Britain. The burial at Rylstone is, therefore, one of only two sites in Britain, and is unparalleled elsewhere in north-western Europe at a time when disposal of the dead was primarily through dispersed cremated or unburnt disarticulated remains.

INTRODUCTION: BRONZE AGE LOG COFFIN BURIALS IN NORTHERN EUROPE

Burial within a hollowed-out tree-trunk was a feature of many regions in northern Europe during the Bronze Age, and such coffins are found in Bohemia, Moravia, Silesia, Germany and the Netherlands (Parker Pearson *et al.* 2013, 29). The best known European examples are, however, those from beneath the Early-Middle Bronze Age barrows in southern Scandinavia, especially Denmark, which contain the extended, supine, burials of both males and females (Boye 1896; Glob 1974; Holst *et al.* 2001; Holst and Rasmussen 2013). Eighteen of the Danish tree-trunk coffin burials have been dendrochronologically dated, and all fall within the period 1396-1268 BC (Randsborg and Christensen 2006; Parker Pearson *et al.* 2013, 29).

In Britain, more than 60 known examples of Bronze Age log-coffins are found scattered across England, Scotland and Wales, from west Wales to East Anglia and from the Moray Firth to the Isle of Wight (*ibid.*, 29-31). To date, 16 of the British log-coffin burials have been radiocarbon dated to the Bronze Age, with dates ranging from 2500-1320 BC (*ibid.*, 41, Table 4.2), but with the more recent and reliable radiocarbon dates coming from the earlier part of the range, prior to *c.* 1800 BC. Parker Pearson *et al.* (2013, 40) conclude from the various sources of dating that the use of tree-trunk coffins in Britain is likely to fall between the 22nd and the 17th century BC.

The British examples in which there has been bone preservation, such as that excavated at Gristhorpe on the Yorkshire coast in 1834 (Melton *et al.* 2010; Melton *et al.* 2013), frequently appear to have contained a body in a flexed burial position but not exclusively so: for example in North Yorkshire, the log-coffin burials at Loose Howe (Elgee & Elgee 1949) and Towthorpe (Mortimer 1905, 3-5) contained extended bodies (Parker Pearson *et al.* 2013, 53-65, Appendix 4.1). Previously published as one of several textiles from Early Bronze Age inhumations (Henshall 1950, 133), the Rylstone example was recently investigated in the search for the earliest wool textiles in Europe (Bender Jørgensen & Rast-Eicher 2014, 69).

WILLIAM GREENWELL'S EXCAVATION AT RYLSTONE IN 1864

The Rylstone (Rilston, Rylston, Rylestone) barrow lies within the grounds of Scale House, near the village of Rylstone, formerly in the old West Riding but now in North Yorkshire 5km north of the market town of Skipton (O. S. Grid Ref. SD 970 568). Greenwell undertook his investigations on 25th October 1864 when he found that the centre of the barrow had been disturbed about a year prior to his excavation (Greenwell 1877, 375). He described the barrow as being 9.1m (30ft) in diameter and 1.5m (5ft) high, encircled by a shallow ditch, and containing the following layers encountered during the excavation:

- i) a layer of flat stones, approximately 1.8m (6ft) in diameter, immediately below the surface of the barrow.
- ii) A layer of firmly compacted clay.
- iii) A thin, dark-coloured earthy layer containing charcoal.
- iv) A layer of finer clay, which appeared to have been tempered.
- v) A log-coffin, which was '*carefully embedded*' (*ibid*) in the fine clay and laid on more clay with a few stones to help support it.

The coffin was orientated N-S and had been fashioned from the trunk of an oak. It was 2.21m (7ft 3 in) long and 0.59m (1ft 11in) in diameter and tapered, with the wider end to the south; both ends had been partially rounded. The inner hollow was 1.93m (6ft 4in) long and 0.30m (1ft) wide and had been fashioned using a narrow-bladed metal tool. Greenwell (1877, 375) described the coffin as '*very much broken*', attributing this to the previous year's disturbance of the barrow. This latter point contrasts somewhat with his account of the apparently intact archaeological stratigraphy that sealed the coffin.

The layer of fine, probably tempered, clay that sealed the coffin is interesting as it resonates with the layer of '*Puddle, or blue clay*' that sealed the Early Bronze Age log-coffin found at Gristhorpe in 1834 (Williamson 1834, 10-11) and other North Yorkshire examples (Parker Pearson *et al.* 2013, 36). It has been suggested (*ibid*) that this could represent a mortuary rite aimed at preservation of the body, with analogies with the Danish log-coffin burials where experimental archaeology has shown that steps were taken to seal the burial by inducing the formation of a layer of iron pan (Breuning-Madsen & Holst 1995).

All that remained of the body at Rylstone was an '*unctuous white substance*', which was analysed and found to be of animal origin (Greenwell 1865, 253; 1877, 376). The corpse, which must have been laid in an extended position with the head to the south, had been wrapped in a wool textile which had survived in a rotten state. Greenwell (1865, 254) described the textile as dark brown in colour, probably due to the tannins present in the oak coffin, and as having a coarse, loose texture. Davis (1865, 2fn), quoting inquiries made of Greenwell, described it as woollen cloth that had been woven. There were no other grave goods and Greenwell's (1877, 376-377) attribution of a Bronze Age date for this burial was based on the fact that the burial was under a ditched round barrow and on its similarity with other burials from Britain and Denmark. Davis (1865) compared the Rylstone burial with the Gristhorpe coffin and grave goods, and with examples of log-coffin burials from Denmark in which woollen clothing had been present. He, too, concluded that the burial was Bronze Age. In the 1930s, the Rylstone burial was quoted as a key site in a hypothesis that a route

traversing Yorkshire was taken by traders from Denmark seeking copper ore from Ireland (Elgee & Elgee 1933, 68-69). Greenwell's and Davis's Bronze Age attribution for the Rylstone burial has remained to the present day (Parker Pearson *et al.* 2013, Appendix 4.1, No. 9), based largely on the 'barrow' aspect of the burial cited by Greenwell.

There have, however, been finds of later log-coffin burials in north-west Britain. Greenwell (1877, 377) contrasted Rylstone with log-coffin burials which were not under barrows and which he considered to date from '*a time several centuries after the Christian era*'. These included his excavation of a barrow to the south of Kirby Stephen in Cumbria in which he found a burial on a thick, hollowed, slab of wood with short planks either end, and to which he attributed a post-Roman, possibly Anglian, date (*ibid*, 384-385). More recently, a canoe-shaped log-coffin found during car park construction works near Quernmore, Lancashire was published as a Bronze Age example (Edwards 1973), but has subsequently been radiocarbon dated to cal AD 430-970 (95.4%) (White 2001). The Quernmore coffin, like the Rylstone example, contained an extended body wrapped in a wool textile, although, unlike that at Rylstone it was not buried under a barrow.

THE RADIOCARBON DATES

Fragments of the coffin and wool textile excavated by Canon Greenwell are curated in the Craven Museum and Gallery in Skipton. A fragment of the textile was illustrated by both Davis (1865, 2) and Greenwell (1877, 32, Fig. 2). The coffin fragment was sampled for radiocarbon dating (SUERC-47687). This gave a highly unexpected result: a Late Bronze Age-Earliest Iron Age measurement of 2648 ± 30 ^{14}C y BP, calibrating to 900 (95.4%) 780 cal BC. If the date range estimated by Parker Pearson *et al.* (2013, 40) for the British examples of 22nd to 17th centuries BC is used, the Rylstone coffin is approaching a millennium later than the latest of the other British Early Bronze Age coffins, and is approximately half a millennium later than the Danish examples. It was therefore considered important that a second date be obtained for the coffin. The sample for this second date (SUERC-50211) was taken from the same side of the surviving coffin fragment and produced a statistically indistinguishable measurement of 2627 ± 42 y BP, calibrating to 910 (95.4%) 760 cal BC.

As a further check on the date of the burial and to ensure that there had been no mix-up in the century and a half that the items had been curated, a thread from the textile was also submitted for radiocarbon dating (SUERC-5389). This produced a radiocarbon age of 2597 ± 35 y BP. The results of the three radiocarbon dates are given in Table 1 and Figure 1. A Chi-

squared test indicates that they are indistinguishable from one another ($T= 1.22$ ($X^2_{P=0.05}=5.99$)). The two wood samples were so close that they were regarded as representative of the same point in time and a weighted mean calculation produced an age of 2641 ± 25 BP. This provides a calibrated date of 840 (95.4%) 790 cal BC for the coffin.

Insert Table 1 here

Insert Figure 1 here

THE WOOL TEXTILE

Fragments of the Rylstone textile are archived in the British (1879.1209.2064-7, 1879.1209.1595, 1873.1209.219) and Ashmolean (AN1983.201) Museums, and the Craven Museum and Gallery (SKIPM:76), and are well represented in the literature (Henshall 1950, 131-3; Crowfoot in Kinnes & Longworth 1985, 97; Bender Jørgensen 1992, 19,197). The largest fragment in the British Museum (1879.1209.2064) measures 170 x 120mm. On the basis of technical similarities, the fragments appear to belong to the same textile, which is consistent with Greenwell's description when it was excavated: *'The corpse had been enveloped in a woollen fabric, enough of which remained to show that it had reached from head to foot. It was very rotten... it was impossible to recover any but small pieces of it, or to prove whether the body had been laid in the grave in its ordinary dress or simply wrapped in a shroud'* (Greenwell 1877, 376). Whether this textile was a shroud, blanket, cloak or other large wrapped garment is thus unclear. Well preserved textiles of these kinds have been identified in the male and female earlier Bronze Age barrow burials of Southern Scandinavia (Broholm & Hald 1940; Bergerbrant 2007, 49-61; Mannering *et al.* 2012, 97-102).

The Rylstone textile is woven in tabby (plain weave) which is a simple one over, one under configuration alternating in each row. The threads of both systems are single z-spun yarns. As there are no selvages or starting borders, the attribution of warp and weft is a matter of judgement. In Crowfoot's opinion, the finer and more tightly spun yarn is probably the warp (Crowfoot 1979, 1), as previously observed by Henshall (1950, 136). Measured with digital callipers, the warps of the textile in the British Museum have a diameter ranging from 0.35-0.8mm and the weft 0.5-1.0mm. The weave density is also somewhat irregular; there are between 7-11 threads per cm in the warp and 8-9 threads per cm in the weft. The textile is dark brown, presumably due to staining from the burial environment.

Insert Figure 2 here

Sheep's wool is known in Britain from the Early Bronze Age, as attested by organic remains identified by Walton-Rogers as wool or sheepskin in a cist burial from Spinningdale, Scotland (2051-1911 cal BC) (Arabaolaza *et al.* 2013, 15). There are a handful of Late Bronze Age textiles in Britain and Ireland made of plant fibres, wool and horsehair, mostly from the north and west (Wincott Heckett 2012, 432-3). These include wool textiles wrapped around or adhering to hoards excavated from St. Andrews Fife, Scotland (Ewart Park Phase, 9-8th centuries BC) and Cromaghs, Co. Antrim, Northern Ireland (900 to 500 BC) and textiles from a mound deposit at Killymoon, Co. Tyrone, Northern Ireland (c.1000 BC) (Gabra-Sanders 1994, 36; Wincott Heckett 1998, 29-30; Wincott Heckett 2005, 28). Although few, the wool textiles are typically tabbies of z-spun yarn, and in this technically the Rylstone textile fits well. Technically, the plant fibre textiles follow a different pattern, and more complex weaves are known. For example, also from Cromaghs comes an ornamental horsehair band, woven in broken twill and finished in elaborate tassels (Wincott Heckett 1998, 31-2; Wincott Heckett 2012, 433-4). The new radiocarbon date for the Rylstone textile adds another example to what is currently a rather small corpus of preserved Late Bronze Age / Earliest Iron Age wool textiles from Britain.

DISCUSSION

The statistically indistinguishable radiocarbon dates obtained from the Rylstone coffin and textile clearly demonstrate that it was not the case of the re-use of an Early Bronze Age coffin. Prior to these dates being obtained from the Rylstone example, log-coffin burials found in Britain had, with one exception discussed below, fallen into two distinct chronological groupings. The first of these are the Early Bronze Age examples which are distributed throughout England, Scotland and Wales, with three main concentrations in East Yorkshire, Wessex and the south coast, and in Leicestershire and Cambridgeshire (Parker Pearson *et al.* 2013, 30-31, Fig. 4.1). They range in date from the 22nd to 17th centuries BC (*ibid*, 40) and represent a high status burial rite. Many contain grave goods that include bronze daggers and knives and, especially in the southern cluster in Wessex and the south coast, exotic items such as the amber and shale cups found in log-coffin burials at Hove and Stoborough (Stowborough) respectively (*ibid*, 37).

The second group of British log-coffins date from the Early Medieval period. They have been found mainly in the north and east of England, and include examples excavated at Wydon

Eals, near Featherstone Castle in Northumberland (Wallace 1832; Snagge 1873; Whiting 1937, 96-98; Parker Pearson *et al.* 2013, 66, Appendix 4.2) and in East Yorkshire, where such coffins have been found at Church Hill, Selby (Snagge 1873), at Beverley Parks (Gomme 1886, 83; Wright 1857; Greenwell 1865, 254fn; Greenwell 1877, 377fn; Whiting 1937, 100-101; Mowat 1996, 140) and at St Saviour Gate and Parliament Street, York (Elgee & Elgee 1933, 209-210; 1949, 102). Examples from elsewhere in northern England include those from Quernmore and Kirby Stephen mentioned previously. In the south of England, 'Arthur and Guinevere' were found by monks in the 12th century in a log-coffin burial in Glastonbury Abbey (Wallace 1832, 177). In Scotland, two log-coffins containing the bodies of a male and a female were found on the Castlehill, Edinburgh in 1851 (Mowat 1996, 86; Parker Pearson *et al.* 2013, 29). The interiors of the coffins had been shaped with recesses for the head and arms in the manner of medieval stone coffins and these examples appear to date to the High Medieval period (*ibid.*). The Early Medieval log-coffins differ from the Bronze Age examples in a number of ways: the lid and base are pegged together; the bark has been removed; they do not contain grave goods; they are not associated with barrows; and they can occur in cemeteries, for example, at Wydon Eals and Selby.

Insert Figure 3 here

The Rylstone log-coffin, therefore, represents a previously unrecognised and distinct chronological occurrence in Britain for this type of high-status funerary practice. The dates obtained from both the coffin and the fragment of textile place this burial at around 800 BC, on the Late Bronze Age-Earliest Iron Age transition (Needham 2007). A tantalizing hint that iron objects might have been present in the coffin is provided by the noted anatomist and antiquarian J. Barnard Davis FRS (1865, 2) in his description of '*pieces of a bright black substance like pitch, which appeared to have been placed on the inside of the coffin, on examination are found to be (Fe₃O₄)*' which is often left behind when iron objects have entirely decayed in anoxic environments (Cronyn 1992, 184). There are a small number of iron objects that have been found primarily in southern and eastern England such as socketed axes, socketed spearheads, a rivet and a sword which, whilst frequently lacking archaeological contexts, appear to be typological imitations of Late Bronze Age-Earliest Iron Age forms (Collard *et al.* 2006, Table 6, Fig 19; Roberts *et al.* 2015). This includes three sites in Yorkshire, although none are entirely unproblematic in terms of the dating. These three sites encompass: Castle Hill, Scarborough where an iron rod was excavated in the same pit

context as a Late Bronze Age (Ewart Park metalwork phase) bronze socketed axes of Type Yorkshire (see Collard *et al.* 2006, 413 for analysis and discussion); three pieces of iron from ditch fills at the hillfort at Grimthorpe (Stead 1968, 166 nos 5-7) of which two were found within or just above a deposit dated to 1150-400 BC (2640±130 BP; NPL-136) (see Collard *et al.* 2006, 413); and two iron pins from the fortified hilltop settlement at Staple Howe dating from 753–402 (68.2%) and 765–350 (95.4%) cal BC (Dent 2010). The recent excavation of an iron furnace and substantial quantities of iron slag at Greetwell Hall Farm, Messingham, Scunthorpe which is securely radiocarbon dated to *c.* 780-590 BC provides the earliest evidence for iron production in northern England, and potentially in Britain (Pitts 2016). The interpretation of iron objects being placed within the log-coffin at Rylstone and subsequently decaying prior to their discovery is obviously provisional due to the lack of modern post-excavation analyses. There are also currently no known funerary sites in Britain dating to the Late Bronze Age-Earliest Iron Age transition where iron objects have been recovered. However, it is worth noting that iron objects play an especially prominent role in funerary deposits in the Iron Age of East Yorkshire (Giles 2007; 2012; Dent 2010; Halkon 2011) and there is now widespread evidence for Iron Age iron production in the region (Halkon 2011). Rylstone, the most westerly of the Bronze Age log-coffin burials in Yorkshire, clearly has close associations with its Early and Middle Bronze Age predecessors in North and East Yorkshire. Rylstone may, therefore, represent a continuing, or perhaps re-discovered and re-instated local tradition, especially as it appears that the funerary rite included sealing the coffin with clay (Parker Pearson *et al.* 2013, 36).

However, given the centuries that had passed since the earlier Bronze Age log-coffins were felled, prepared and interred, this continuity is surprising. It is even more surprising as this elite burial rite is virtually unique in the contemporary archaeological record of northwest Europe with only one other log-coffin burial known for this date in Ireland, Britain or the near continent from northwest France to southern Scandinavia. Cremation was the dominant funerary rite throughout northwest Europe during the early first millennium BC, frequently in flat graves or older monuments and with few grave goods (Bradley *et al.* 2016, 246-250). With the exception of the recently discovered site of Melton, East Yorkshire (Fenton-Thomas 2010), Rylstone stands in stark contrast to what is known from elsewhere in Britain during the Late Bronze Age-Earliest Iron Age (Brück 1995; Thomson 2011; Roth 2012; Warden *et al.* forthcoming). Burial in this period in Britain has previously been notable for being difficult to detect archaeologically, with human remains in southern Britain occurring in cremated or disarticulated forms and fragments placed without grave goods in a range of

contexts associated with settlements, especially in enclosure ditches (Brück 1995, 257). They have been interpreted as associated with the ritual destruction of the corpse, either by cremation or by excarnation and disarticulation, and linked to changing social and economic conditions (*ibid*, 262-263). A recent comprehensive examination of evidence for disposal of the dead in the Late Bronze Age (c. 1100-800 BC) just to the north of Rylstone in the Tyne-Forth region of northeast England and southeast Scotland (Warden *et al.* forthcoming), revealed only 12 sites, with only two radiocarbon dated and three typologically dated sites which are potentially contemporary. In the Tyne-Forth region, the evidence indicates that a similar rite of dispersal of both cremated and unburnt remains was being practiced to southern Britain, although deposition of the remains was generally in pits and associated with older monuments in the landscape rather than with settlements. The layer of ‘*carefully arranged*’ flat stones that Greenwell encountered ‘*immediately below the surface*’ of the Rylstone barrow (Greenwell 1877, 375) is unusual and may be associated with the disturbance of the barrow the year prior to Greenwell’s excavation. If not, it raises the possibility that the log-coffin had been inserted into an earlier Bronze Age barrow and is, therefore, also another Late Bronze Age-Earliest Iron Age re-use of an earlier monumental site.

The secondary burial of urned and unurned cremations in earlier barrows, as well as in contemporary settlements and enclosures, during the Late Bronze Age is found throughout Yorkshire (see Manby *et al.* 2003) though radiocarbon dating is required to distinguish Middle and Late Bronze Age funerary rites. For example, recent excavations at Melton Area 2-3 revealed five aceramic cremations in and outside of a barrow ring ditch with one in Pit 1224 dated to 1027-842 cal BC (Wk-21864 2795 \pm 35 BP) (Fenton-Thomas 2010). A further cremation, in a truncated pot with charcoal was excavated at Preston in Holderness and dates to 1107-1088 cal BC (Poz-25567 2825 \pm 35 BP) (Savage 2013, 101-2). Beyond these cremation deposits, there is one burial, and possibly two, which are potential contemporary parallels to Rylstone. Recent excavations of a group of seven inhumations dating to the 8th-6th centuries BC at Melton, East Yorkshire revealed one ?male adult individual - Skeleton 2722 - a flexed inhumation on the left side orientated north-south within the soil stain of a wooden, and very probably log, coffin (Fenton-Thomas 2010, 50, Fig 29, Pl. 18-19; Table 17; 566). The burial was accompanied by one sherd of Early Bronze Age pottery and one sherd of Early Iron Age pottery but the skeleton was radiocarbon dated to 800-500 cal BC (Wk 21865 2522 \pm 47) and the placing of earlier pottery in later graves is known in the region (Manby *et al.* 2003, 60). This burial had cut into an earlier grave of a flexed adult male -

Skeleton 3397 - which revealed soil stains of a wooden coffin or stretcher as well as Beaker pottery sherds from seven different vessels which was not radiocarbon dated but is paralleled by late 3rd millennium BC burials in the region (*ibid*, 46-48). The excavators propose two explanations: either that a late 3rd millennium BC grave was cut over a millennium later by the earlier first millennium BC log-coffin burial; or that both graves were dug in the early first millennium BC and either disturbed or removed an earlier grave (*ibid*, 49). Given the narrow interior width of the Rylstone log coffin, it would appear to be impossible that an adult inhumation could have been deposited in a flexed position. Manby (1986, 71) highlights the cairn site at Roomer Common, Yorkshire as potentially dating to the Late Bronze Age due to the associated ceramic sherds. It comprised a small round cairn with a wide ditch that contained a stone-lined cist that originally had a wooden cover. No bones were found in the acidic soil, potentially implying an inhumation, and iron fragments were found between the stones of the cist that could have resulted from a collapse. The evidence is fragmentary and the dating is disputable in the latter case, yet these sites are the closest potential parallels to Rylstone in the region.

As a consequence, it is increasingly evident that there is far a greater diversity in funerary practice in Late Bronze Age-Earliest Iron Age Britain than has previously been recognised. The antiquarian excavation of numerous unburnt bones, including crania, accompanied by animal bones, metalwork and ceramics in Heathery Burn Cave, County Durham (Greenwell 1894) highlighted the potential funerary depositions within these natural phenomena during the Late Bronze Age. The radiocarbon dating of human remains excavated Sculptor's Cave, Covesea, northeast Scotland (Armit *et al.* 2011) and at Raven Scar Cave, Yorkshire (Leach 2005) to the Late Bronze Age further supports the use of caves in funerary rites during this period. The dating of human crania and bones found in rivers and lakes to the Late Bronze Age in Britain implies the potential contemporary importance of funerary rites in watery contexts (Bradley & Gordon 1988; Schulting & Bradley 2014). Human crania and bone fragments were also found in Late Bronze Age-Earliest Iron Age levels in the substantial midden sites of Potterne (Lawson 2000) and East Chisenbury (McOmish 1996), Wiltshire, southern England. Further previously unrecognised Late Bronze Age funerary complexities in Britain are suggested by the settlement site of Cladh Hallan, Uist, Scotland where Middle Bronze Age human remains were preserved for re-use and re-burial alongside Late Bronze Age human remains (Parker Pearson *et al.* 2005; Booth *et al.* 2015). The recent excavation of a large mortuary feature at Cliff's End Farm, Kent, England revealed a minimum of 24 individuals dating to the Late Bronze Age who not only had been subject to differing

mortuary practices including exposure, excarnation and curation, but also had strontium and oxygen isotope ratios suggestive of diverse geographical origins (McKinley *et al.* 2015). Rather than seeing the dating of a log coffin burial at Rylstone to *c.* 800 BC as a surprise anomaly, it should be seen more as a challenge for us to re-evaluate our interpretations of the disposal of the dead at the Late Bronze Age-Earliest Iron Age transition in Britain.

ACKNOWLEDGEMENTS

Martin Wills, Craven Museum and Gallery, Skipton kindly gave access and permission to sample the coffin and textile fragments for radiocarbon dating. The authors are grateful to Quentin Bourgeois, Catherine Draycott, David Fontijn, Mette Løvschal, Brendan O'Connor, John Waddell and Eugène Warmenbol for discussions of potential parallels for the Rylstone burial. They are especially grateful to Terry Manby for detailed comments and bringing the site at Melton to their attention. Thanks also to Jacqueline Towers for photographing the textile and to Peter Montgomery for assistance in the preparation of figures 2 and 3. NDM acknowledges Rob Janaway's assistance in sampling the Craven Museum and Gallery textile fragment for radiocarbon dating.

REFERENCES

- Arabaolaza, I., Ballin Smith, B., Clarke, A., Ramsay, S. & Walton Rogers, P. 2013. ARO5: Spinning the yarn: a cist at Keas Cottage, Spinningdale. Glasgow: GUARD Archaeology Ltd.
- Armit, I., Schulting, R., Knüsel, C.J. & Shepherd, I. 2011. Death, decapitation and display? The Bronze and Iron Age human remains from the Sculptor's Cave, Covesea, north-east Scotland. *Proceedings of the Prehistoric Society* 77, 251-278
- Bender Jørgensen, L. & Rast-Eicher, A. 2015. Searching for the earliest wools in Europe. In K. Grömer & F. Pritchard (eds) *Aspects of the Design, Production and Use of Textiles and Clothing from the Bronze Age to the Early Modern Era, NESAT XII*, 67-72. Budapest: Archaeolingua Main Series 33
- Bergerbrant, S. 2007. *Bronze Age Identities: Costume, Conflict and Contact in Northern Europe 1600-1300 BC*. Lindholme: Bricoleur Press
- Booth, T.J., Chamberlain, A.T. & Parker Pearson, M. 2015. Mummification in Bronze Age Britain. *Antiquity* 89, 1155-1173
- Boye, V. 1896. Fund af Egekister fra Bronzealderen i Danmark: et monografisk Bidrag til Belysning af Bronzealderens Kultur. Høst, Kjøbenhavn

- Bradley, R., Haselgrove, C., Webley, L. & Vander Linden, M. 2016. *The Later Prehistory of Northwest Europe: the evidence of recent fieldwork*. Oxford: Oxford University Press
- Bradley, R. & Gordon K. 1988. Human skulls from the river Thames, their dating and significance. *Antiquity* 62, 503-509
- Breuning-Madsen, H. & Holst, M.K. 1995. Genesis of iron pans in Bronze Age mounds in Denmark. *Journal of Danish Archaeology* 11, 80-86
- Broholm, H.C. & Hald, M. 1940. *Costumes of the Bronze Age in Denmark: Contributions to the Archaeology and Textile History of the Bronze Age*. Copenhagen, NYT Nordisk Forlag: Arnold Busck
- Brück, J. 1995. A place for the dead: the role of human remains in Late Bronze Age Britain. *Proceedings of the Prehistoric Society* 61, 245-277
- Collard, M., Darvill, T. & Watts, M. 2006. Ironworking in the Bronze Age? Evidence from a 10th century BC settlement at Hartshill Copse, Upper Bucklebury, West Berkshire. *Proceedings of the Prehistoric Society* 72, 367-421
- Cronyn, J.M. 1992. *The Elements of Archaeological Conservation*. London: Routledge
- Crowfoot, E. 1979. Rylston, Yorkshire. Bronze Age. Unpublished museum report in the British Museum
- Davis, J.B. 1865. Notice of the opening of a barrow at Scale House, in the West Riding of Yorkshire; and a comparison of that barrow with certain others in Jutland. *The Reliquary* 6, 1-11
- Dent, J.S. 2010. The Iron Age in East Yorkshire. Oxford: British Archaeological Reports 508
- Edwards, B.J.N. 1973. Canoe burial near Lancaster. *Antiquity* 47, 298-301
- Elgee, F. & Elgee, H.W. 1933. *The Archaeology of Yorkshire*. London: Methuen & Co. Ltd.
- Elgee, H.W. & Elgee, F. 1949. An Early Bronze Age burial in a boat-shaped wooden coffin from north-east Yorkshire. *Proceedings of the Prehistoric Society* 15, 87-106
- Fenton-Thomas, C. 2010. *Where Sky and Yorkshire and Water Meet: The Story of the Melton Landscape from Prehistory to the Present*. York: Onsite Archaeology
- Gabra-Sanders, T. 1994, Textiles and fibres from the Late Bronze Age hoard from St. Andrews, Fife, Scotland. In K. Tidow & G. Jaacks (eds) *Textilsymposium Neumünster, 4.-7. 5. 1993 (NESAT V)*, 34-42. Neumünster, Germany: Textilmuseum Neumünster
- Giles, M. 2007. Making metal and forging relations: ironworking in the British Iron Age. *Oxford Journal of Archaeology* 26, 395-413
- Giles, M. 2012. *A Forged Glamour: Landscape, Identity and Material Culture in the Iron Age*. Oxford: Windgather Press

- Glob, P.V. 1974. *The Mound People: Danish Bronze-Age Man Preserved*. London: Faber and Faber
- Gomme, G.L. (ed) 1886. *The Gentleman's Magazine Library: being a classified collection of the chief contents of the Gentleman's Magazine from 1731 to 1868*. London: Elliot Stock
- Greenwell, W. 1865. Notices of the examination of ancient grave-hills in the North Riding of Yorkshire. *Archaeological Journal* 22, 241-264
- Greenwell, W. 1877. *British Barrows*. Oxford: Clarendon Press
- Greenwell, W. 1894. Antiquities of the Bronze Age in the Heathery Burn Cave, County Durham. *Archaeologia* 54, 87-114
- Halkon, P. 2011. Iron landscape and power in Iron Age East Yorkshire. *The Archaeological Journal* 168, 134-165
- Henshall, A.S. 1950. Textiles and weaving appliances in Prehistoric Britain. *Proceedings of the Prehistoric Society* 16, 130-62
- Holst, M.K., Breuning-Madsen, H. & Rasmussen, M. 2001. The south Scandinavian barrows with well-preserved oak-log coffins. *Antiquity* 75, 129-136
- Holst, M.K. & Rasmussen, M. (eds) 2013. *Skelhøj and the Bronze Age Barrows of Southern Scandinavia: The Bronze Age Barrow Tradition and the Excavation of Skelhøj*. Højbjerg: Jysk Arkæologisk Selskab
- Kinnes, I. & Longworth, I. 1985. *Catalogue of the Excavated Prehistoric and Romano-British Material in the Greenwell Collection*. London: British Museum Press
- Lawson, A. 2000. *Potterne 1982-85: Animal Husbandry in Later Prehistoric Wiltshire*. Wessex Archaeology Report 17. Salisbury: Wessex Archaeology.
- Leach, S. 2005. Heads, shoulders, knees and toes. Human skeletal remains from Raven Scar Cave in the Yorkshire Dales. In S. Zakrzewski & M. Clegg, (eds) *Proceedings of the Fifth Annual Conference of the British Association for Biological Anthropology and Osteoarchaeology*, 59-68. Oxford: British Archaeological Reports S1383
- McKinley, J.I., Leivers, M., Schuster, J., Marshall, P., Barclay, A.J. & Stoodley, N. 2015. *A Mortuary and Ritual Site of the Bronze Age, Iron Age and Anglo-Saxon Period with Evidence for Long-Distance Maritime Mobility*. Wessex Archaeology Report 31. Salisbury: Wessex Archaeology
- McOmish, D. 1996. East Chisenbury: ritual and rubbish at the British Bronze Age-Iron Age transition. *Antiquity* 70, 68-76
- Manby, T. 1986. The Bronze Age in Western Yorkshire. In T. Manby & Turnbull, P. (eds) *Archaeology in the Pennines*, 55-126. Oxford: British Archaeological Reports 158

- Manby, T., King, A. & Vyner, B.E. 2003. The Neolithic and Bronze Age in Yorkshire: a time of early agriculture. In T. Manby, S. Moorhouse & P. Ottaway (eds) *The Archaeology of Yorkshire: an Assessment at the Beginning of the 21st century*. Leeds: Yorkshire Archaeological Society Occasional Paper 3, 35-113
- Mannering, U., Gleba, M. & Bloch Hansen, M. 2012. Denmark. In M. Gleba & U. Mannering (eds) *Textiles and Textile Production in Europe from Prehistory to AD 400*, 89-118. Oxford: Oxbow
- Melton, N., Montgomery, J., Knüsel, C., Batt, C., Needham, S., Parker-Pearson, M., Sheridan, A., Heron, C., Horsley, T., Schmidt, A., Evans, A., Carter, E., Edwards, H., Hargreaves, M., Janaway, R., Lynnerup, N., Northover, P., O'Connor, S., Ogden, A., Taylor, T., Wastling, V. & Wilson, A. 2010. Gristhorpe Man: an Early Bronze Age log-coffin burial scientifically defined. *Antiquity* 84, 796-815
- Melton, N.D., Montgomery, J. & Knüsel, C.J. (eds) 2013. *Gristhorpe Man: A Life and Death in the Bronze Age*. Oxford: Oxbow
- Mortimer, J.R. 1905. *Forty Years' Researches in British and Saxon Burial Mounds of East Yorkshire*. London: A. Brown & Sons
- Mowat, R.J.C. 1996. *The Logboats of Scotland*. Oxford: Oxbow
- Needham, S.P. 2007. 800 BC. The Great Divide. In C. Haselgrove & R. Pope (eds) *The Earlier Iron Age in Britain and the Near Continent*, 39-63. Oxford: Oxbow
- Parker Pearson, M., Chamberlain, A., Craig, O., Marshall, P., Mulville, J., Smith, H., Chenery, C., Collins, M., Cook, G., Craig, G., Evans, J., Hiller, J., Montgomery, J., Schwenninger, J-L., Taylor, G. & Wess, T. 2005. Evidence for mummification in prehistoric Britain. *Antiquity* 79, 529-546
- Parker Pearson, M., Sheridan, A. & Needham, S. 2013. Bronze Age tree-trunk coffin graves in Britain. In N.D. Melton, J. Montgomery & C.J. Knüsel *Gristhorpe Man: a Life and Death in the Bronze Age*, 29-66. Oxford: Oxbow
- Pitts, M. 2016. Oldest iron-smelting site found by Tata Plant. *British Archaeology* 146, 6-7
- Randsborg, K. & Christensen, K. 2006. *Bronze Age Oak-Coffin Graves: Archaeology and Dendro-Dating*. Copenhagen: Blackwell Munksgaard (*Acta Archaeologica* 77, Supplements VII)
- Roberts, B.W., Boughton, D., Dinwiddy, M., Doshi, N., Fitzpatrick, A., Hook, D., Meeks, N., Woodward, A. & Woodward, P. 2015. Collapsing commodities or lavish offerings? Understanding massive metalwork deposition at Langton Matravers, Dorset during the Bronze Age-Iron Age transition. *Oxford Journal of Archaeology* 34 (4), 365-395

- Roth, N.M. 2012. *Regional patterns and the cultural implications of Late Bronze Age and Iron Age burial practices in Britain*. Unpublished PhD thesis, University of Sheffield, UK
- Savage, R. 2013. Salt End to Aldbrough: the archaeology of a high-voltage underground electricity cable route. *East Riding Archaeologist* 14, 65-104
- Schulting, R.J. & Bradley, R. 2013. 'Of human remains and weapons in the neighbourhood of London': new AMS ¹⁴C dates on Thames 'river skulls' and their European context. *Archaeological Journal* 170, 30-77
- Snagge, T.W. 1873. Some account of ancient oaken coffins discovered on the lands adjoining Featherstone Castle, near Haltwhistle, Northumberland. *Archaeologia* 44, 8-16
- Stead, I.M. 1968. An Iron Age hillfort at Grimthorpe, Yorkshire. *Proceedings of the Prehistoric Society* 34, 148-90
- Thomson, A. 2011. What happened to the dead in Late Bronze Age Scotland? Unpublished BA dissertation, Durham University, UK
- Wallace, T. 1832. Accounts of some ancient wooden coffins discovered not far from Haltwhistle, in the County of Northumberland. *Archaeologia Aeliana*, 1st Series 2, 177-8
- Warden, K., Caswell, E. & Roberts, B. W. Forthcoming. Funerary Fragments between the Rivers: analysing the evidence for the dead in the Tyne-Forth region during the Late Bronze Age (c.1150-800 BC). In R. Crellin, C. Fowler & R. Tipping (eds) *Prehistory without Borders: the Prehistoric Archaeology of the Tyne-Forth region*. Oxford: Oxbow
- White, A.J. 2001. *The Quernmore Burial Mystery*. Lancaster: Lancaster City and Museums (pamphlet)
- Whiting, C.E. 1937. Ancient log coffins in Britain. *Transactions of the Architectural and Archaeological Society of Durham and Northumberland* 8, 80-105
- Williamson, W.C. 1834. *Description of the Tumulus, lately opened at Gristhorpe, near Scarborough*. Scarborough: C. R. Todd
- Wincott Heckett, E. 1998. A Late Bronze Age Horsehair Ornament from Cromaghs, Armooy in Ireland. In L. Bender Jørgensen & C. Rinalso (eds) *Textiles in European Archaeology. Report from the 6th NESAT symposium, 7-11th May 1996 Borås*, 29-37. Göteborg: Göteborg University
- Wincott Heckett, E. 2005. Late Bronze Age textiles, hair and fibres remains, and spindle whorls from Killymoon, Co. Tyrone, Northern Ireland. In A. Rast-Eicher & R. Windler (eds) *Archäologische Textilfunde: Archaeological Textiles. NESAT IX*, 28-34
- Wincott Heckett, E. 2012. Scotland and Ireland. In M. Gleba & U. Mannering (eds) *Textiles and Textile Production in Europe. From Prehistory to AD 400*, 428-42. Oxford: Oxbow

Wright, T. 1857. On some curious forms of sepulchral interment found in East Yorkshire, *The Gentleman's Magazine* 3, 114-19

TABLE AND FIGURE CAPTIONS

Table 1 caption

Table 1. Radiocarbon dates obtained from the Rylstone coffin and textile
(calibrated using OxCal v4.2.4)

Figure 1 caption

Figure 1: Multiplot of the calibrated age ranges for the coffin and textile

Figure 2 caption

Figure 2: The Rylstone textile, (U) As illustrated by Greenwell in 1877 and (L) detail of the Craven Museum and Gallery fragment (photograph: J.R. Towers)

Figure 3 caption

Figure 3: Distribution of log-coffin burials in northern England
(based on Parker Pearson *et al.* 2013, fig.4.1, with additions)

Key to the Early Bronze Age and Early Medieval examples:

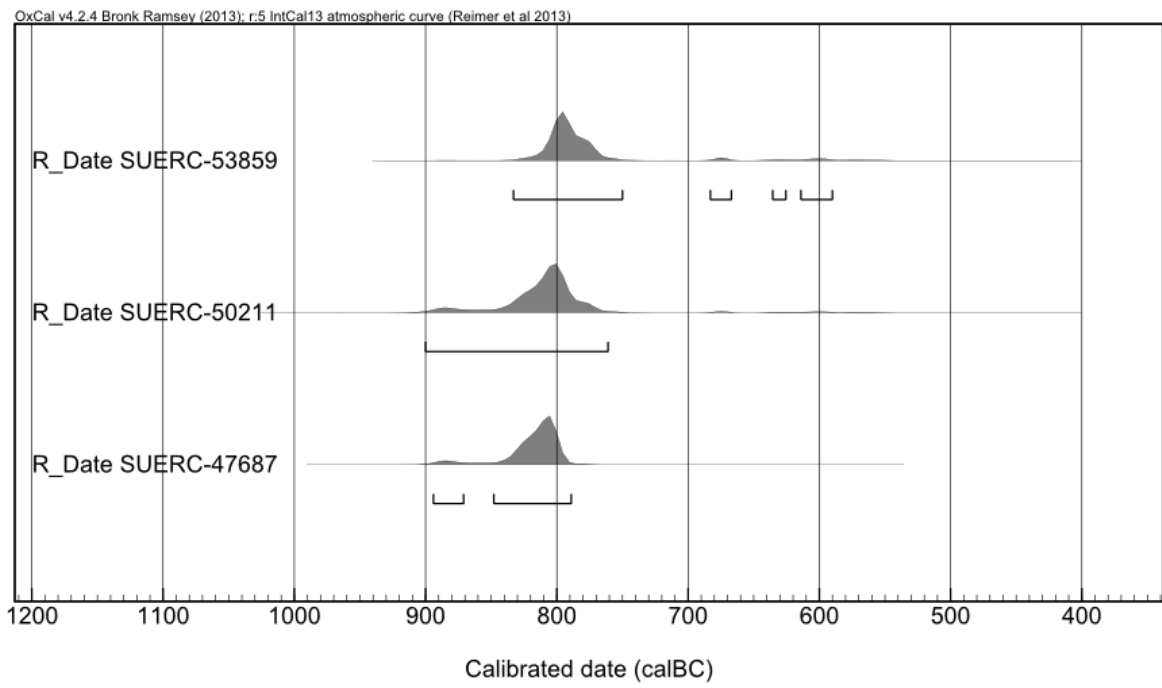
Early Bronze Age: 1. Cartington; 2. West Tanfield; 3. Howe Hill, Brotton; 4-5. Loose Howe; 6. Pockley, Oxclose Farm; 7. Hutton Buscel; 8. Irton Moor; 9. Gristhorpe; 10. West Heslerton; 11. Beacon Hill, Ruston Parva; 12. Willie Howe; 13-14. Towthorpe; 15. Hanging Grimston; 16. Little Ouseburn; 17-18. Wetwang Slack; 19. Garton Slack; 20. Old Sunderlandwick. 21. Calais Wold XIV.

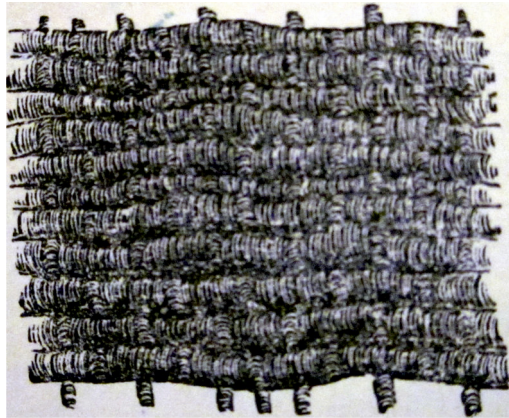
Early Medieval: a. Wydon Eals; b. Quernmore; c. Kirby Stephen; d. St Saviour Gate and Parliament Street, York; e. Beverley Parks; f. Selby Abbey.

Table 1

Sample No.	Material dated	Date BP	Date range (95.4% confidence)
SUERC-53859	Wool textile	2597 ± 35	840-590 cal BC
SUERC-50211	Coffin wood	2627 ± 42	910-760 cal BC
SUERC-47687	Coffin wood	2648 ± 30	900-780 cal BC

Figure 1





0 2cm

