

# Bosiliack and a Reconsideration of Entrance Graves

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*with contributions from*

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*In 1984 the entrance grave at Bosiliack, Cornwall, was excavated by Charles Thomas on behalf of the Institute of Cornish Studies. It was a comparatively small example, approximately 5 m in diameter encircled by a substantial kerb. A deposit of cremated bone was found within the chamber accompanied by sherds of plain pottery from three vessels. Two radiocarbon determinations were obtained on the cremated bone. The dates were almost identical, falling between 1690 and 1500 cal BC.*

*Because Bosiliack is the only entrance grave in Cornwall to have been excavated to modern standards, and to have had any analyses undertaken on the contents of its chamber, it is significant to the study of small chambered tombs elsewhere. This paper outlines the results from the excavations before moving on to a discussion of the use of monument and a consideration of its possible affinities with monuments elsewhere.*

## INTRODUCTION

Bosiliack, a small chamber tomb of the ‘entrance grave’ type in west of Cornwall (SW43113422), was selected for excavation after extensive fires had exposed large tracts of generally inaccessible gorse and bracken covered upland areas. It was excavated in the summer of 1984 by Charles Thomas as part of a research project to investigate Cornish megaliths, supported by the Institute of Cornish Studies and the Cornwall Archaeological Society, with the aim of obtaining information about their function and date, as well as establishing the relationship between tombs and adjacent field systems and settlements (Thomas 1984). It is one of 13 entrance graves known on mainland Cornwall and is the only one not to have been robbed in antiquity or excavated by antiquaries in the 19th century, although there was some disturbance by mining activity (*ibid.*, 3).

The excavation of the tomb was carried out in conjunction with the investigation of an adjacent

cultivation terrace which lay to the south of the entrance grave, and of two stone-walled round-houses within a settlement situated approximately 350 m to the north-west. An interim outlining the results from the excavations was produced within a few months of the completion of the field project (Thomas 1984). This paper is concerned with the excavation and interpretation of the entrance grave. It is intended that the excavation of the settlement will be published in a subsequent paper.

### *The setting of Bosiliack and summary of 1984 excavations*

Bosiliack lies in open moorland between the well-known monuments of Lanyon Quoit and the Men-an-Tol. The former is a large iconic table-like chamber tomb, of probable 4th millennium cal BC date, whereas the Men-an-Tol is an equally immediately recognisable holed stone, which may have been part of a stone circle (Barnatt 1982, 121–4; Preston-Jones 1993). The site is located south of a major concentration of 3rd and 2nd millennium cal BC monuments, which are found around the Nine Maidens Stone circle. It is situated within a fieldscape of 19th century crofts and earlier lynched boundaries, close to the Bronze Age settlement of Bosiliack mentioned above. In common with most

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entrance graves (Fig. 1), but in contrast with Cornish ‘quoits’ and portal dolmens, Bosiliack is not sited upon a hilltop but on a slope, so that views from the site are channelled towards the south-east. As a consequence, Carn Galva to the north, the most visually distinctive tor in the immediate area with a possible Early Neolithic enclosure (Oswald *et al.* 2001, 158), is not visible from Bosiliack. Again, this contrasts with many other monuments in the area, such as the Nine Maidens stone circle, which may have been deliberately sited to obtain views of it (Preston-Jones 2004–5, 32). The overall impression from the setting of the tomb was that it was not sited to make a large impression in the wider landscape but neither was it intended to be integrated within a wider ceremonial setting.

Bosiliack was excavated over five weeks in August and September 1984. The site is a Scheduled

Monument so, in agreement with the landowner and English Heritage, excavation was targeted upon the front, eastern, half of the monument and on the chamber (Fig. 4). A complete survey of the site was made in advance of the excavations and, following their completion, the site was reconstructed (Fig. 7). Following the clearance of vegetation from the site, the tomb was found to be circular (Fig. 2) with a diameter of approximately 5 m, with a north-of-centre chamber which extended east-south-east to west-north-west from an entrance in the south-east.

The monument’s most striking feature was the kerb which originally comprised 17 or 18 stones (Figs 3 & 5). This ring, which defined the tomb, was of very large granite slabs up to 1 m high and up to 0.5 tonnes in weight that rested against the cairn. There was no evidence for the kerbstones being set in sockets. The stones either side of the entrance appear to have been

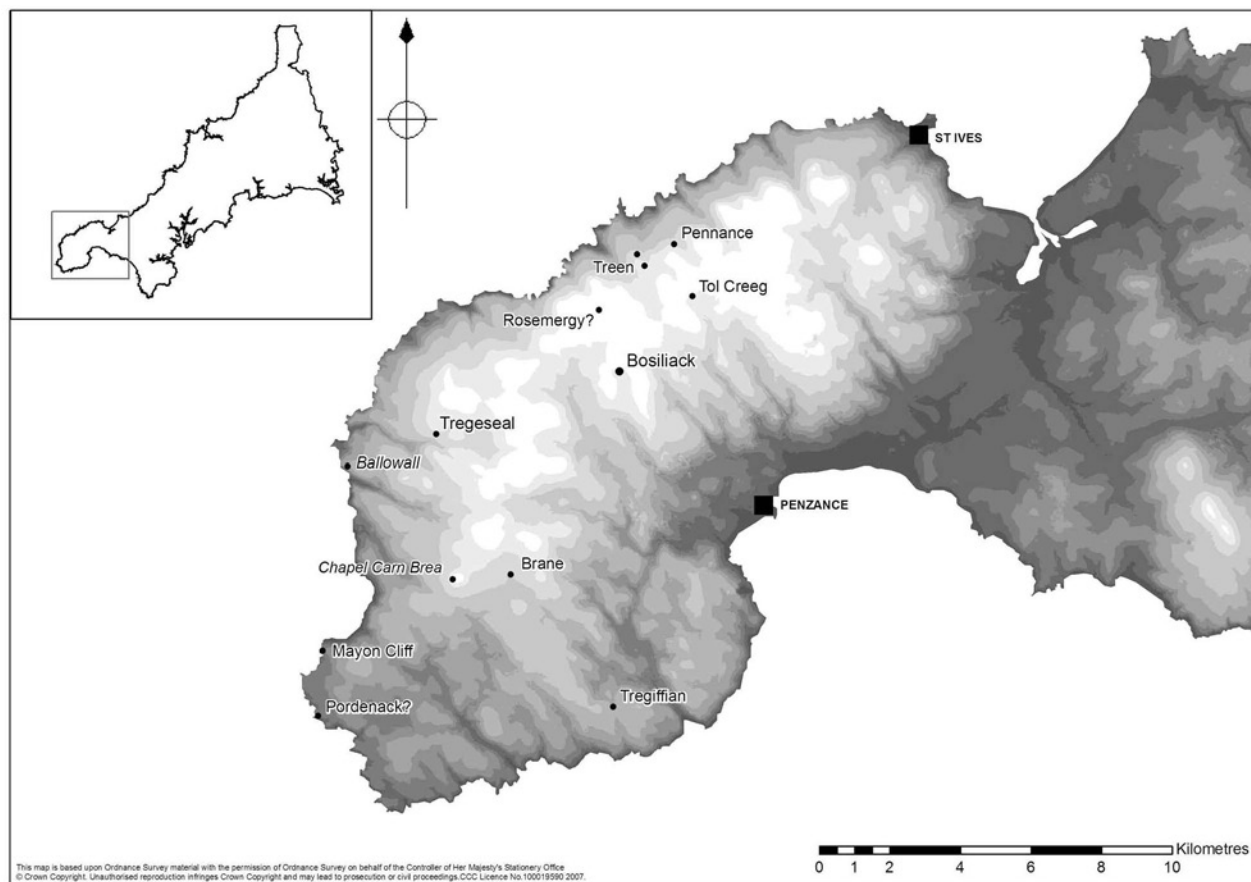


Fig. 1.  
Location map showing Bosiliack and other Penwith entrance graves

set with long axis inward to form entrance stones for the chamber (Fig. 2).

Excavation revealed that the monument was constructed upon the old land surface. The cairn comprised medium sized boulders around the outside, which were placed to support the large kerbstones. It is possible that the spaces between the kerbstones had been packed neatly with stones. Further inside, the cairn's construction became more jumbled and included much smaller stones. It was estimated that the cairn probably reached a height of around 1.5 m and that the kerb probably stood 1–1.2 m high. Overall the monument may have had a 'bun-shaped' appearance (Thomas 1984). No artefacts were directly associated with its construction. However, some worked flints were found within the body of the cairn and beneath it (Lawson-Jones below). Most of these appear to be later Neolithic or Early Bronze Age in date.

The chamber measured approximately 3 m long by 0.6 m wide. It was therefore narrow and the short 1.2 m length at the south-eastern entrance end was particularly so, comprised of smaller stones, which had been slightly off-set to the south-east of the main body of the chamber (Figs 2 & 5). The remainder of the chamber was built of large, horizontally laid granite slabs. None of the capstones survived *in situ* but a massive displaced capstone was found on the body of cairn south-west of the chamber (Figs 2 & 3). This stone had been dislodged in the 19th century by miners and prospecting pits could be seen north of the cairn. Fortunately, none of this activity had impacted upon the contents of the chamber.

The chamber was found to have been infilled in antiquity and was undisturbed. The primary deposit on the floor of the central part of the chamber comprised cremated human bone, charcoal, pebbles, and sherds from three plain ceramic vessels (Quinnell below), which had been placed on the floor of the chamber. Analyses of the burial suggests that only one individual was interred within the chamber (McSweeney below) and two near-identical radiocarbon dates were obtained on the bone: 3320±35 BP (SUERC-15589) and 3305±35 BP (SUERC-15590), both calibrating to 1690–1500 cal BC at 95% confidence, support this. The burial was covered by soil containing pebbles and gravel which was up to 0.3 m thick. Apart from two flints, the infill was devoid of artefacts. The entrance to the chamber was then blocked. A thin, upright granite slab was

placed between the flanking stones at the entrance to the chamber. Smaller granite stones and beach pebbles were placed against this blocking stone on its outer side. A second, thicker granite slab with a rounded top was then placed on the outer side of the small stones (Fig. 6). However, the blocking did not completely seal off the chamber from view, as the 'door' or portal stones, were not flush with the top of the chamber.

Approximately 1.5 m to the south of the tomb was a line of boulders marking the upper edges of a terrace. This terrace was covered by a deposit of up to 0.3 m of dark earth which was interpreted as a cultivation soil (Thomas 1984, 5). Artefacts from this layer included a copper alloy object that had corroded into an unidentifiable lump, flints, and a coarse granitic sherd of pottery, which appears to be of the same fabric as those found in the chamber (see below). It was suggested that the terrace was contemporary with, or predated the tomb, and could have been part of the Bosiliack settlement field system (*ibid*).

In summary, Bosiliack was a small tomb seemingly of single-phase construction, possibly set on the edge of a field system, upon a relatively sheltered valley side. It was not sited to make a major impression on the wider landscape. Although it could have been cleared out, Bosiliack appears to have been only used for a single burial towards the middle of the 2nd millennium cal BC. This burial was covered by a homogeneous infill deposit that appeared to have been undisturbed by subsequent activity, although how long the chamber was in use prior to the burial remains uncertain.

#### RADIOCARBON DATING

One of the original aims of the project was to obtain secure dating evidence from the tomb. Unfortunately, little material which was datable was recovered from the site in 1984, and in 2005 one of the major outstanding issues with Cornish ceremonial monuments remained the poor resolution of the dating of entrance graves (Jones 2005, 11–12). It was unclear whether they belong in the Early or later Neolithic periods, or if they were of Early Bronze Age date. Most datable artefacts from Cornish entrance graves point towards a 2nd millennium cal BC date (see below). This also accords with a single

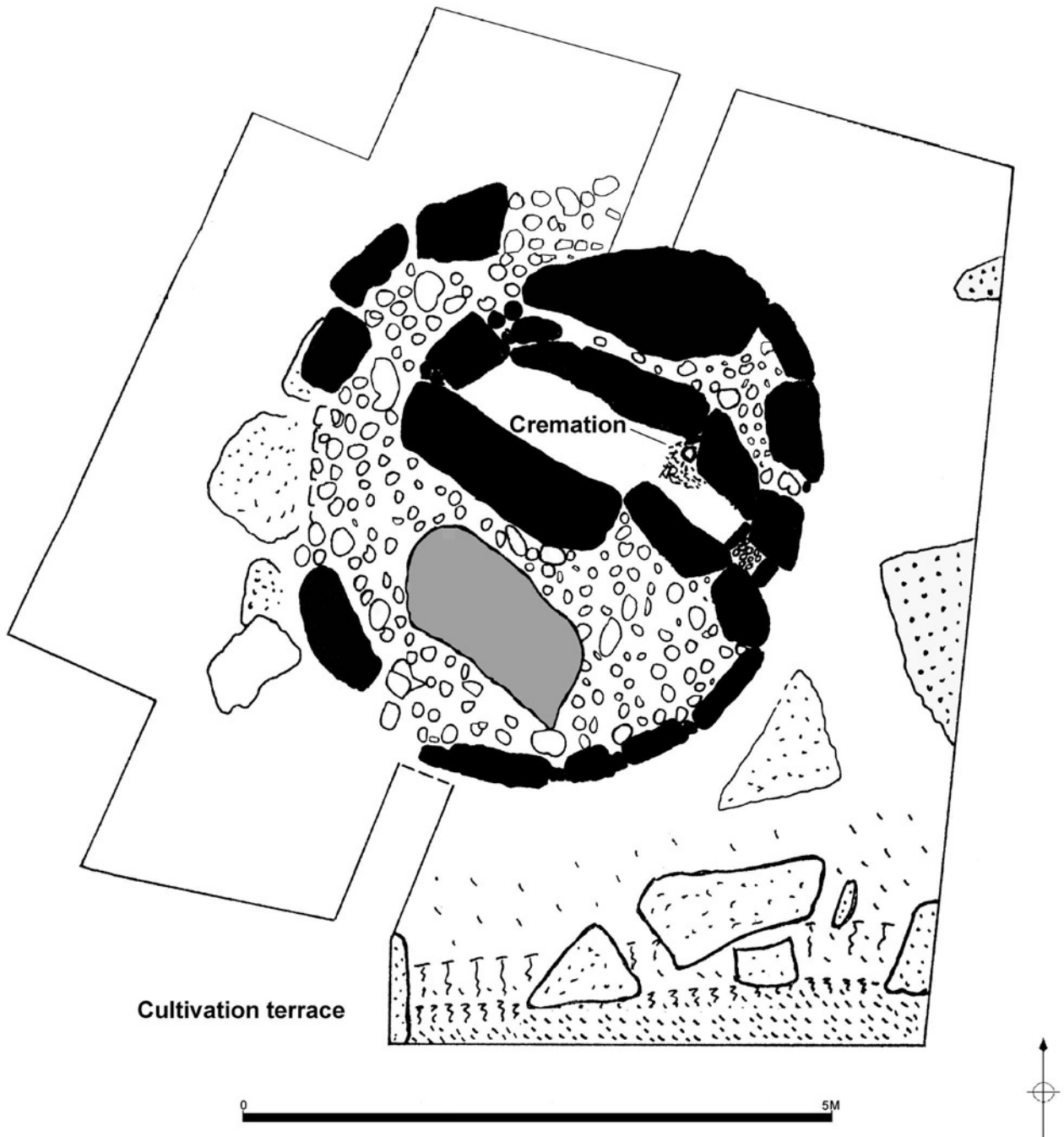


Fig. 2.  
Plan of Bosiliack  
(dark shading indicates *in situ* chamber and kerbstones, displaced capstone shaded grey, *in situ* boulders stippled)

radiocarbon determination associated with a Collared Urn/Enlarged Food Vessel (see pottery below) found at Tregiffian of 3489±59 BP (BM-935), or 1660–1680 cal BC. However, as Piggott (1973) pointed out, there are difficulties with dating megalithic tombs and it is possible that the chamber had been cleared out prior to the deposition of the burial and all of the available evidence could have been associated with secondary activity.

Recently, a technique for dating cremated human bone has become widely accepted (Aerts *et al.* 2001), allowing the possibility of obtaining radiocarbon determinations from Bosiliack. Two samples of cremated human bone from the floor of the chamber were submitted for accelerator mass spectrometry dating (AMS) at the Scottish Universities Environmental Research Centre (SUERC). The probability distributions (Tables 1 and 2) have been calculated using OxCal (v3.10). The resulting radiocarbon determinations of 3320±35 BP (SUERC-15589) and 3305±35 BP (SUERC-15590), are statistically indistinguishable. Both point to the burial in the chamber occurring between 1690 and 1500 cal BC. The implications of the dating will be discussed below.

THE CREMATION BURIAL

(Kathleen McSweeney)

The examined remains were in two boxes labelled ‘Bosiliack Carn 4 Sept 1984 No. 1’ and ‘Bosiliack Carn 4 Sept 1984 No. 2’. General osteological methods employed are those outlined in Buikstra and Ubelaker (1994). Identification and ageing of dental remains is based on van Beek (1983). An inventory with full descriptions of the identified fragments can be found in the project archive.

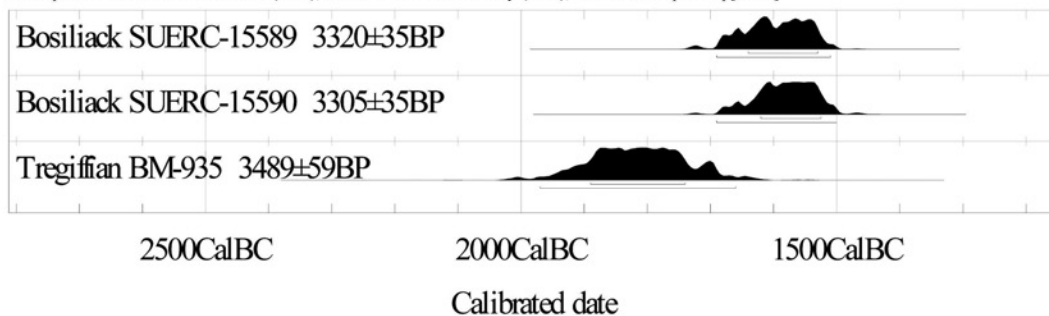
The weight of the whole deposit, including soil lumps and residue, was 404.7 g. The extracted bone weighed 206.2 g, just over 50% of the total. The bone was in very poor condition, consisting largely of small fragments that could not be identified. The largest fragment was a 55 mm long piece of ulna shaft which adjoined another fragment, resulting in a combined length of 80 mm. There were a few other long-bone shaft fragments of about 50 mm but most were considerably smaller. The largest cranial fragment was 35 mm long. These sizes are less than those noted by McKinley in her analysis of 15 modern cremations (McKinley 1993, 284), where she found skull fragments of up to 95 mm and long-bone fragments of up to 195 mm. Clearly much pre- or post-depositional

TABLE 1: RADIOCARBON DATES FROM BOSILIACK

Feature	Lab. no	Age BP	Material	Cal. years BC 68%	Cal. years BC 95%
Chamber deposit	SUERC-15589	3320±35	Cremated long-bone frag.	1640–1530	1690–1510
Chamber deposit	SUERC-15590	3305±35	Cremated skull frag.	1620–1525	1690–1500

TABLE 2: RADIOCARBON DATES FROM ENTRANCE GRAVES

Atmospheric data from Reimer *et al.* (2004); OxCal v3.10 Bronk Ramsey (2005); cub r:5 sd:12 prob usp[chron]



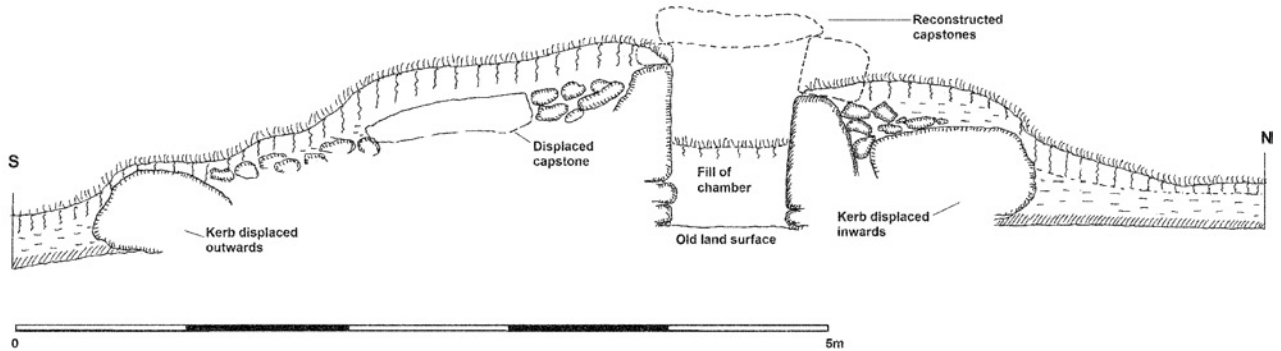


Fig. 3.  
East facing profile across Bosiliack



Fig. 4.  
Bosiliack under excavation (viewed from south-east)

disintegration has occurred in this case.

It is known that the colour of bone changes during burning (Mays 1998, 217; Shipman *et al.* 1984, 312). Burnt bone can range from shades of red, brown, black, grey, bluish white, and white. Although experimentation has shown some differences in the specific temperatures at which each colour variation was achieved (suggesting that factors other than the firing temperature are involved), in general colour can be used to assume a range of temperature (Shipman *et*



Fig. 5.  
Photograph showing Bosiliack excavated  
(viewed from south-east)

*al.* 1984). Dark colouring occurs because organic matter within the bone becomes carbonised. Bones exposed to greater heat lose carbon and become brittle and white. Black colouring indicates full carbonisation while white bone is fully calcined. The Bosiliack remains were generally whitish in colour with no evidence of any colour variation indicating they were well calcined. It is clear therefore that they had been burned to a temperature of at least 645°C. Colour consistency also indicates even burning of the corpse.

Only 109 fragments were identified, most of these

were undiagnostic limb shaft or cranial vault fragments. Of the more diagnostic bones were four fragments of parietal bone, one with a partially obliterated suture; a probable pair of petrous parts of temporal bone; a piece of occipital bone; one of right side of mandible with traces of five sockets (canine, both premolars, M1 and M2); the root of a canine; a single piece of vertebra; one of rib shaft; a small part of a scapula; and one fragment of pelvis. Positively identified limb bone fragments included one of humerus, two of ulna, and one of femur. No hand or foot bones were recognised. A breakdown of the weight of body elements and identified to unidentified fragments is given in Table 3. Despite the poor condition, a relatively high proportion of the remains were identified (Table 3) although, as stated above, these were largely undiagnostic.

The total weight of 238.7 g is much less than McKinley found in her study of modern cremations (1993, 284), where full weight ranged from 1227.4 g for an 83 year old female, to 3001.3 g for a 90 year old male. She estimated that, in an archaeological setting, a realistic range would be 1001.5–2422 g. As these were not the remains of a sub-adult (see below), this indicates either incomplete collection and/or deposition of the cooled remains from the pyre, or post-depositional loss.

There were no duplicated bones, no obvious variations in age at death, and no evident differences in robustness to suggest the presence of more than one individual. However, this does not exclude the possibility that remains of more than one individual are represented.

Dental development, based on the mandible fragment and the canine root, confirmed that age at death was at least 14 years. Two other pieces of evidence suggested that the individual may have reached at least mid-adulthood. The first is a fragment of cranium with a partially fused suture. While cranial suture closure is highly variable, in the main, it advances with age until obliteration is reached. The other piece of evidence is a canine root with a smooth rounded coronal end that is strongly suggestive of advanced attrition where the crown of the tooth has been completely worn away and the root comes into opposition as a result of continuous eruption, and then it too becomes worn. Both of these features are more likely to be found on an older, than younger adult. No sexually diagnostic features could be identified and no pathological lesions were noted.

#### POTTERY

(Henrietta Quinnell)

One hundred and nine sherds weighing 813 g were present, all from the deposit in the chamber except for one sherd, 15 g, found at the beginning of the excavation, from soil on the cultivation terrace outside the tomb. They represent parts of two, possibly three, vessels made from the same granite-



Fig. 6.  
Detail of the blocking stone (viewed from south-east)

TABLE 3: CREMATED HUMAN BONE

<i>Skeletal Area</i>	<i>Weight(g)</i>
Skull	42.8
Trunk	7.3
Limb bones	78.2
Total identified	128.3 (54%)
Unidentified	110.4 (46%)
Total	238.7



Fig. 7.  
Bosiliack reconstructed 2007 (viewed from south-east)

derived, fairly local, fabric with common inclusions varying from fine to very coarse. The greater part of these vessels is missing and most sherds present are small, with a mean average weight of 7.5 g. There is little abrasion on most edges. There is no indication of decoration. The remnants of these vessels do not merit illustration.

#### *Vessel 1*

(Eighty-nine sherds, 645 g, mean sherd weight 7.3 g). These, including four non-joining pieces of a simple upright rounded rim and several base angle sherds, suggest a fairly upright wall. The curve of rim suggests a diameter of *c.* 200 mm. Slight variations in the wall sherds indicate that the vessel had a slightly biconical profile. The fabric is soft, some 8 mm thick, but coarse

with some inclusions 3–5 mm in size. Poorly-fired with some spalling of the surface; generally reduced 5YR 5/3 reddish brown.

#### *Vessel 2*

(Eighteen sherds, 128 g, mean sherd weight 7.1 g). All these come from a base with a slightly angled wall, *c.* 140 mm in diameter. Thin, 6 mm, with the wall in places no more than 4 mm. Hard fired, inclusions up to 2 mm, with parts of the surface oxidised 5YR 5/6 yellowish red.

#### *Vessel 3*

(One sherd, 25 g). Generally similar to Vessel 2 in fabric and colour but thicker, *c.* 9 mm. It is difficult to



see how the thin wall of Vessel 2 could support this thicker wall fabric. The curve on the sherd suggests that it comes from the girth of a biconical vessel.

#### PETROLOGY

(Roger Taylor)

A sherd of Vessel 2 was thin-sectioned. This contained:

*Quartz* colourless transparent to translucent angular and sub-angular grains, 0.05–5 mm.

*Feldspar* perthitic orthoclase, white, variably sericitised, angular to sub-angular grains, some with traces of cleavage, 0.1–3 mm; plagioclase, sparse twinned albite-oligoclase grains seen in thin-section, 0.1–0.4 mm.

*Mica* muscovite, irregular cleavage flakes 0.05–0.3 mm, rarely 0.6–0.8 mm; biotite, rare brown, pleochroic light brown to dark brown, irregular cleavage flakes, 0.05–0.3 mm

*Tourmaline* sparse black vitreous angular grains, blue and yellow coloured in thin-section, rarely with crystal form, 0.05–0.8 mm

*Granite fragments* composite quartz-mica-feldspar grains, 0.4–0.6 mm

*Rock fragments* slate, one tabular grey fragment, 1.5 mm

A typical coarse, poorly sorted, granite-derived temper, probably sourced just outside the granite margin *c.* 2 km to the south-east. The other vessel(s) appear to be of a similar fabric.

The data tentatively suggests the presence of two or, possibly, three vessels. From the excavation account it is apparent that these had been buried as sherds, a practise common in other types of Bronze Age barrow deposit in Cornwall (Jones 2005, 138). Taking 1500 g as a rough estimate for a complete vessel of the size of Vessel 1, it is apparent that less than half a pot was present and only very small proportions of Vessels 2 and 3. The vessels appear to have been of simple, undecorated, slightly biconical form, although, in the absence of anything except the base, no statement regarding decoration can be made for Vessel 2.

Indeed, assuming that some criteria were used in the choice of sherds, they *might* have been chosen for their lack of decoration. Most decoration on Cornish Bronze Age vessels occurs in a zone around the upper body; and none of the rim sherds represented here extends more than 30 mm down the wall and could thus have come from above the decorated zone.

The dating of the bone suggests that the vessels fall in the middle of the currency of Trevisker ware but they lack both the decoration and the normally distinctive modelled rims of that style. Trevisker ware appears to have been in use for most of the 2nd millennium BC (Parker Pearson 1990, 7). It is usual to contrast the long currency of decorated Trevisker ware in south-west Britain with the simpler, normally undecorated Biconical style (for example, Parker Pearson 1990, 22) which occurs infrequently west of Dartmoor. The underlying shape of Trevisker ware is generally biconical, although usually of more marked form and with decoration. There is no site in Cornwall in which plain Biconical ware occurs as the predominant type as it does, for example, at Shaugh Moor on the west of Dartmoor (Wainwright & Smith 1980). Recent discussion of Trevisker assemblages at Tremough (Quinnell in Gossip & Jones 2007) and at Scarcewater (Quinnell in prep.) have emphasised that the range of Trevisker forms is much wider than once thought, providing a repertoire from which vessels of different type could be selected for different purposes. The simple biconical form of the Bosiliack vessels is very much that which occurs in entrance graves on the Isles of Scilly (for example, Ashbee 1974, 247–57) but lack the distinctive decoration found in the Isles.

Granitic fabrics occur in the West Penwith area in Early Bronze Age Collared Urns, an Enlarged Food Vessel, and Trevisker vessels from barrow and burial related-contexts although these forms are found more frequently in gabbroic fabrics (Parker Pearson 1990, *passim*). Presumably, the burial of simple vessels made of a fairly local granitic-derived fabric was a matter of deliberate choice. The Bosiliack vessels occur in the 17th or 16th centuries cal BC, at a time when all Early Bronze Age vessel forms were coming to the end of their currency; from around 1500 cal BC, all vessels appear to have been broadly Trevisker.

Ceramics, in varying amounts and with varying reliability of description, occur in the mainland entrance graves of Tregiffian, Tregaseal, Tolcreeg, Chapel Carn Brea, and Ballowal. Given the limited amount of work done on the sites as a whole, this

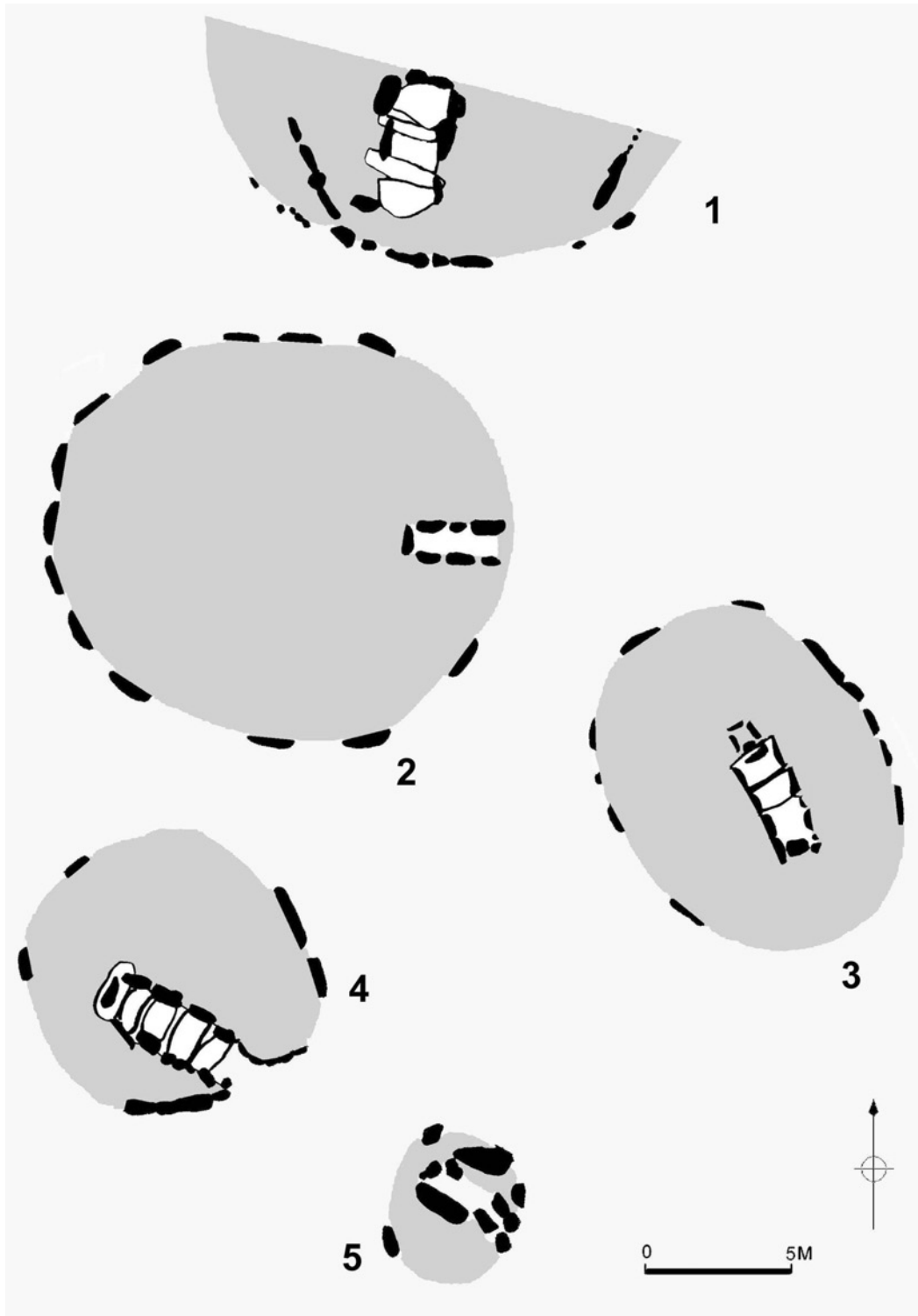


Fig. 8.

Penwith entrance graves: 1. Tregiffian (after ApSimon), 2. Tolcreeg (after Pool/Mercer), 3. Tregaseal (after Hencken), 4. Pennance (after Daniel), 5. Bosiliack (after Thomas)

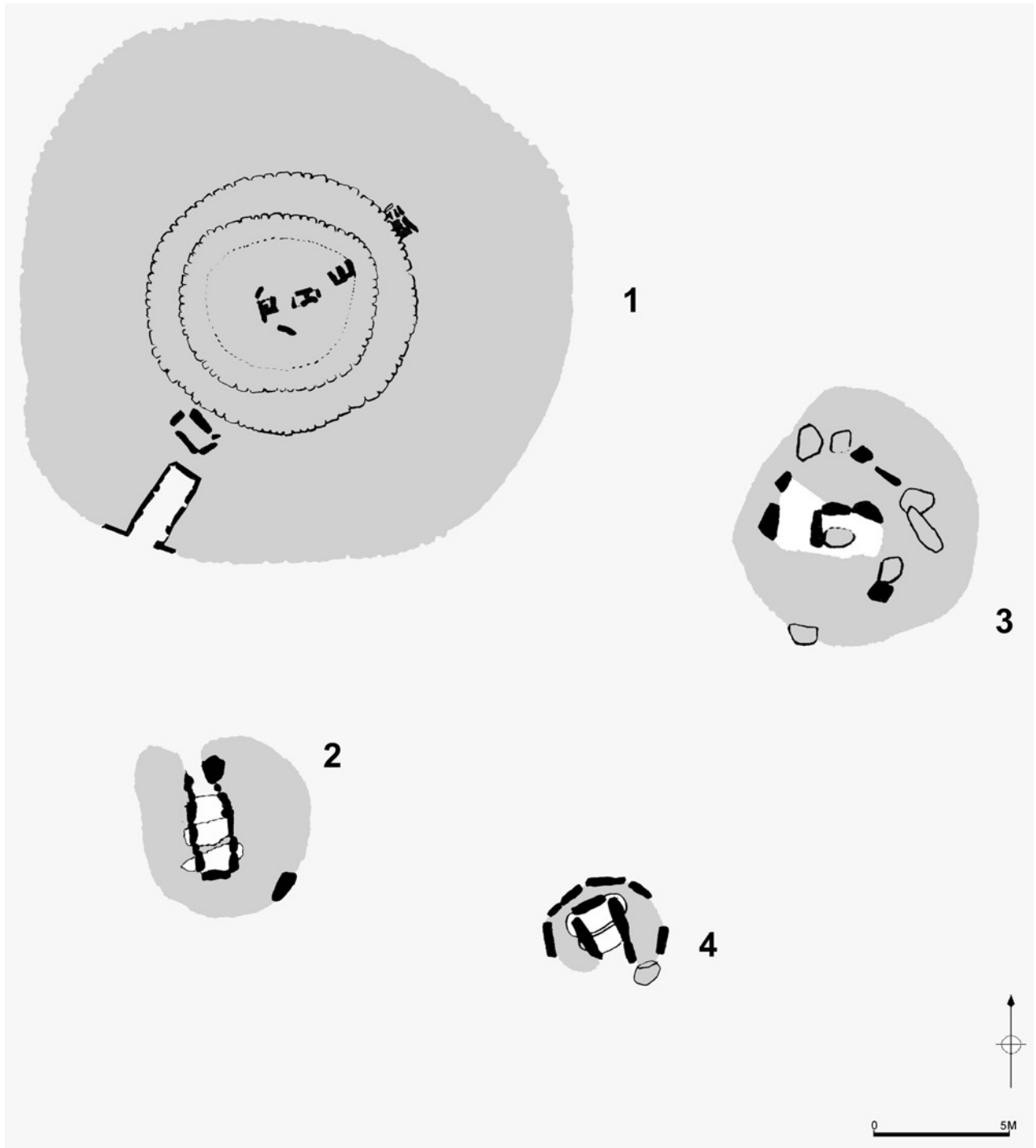


Fig. 9.  
Penwith entrance graves: 1. Ballowal (after Mercer), 2. Treen south (after Barnatt), 3. Mayon (after Herring),  
4. Brane (after Barnatt)

seems a good quantity, indicating that ceramics were a usual deposit in these sites. However, the forms vary considerably and none matches the Bosiliack vessels closely. The vessel from Tregiffian has not been published but comes from a pit in the chamber floor with a cremation deposit (ApSimon 1973), together with sherds from a second pit. ApSimon describes this vessel as a Collared Urn, but Parker Pearson (1990, 6, 13), uses the term Enlarged Food Vessel and describes its fabric as granitic. Undiagnostic sherds were recorded at Tregaseal (Borlase 1885, 194) in the entrance grave chamber. However, a complete handled Trevisker vessel was found with a cremation deposit in a small adjacent cist (*ibid.* pl. xlix). This vessel is recorded by Patchett (1944, B13) as in the British Museum and has not been petrographically examined. It has been customary to follow Borlase and describe the cist at Tregaseal as 'secondary' to the entrance grave. While there are some problems with the detailed plans and section of the site, it does seem clear that the cist shared part of the roof of the entrance grave. Given the virtual absence of secondary burial in Cornwall (Miles 1975, 78), the cist is more likely to be an integral part of the Tregaseal structure and its contents contemporary with the construction of the entrance grave. Undiagnostic sherds were recovered from Chapel Carn Brea (Borlase 1885) and from the ruined chamber at Tolcreeg (Pool 1964); the latter appear to have been granitic.

The site at Ballowal has a complex and muddled record (Borlase 1885; Fox 1973, 60–2) which has been rigorously examined by Sharpe (1990) with the help of J. Nowakowski on the finds. Its central area, and probable earlier part, contained at least seven cists. Using Sharpe's numbers for cists, Cist 2 contained a thick necked vessel  $4\frac{1}{2}$  in (c. 114 mm) high; its whereabouts is now unknown. Cist 3 contained a small cylindrical vessel  $5\frac{3}{8}$  in (c. 137 mm) high, subsequently illustrated by Patchett (1950, fig. 3, G9) and now in the Cambridge Museum of Archaeology and Anthropology. The same cist contained, now lost, 'three other fragments of another small vessel which had been provided with two knobs or cleats' (Borlase 1885, 193); this is described by Patchett (1944) as G12 but not illustrated. While the cist pottery is not particularly diagnostic, G12 probably belongs to a plain biconical lugged vessel such as those found in the cairn at Chysauster (Smith 1996, fig. 6, p1. 193) associated with a radiocarbon date of  $3430\pm 80$  BP (OxA-822); 1950–1530 cal BC.

A similar vessel was recovered from an entrance grave on Salakee Down on the Isles of Scilly (Grimes 1960, 174–6).

The entrance chamber at Ballowal, presumably later than the above vessels, contained recognisable Trevisker sherds which were found under paving and came from at least three vessels; these are now in the Royal Cornwall Museum. These consisted of a decorated ribbon handle (Sharpe 1990, fig. 12), a rim with decoration of impressed cord and circular stab marks below (*ibid.*, fig. 10), and a simple rim sherd with fingernail impressions (*ibid.*, fig. 11). Patchett (1944, fig. 7) wrongly assigned the handle and the impressed cord rim to the same vessel C11 and illustrated the second rim sherd as G10 (fig. 12). However, she incorrectly assigns all these vessels to cists and not to the entrance grave. The presence of Trevisker sherds in the Ballowal entrance grave and in the chamber contemporary with the entrance grave at Tregaseal firmly links these structures to the Early or Middle Bronze Age. The overall impression of the West Penwith entrance grave pottery as a whole is its variety, especially when compared to the cohesive, generally decorated, biconical vessels of Scillonian entrance graves (Ashbee 1974, 247–57).

#### FLINT

(Anna Lawson-Jones)

Seven worked flints were collected during the excavations. All were recovered from outside the tomb or within the body of the cairn and, as such, were not directly related to activity within the chamber (Table 4). Two flints were also recorded at the back of the chamber but these were not available for examination.

Most of this assemblage appears unabraded with the exception of slight focused use-wear referred to on specific tools (Table 4). With the exception of the multi-purpose tool (BS47), which retained some of its pebble surface, none of the pieces retains any cortex. It seems likely, based on the variety of flint colour seen in the assemblage, that it is all of local, beach pebble origin. The markedly fresh condition of the knife indicates that it had been sealed within an undisturbed context, whilst the presence of the microlithic piece shows that residual material existed within the immediate area of the entrance grave and further flints were recovered from the cultivation terrace to the south (site archive).

TABLE 4: BOSILIACK FLINT

<i>Flint no</i>	<i>Description</i>
BC15	Knife. Within S. side of cairn. 51 x 28 max x 6 mm. Mottled grey-brown tertiary flake. Slightly dagger-shaped in plan; opposed notching suggestive of hafting at narrow bulbar end. Bifacial removals, poss. use-wear. Tiny 'nibbled' ventral (and some dorsal) retouch on working edge; snapped break and backing removals on opposite edge suitable for mounting. Bifacial damage suggesting lateral mounting, slight abrasion to notches indicate binding.
BC32	Retouched flake, poss. piercer. Beyond SE side of kerb. 20 x 13 x 6 mm. Dark, good-quality flint. Tertiary flake with retouch and ?deliberate snapping producing abrupt, straight burin-like edge of narrow, triangular shape. Poss. post-depositional edge damage. BC32 and BC49 may both originate from same core.
BC38	Serrated flake. Beyond S. side of kerb. 21 x 13 mm. Pale, tertiary crescentic shaped piece with an arc of serration-like dorsal and some ventral retouch around entire convex edge inc. poss. use-wear. Straight edge suggests poss. hafted or mounted.
BC47	End and side scraper with opposing borer. Beyond S side of the kerb. 39 x 24 x 12 mm. Mottled grey, secondary pebble flake, poss. slight use wear on ends.
BC49	Tertiary flake. Just within S. of kerb. Small, dark, good quality, probably associated with platform renewal. See BC32.
BC56	Microlith. Beyond Southern side of kerb. Mesolithic, near complete, 14 mm long with tiny bilateral retouch along either side of thinnest half of length. Residual.
BC??	Tertiary flake. Pale thin.

Cairns and barrows across Cornwall have also been found to overlie flint assemblages, some of which are likely to have been broadly contemporary but others are probably far older (Griffith 1984; Miles 1975; Harris *et al.* 1984; Trudgian 1977; Jones forthcoming). With the exception of the microlith, the Bosiliack assemblage is Late Neolithic–Early Bronze Age in character. The presence of two pieces, possibly from the same core, reiterates the suggested lack of disturbance to the deposit. It is possible that the majority of the assemblage was contemporary with the construction of the tomb, most notably the knife, the multi-purpose tool, and the two fresh dark pieces.

#### DISCUSSION

##### *Entrance graves*

This section will largely consider the mainland entrance graves as, with the exception of two unexcavated doubtful sites at Pordenack and Rosemergy (Russell 1971, 21, 24,) and two unusually complex monuments at Ballowal and Chapel Carn

Brea (Borlase 1885; Sharpe 1990), they form a coherent group. Cornish entrance graves comprise approximately 13 examples confined to the western district of Penwith, of which nine have been planned with some confidence (Figs 8 & 9). The remaining sites are either dubious (Pordenack & Rosemergy), overgrown (Treen north), or very disturbed (Chapel Carn Brea). Unfortunately, with the exception of Bosiliack and Tregiffian (Fig. 12), all of the Penwith entrance graves were dug into without record, or, as at Tregaseal and Ballowal, investigated in the 19th century (Borlase 1885).

The term entrance grave has only been used as a terms for this type of tomb since the 1940s (Childe 1940, 75; Hawkes 1941). Prior to that time they were variously referred to as barrows, covered galleries, or passage graves (Ashbee 174, 73). Entrance graves are, as exemplified by Bosiliack, simple structures, comprised of short undifferentiated, often slightly bulging passages set within circular, usually kerbed mounds or cairns. Where roofing survives, it comprises large flat slabs of granite. Unlike passage tombs there is no evidence of any attempt to demarcate the passage from the chamber or for corbelling of the roof

structure (Radford 1957/8; Eogan 1986, 133; Smith & Lynch 1987, 18), and the passage opens directly from the kerb without any expansion or elaboration. There is also considerable variety in size, with Tolcreeg measuring up to 16 m in diameter (Pool 1964), in contrast to Bosiliack at just 5 m.

In many cases entrances are oriented between the eastern and southern horizons (Figs 8 & 9) and could arguably represent a concern with the establishment of an alignment onto the midwinter sunrise. A similar argument has been made in relation to the orientation of features and entrances into round barrows, where it has been suggested that celestial events involving the sun were marked (Owoc 2001). However, as Townend (2007) points out in relation to round-house doorways, orientation is often conceptual rather than an exact science and therefore open to variation.

Passages normally extend to the kerb but in one or two instances, such as at Tregaseal (Borlase 1885), the entrance appears to have finished a little short of the kerb (Figs 8 & 9). This has resulted in these sites sometimes being recorded as cisted cairns, as for example that at Mayon (Borlase 1879; Weatherhill 1981, 24). It is probable that deliberate remodelling of the mound to prevent access to the chamber is a more likely explanation (Barnatt 1982, 50) and this is certainly borne out at Bosiliack where, in addition to an infilling deposit, blocking stones were put in place. Most other Cornish sites are poorly recorded; however, 'earth' filled chambers have been recorded on Scilly (Thomas 1985, 135).

#### *A time for entrance graves*

Entrance graves sit uncomfortably in the chronology of chambered tombs. For Daniel (1950, 164) they evolved from simple Breton passage graves of the earlier Neolithic. Likewise, Ashbee (1982) saw very early origins and suggested that they were constructed by Mesolithic communities. However, by drawing on the artefactual assemblages from Irish Tramore tombs and entrance graves, Piggott (1954, 264–7) placed them at the very end of the Neolithic, linking them with the small tombs that have been found in the east of Ireland and dated the group to the 2nd millennium cal BC. This dating has been followed by subsequent writers (Thomas 1985, 115; Jones 2005, chap. 1).

However, given that the small passage tomb, Broadsands, in south Devon has recently been dated to the Early Neolithic (Schulting & Sheridan

forthcoming) and passage tombs dating to 3rd and 4th millennia cal BC are found widely around Atlantic Europe (Smith & Lynch 1987; Scarre *et al.* 2003; Sheridan 2003; Cummings & Whittle 2004; Patton 1993, 179–83), possible early origins for this group should not be dismissed out of hand. Similarly, the trend for entrances to face towards the south-eastern part of the horizon is found in many passage tombs (Bradley & Phillips 2008; Burl 1983, 24–5; Bergh 1995, 124–5), which could be taken to be indicative of a shared concern with the midwinter sky.

With these possible alternatives in mind, we can turn to the dating evidence from the Penwith entrance graves. Given the view after the excavation in 1984 that the ceramics were considered to have belonged to the late 3rd–early 2nd millennium cal BC (Thomas 1985, 98), the very late Early Bronze Age radiocarbon dates from Bosiliack of 3320±35 BP (SUERC-15589) and 3305±35 BP (SUERC-15590) are later than initially expected (Thomas 1984, 3). In fact, the results are not too dissimilar from the determination from the charcoal recovered associated with the Collared Urn/Enlarged Food Vessel from the entrance grave at Tregiffian of 3489±59 BP (BM-935); 1960±1680 cal BC. There is also a growing body of broadly comparable determinations from other small tombs around the fringes of Atlantic Europe, for example at Clava and Bargrennan (Bradley 2000, 160; Cummings & Fowler 2007, 165–7), which fall within the early 2nd millennium cal BC (see below).

The dates are of interest because they indicate that activity at the site was contemporary with that at the wide variety of funerary and ceremonial monuments, cairns, multiple burial cairns, and round barrows typical of the Early Bronze Age in the area (Bonnington 1999; Borlase 1872; Smith 1996; Jones 2005, chap. 3). There is also evidence for Early Neolithic tombs, such as Zennor and Sperris being used into the Later Neolithic and Early Bronze Age periods (Jones 2005, 12; Kytmanov 2008, 106). Both of these sites have produced small biconical vessels and whetstones and a sherd of cord-impressed pottery of probable Early Bronze Age date was recovered from Zennor Quoit (Thomas 1985, 98; Thomas & Wailes 1967). Elsewhere Neolithic chambered tombs were reused in the Early Bronze, for example as at the Mound of Hostages in Ireland, where cremation burials were inserted into the mound (O'Sullivan 2005, 230). It is the case that both the Bosiliack, and Tregiffian radiocarbon determinations

are associated with single burials within the chamber and cannot be used in a *prima facie* way to date either the construction of Bosiliack or entrance graves as a group. However, given its small size and the lack of evidence for reworking, it is unlikely that Bosiliack was used for a long span of time before the burial was deposited.

In the absence of scientific dating from most of the entrance graves, the artefacts from them can provide some assistance with dating. The evidence from pottery has been considered above pointing broadly to the Early Bronze Age. Ballowal contained a copper alloy object associated with the plain and knobbed vessels from (Sharpe's) Cist 3. Here none of the finds are likely to date much before the start of the 2nd millennium cal BC.

The only surviving diagnostic find from the actual Tregaseal entrance grave is the perforated whetstone, which is likely to date to Needham's period 4 c. 1700–1500 cal BC (Needham 1996; Gerloff 1975, 48–9), which although of a similar date to Bosiliack, could have entered the chamber at a late date: the adjacent cist at Tregaseal contained a Trevisker vessel. Only the later Neolithic to Early Bronze Age flints recovered from around the cairn area at Bosiliack provides some indication that the finds in the chamber may not post-date the construction of the tomb by more than a few centuries. However, even here most of the finds were not stratified securely enough to make a watertight case.

The remaining artefacts from Cornish entrance graves offer little help with dating, beyond demonstrating an absence of artefacts, such as round bottomed ceramic vessels, stone pendants, or flintwork that are found in earlier passage graves in Ireland, Brittany, and elsewhere (Burenhult 1980, 40; Clifford 1950, 2–40; Herity 1975, 117–48; Lynch 1969). Similarly, both Early and later Neolithic ceramics, which have been found in other contexts across Cornwall, are completely absent (Mercer 1986; Cole & Jones 2001–2; Gossip & Jones 2007) and the engravings or selection of contrasting coloured stones found at many passage graves are missing from entrance graves (Eogan 1986, 146–71; Bradley & Philips 2008).

The dating of entrance graves is equally problematic on Scilly where the greatest concentration of sites is found (see below), as there are, as yet, no radiocarbon dates. Both Late Mesolithic origins and much later 2nd millennium cal BC dates have been

proposed (Ashbee 1976, 24; 1982; Thomas 1985, 119). With the exception of a flaked stone axe from beneath Knackyboy and some sherds of pottery from Bant's Carn, Neolithic artefacts are absent (Kirk 2004). Current data, largely ceramic, mean that most Scillonian (Robinson 2007a, 144) entrance graves are likely to date to the Bronze Age, the same conclusion now reached for those in West Penwith.

### Contents

Human remains form a recurring deposit in entrance graves. In addition to Bosiliack, cremated bone has been recorded from all of the more fully investigated sites, including Tregaseal, Ballowal, and Tregiffian (Table 5). However, with the exception of Bosiliack, all the other recorded internments seem to have been multiple cremations, perhaps because the sites were larger. At Tregaseal deposits of human bone were found in the chamber both above and below a layer of paving, as well as in the Trevisker urn in the adjacent cist (Borlase 1885). Similarly, at Ballowal, cremated bone was found above and below the floor of the chamber (*ibid.*). At Tregiffian, three phases of excavation (Borlase 1872, 107–9; Dudley 1968; ApSimon 1973) led to several deposits of human bone being uncovered. Splinters of bone were recovered from the chamber as well as from three pits. The first pit, recorded by Borlase, was said to contain shell and bones from more than one individual; the second sherds of pottery bone and charcoal, and the third an upright Collared Urn/Enlarged Food Vessel with a cremation deposit. This suggests that, as in Cornish round barrows, wherever burials have been recorded, multiple burial was the prevalent rite (Jones 2005, chap. 3). However, the proportion of the individuals deposited is unknown, and, given the acidity of the soil, it is possible that unburnt bone may also have been interred within the chambers.

In addition to pottery, other forms of artefact have been recovered. As at Bosiliack, flints are commonly found, although in most instances they have not been recorded in detail or could be residual, entering the chamber as part of infilling activity. Likewise, pebbles are recorded at Tregiffian but may have gone unreported elsewhere. Finds of pebbles are found in a variety of funerary and ceremonial monuments across the county (Borlase 1879; 1885; Miles & Miles 1971; Jones 2005, chap. 3) and are often closely associated with human remains. Their presence in the infilling at

TABLE 5: THE CONTENTS OF EXCAVATED ENTRANCE GRAVES

<i>Site</i>	<i>Burial</i>	<i>Artefactual associations</i>	<i>Principal references</i>
<b>Ballowal</b>			
Large complex cairn <i>c.</i> 22 m diam. covering several cists, entrance grave on S side	Small amount of burnt bone recovered from cist 3 inside urn & poss. animal bone found near cist	3 ceramic vessels recovered from cists within earlier central area. Cist 2 contained 'thick necked vessel' & cist 3 small 'cylindrical vessel' & 3 further sherds. Copper alloy object also found in cist 3	Borlase 1885; Patchett 1944; Sharpe 1990
Entrance grave probably set in added cairn material	Deposits of cremated bone found above & below floor of entrance grave chamber	Trevisker ware sherds from at least 3 vessels found under paved floor in entrance grave chamber	
	No. individuals & completeness of burials unknown		
<b>Bosiliack</b>			
Small entrance grave <i>c.</i> 5 m diam.	Cremation, prob. 1 person. Gender uncertain, ?adult	Parts of 2 or 3 plain ceramic vessels recovered from chamber. Flints from below & within matrix of tomb. Beach pebbles brought to site & deposited in chamber	This paper
<b>Chapel Carn Brea</b>			
Substantial mound, <i>c.</i> 21 m diam., containing large chamber which may have been earlier entrance grave	'Two chips of burnt human bone' found outside chamber in mound	Sherd of 'coarse sepulchral pottery' found outside chamber within mound	Borlase 1885
	No burial recovered from chamber	Possible entrance grave chamber within mound found to contain a few 'atoms of crude pottery' & an unperforated whetstone	
<b>Mayon Cliff</b>			
Poorly preserved entrance grave, <i>c.</i> 8 m diam.	No burial deposit recorded	Probably excavated by Borlase in 1870s, without any finds being recovered	Borlase 1879, 210; Weatherhill 1981, 24
<b>Tolcreeg</b>			
Entrance grave, <i>c.</i> 16 m diam. Destroyed in 1960s. Partial record made	No burial deposit recorded	2 small, undiagnostic frags pottery & a few flints found 'in the vicinity' of chamber	Pool 1964
		Flat pebble & beach pebble also recorded	
<b>Tregaseal</b>			
Entrance grave <i>c.</i> 16 x 12 m diam., cist behind chamber in mound	Cremation deposits found in chamber above & below paved floor. Cremation in Trevisker vessel within cist in body of tomb	Perforated whetstone found inside chamber with undiagnostic pot sherds	Borlase 1885
	No. deposited individuals & completeness of burials unknown	Complete handled Trevisker ware vessel found inside cist	
<b>Tregiffian</b>			
Entrance grave, <i>c.</i> 15 m diam.	Several deposits of burnt bone recorded	Collared Urn/Enlarged Food Vessel found in pit inside chamber	Borlase 1872; 1879; Dudley 1968; ApSimon 1973
Partially excavated on 3 occasions	Bone recovered from chamber floor, & from 3 pits inside tomb	Sherds of pottery, flint pebbles, cup-marked & burnt stones found inside chamber	
	1st pit contained shell & bones from more than 1 individual; 2nd: pot sherds, bone, charcoal; 3rd: upright Collared Urn/Enlarged Food Vessel with cremation		
	More than 1 individual deposited but no. & completeness of burial deposits unknown		



Bosiliack is interesting as the tomb is located inland and it may suggest a desire to create a link with the coast and the sea. Cup-marked stones have been found in the chamber at Tregiffian (ApSimon 1973, fig. 11). Cup-marked stones have occasionally been found at Bronze Age barrow sites, usually on small, portable stones but occasionally on larger slabs, as at Tichbarrow (Trudgian 1976; Christie 1985). The perforated whetstone at Tregaseal is one of only five known examples from Cornwall, all from Penwith. The most recent is an unstratified find from Boscaswell (Jones & Quinnell 2006). Two were found in the 19th century on Brane Common, Sancreed, each associated with an urned cremation burial, and one possibly with a copper alloy knife (Borlase 1872, 212–3). The fourth was found within the ante-chamber at Zennor Quoit (Thomas & Wailes 1967).

On Scilly it has been argued that, rather than being simple tombs, entrance graves acted as repositories for occupation earth, which reflected a concern for soil fertility (Ashbee 1976, 21). More recently, Robinson (2007a, 106) has suggested that deposits such as ash and topsoil, which are found in Scillonian entrance tombs, were derived from settlements, and could represent a transferral of material from the world of the living to the ancestors. Very few mainland tombs have been carefully excavated, but the shells, ashes, and broken sherds of pottery recovered in older work from several tombs could also argue a link between settlement-generated deposits and entrance graves.

As with human remains, the repertoire of deposits placed within Bosiliack and entrance graves generally does not differ from those found in the majority of excavated Early Bronze Age cairns and barrows across Cornwall (Jones 2004–5; 2005, chap. 3). In fact, the quantities of finds involved might be seen to be rather less extensive than have been recovered from other monument types, and more ‘exotic’ artefacts, such as beads or finely-worked stone objects, are absent.

The most important contrast between the contents of entrance graves and those of cairns and barrows lies in accessibility to the interred remains; with communities who used entrance graves still having the potential to access and manipulate ‘ancestral’ remains or contact the spirit world, whereas as those who constructed other forms of closed monument could not (*cf.* Barrett 1988; Lynch 1973).

### Setting

One of the objectives of the fieldwork was to consider the relationship between a tomb and nearby settlement. This has proved difficult elsewhere in Cornwall because of the nature of the evidence and the radiocarbon dating which has developed a division between the use of ceremonial monuments prior to 1500 cal BC and the construction of settlements after that date (Jones 2008). However, in Penwith, it is possible to examine this relationship further because the landscape setting of entrance graves is different from other monument forms.

With the exception of Treen (Fig. 13), where two entrance graves are found together, they are fairly evenly distributed around the western end of the Penwith peninsula (Fig. 1). With the exceptions of Chapel Carn Brea, and Tregiffian, these do not seem to have been components of larger complexes of monuments and, because of their valley locales, there are often quite limited views out into the wider landscape. Instead, they look down over the settled landscape. At Bosiliack this is particularly marked, as Carn Galva, a focal point for many monuments in the area, is excluded from view. This absence may have been deliberate as, had the tomb been constructed further up the slope, the tor would have been visible.

This pattern differs from the majority of Neolithic Cornish chambered tombs, which are sited on distinctive hilltops or in sight of granite tors; however, with the earlier Neolithic radiocarbon dates now available for monuments such as Zennor and Sperris Quoit (Kytmanov 2008, 105, 106) entrance graves must be seen against patterns of a very different use of landscape. This also contrasts with the places chosen for the majority of Cornish Bronze Age barrows, which tend to be in groups sited away from detectable areas of settlement and are, again, often associated with rocky outcrops (Barnatt 1998; Tilley 1995; Jones 2005 chap. 4). It has already been stressed that, unlike other monuments, entrance graves were not sited to make a large impact on the wider landscape, but their large kerbs are impressive and help to monumentalise them within their immediate adjacent locale. This is particularly true at Bosiliack, where the disproportionately large kerb stones markedly throw the site into relief from its immediate landscape.

Visiting sites such as Bosiliack would, therefore, not for the most part have involved physically leaving the ‘everyday’ settled world to climb ‘on high’ places,



Fig. 10.  
Distribution of small tombs



Fig. 11.  
Mayon (viewed from east)

which were more distant, perhaps less frequented, and outside of the farmed landscape, but would have involved approaching a distinctive place of the nearby ancestors who overlooked the fields and the living below. Seen in this light, Penwith entrance graves may, like the wedge tombs of Ireland (O'Brien 1999), have acted as communal shrines as much being receptacles for the dead.

Most Penwith entrance graves are sited within shallow valleys, suitable for settlement, or as at Mayon (Fig. 11) or Brane, close to prehistoric field systems. The strongly lynched fields in Penwith have been taken by several writers to be of prehistoric date (Tilley & Bennett 2001), and Herring (1994) has argued convincingly that the field boundaries on Mayon are overlain by the Iron Age cliff castle. Although direct stratigraphic evidence was lacking, it was suggested by the excavator that Bosiliack lay within a prehistoric field system. However, the date for the formation of these fields is uncertain and contemporaneity between Penwith entrance graves and fields is unproven. Elsewhere links between

settlements and ceremonial monuments have been explored (Richards 1990; 2005, chap. 7; Bradley 2002, 72–80), and it is of interest that many Bronze Age round-houses at Bosiliack and Penwith generally (Dudley 1941; 1957) have doorways oriented between south-east and south. This could indicate a shared concern for the same part of the horizon as the entrance graves, and perhaps mutual cosmological concerns. However, the present evidence suggests that it is likely that the upstanding round-houses in Penwith are of a later Bronze Age date. For example, the pottery from the settlement at Bosiliack appears to have contained a mixture of Trevisker, as well as carinated and other unidentified vessel forms, which are indicative of later usage.

The limited evidence might suggest that in parts of Penwith some communities could have demarcated their spaces with permanent boundaries a century or so earlier than in other regions of southern England, where enclosure occurred from around the middle of the 2nd millennium cal BC (Bradley; 2005, 205; Yates 2007). It is possible that the adoption of entrance



Fig. 12.  
Tregiffian (viewed from south-east)



Fig. 13.  
Treen south (viewed from south-east)

graves was linked with localised changes to tenure; however, securely dated contemporary dwellings remain elusive.

### *The wider world*

When the radiocarbon, artefactual, and limited stratigraphical information are considered jointly, the available evidence suggests that it is highly unlikely that the Penwith entrance graves belong to the earliest part of the Neolithic. It is therefore probable that they

were related to a wider group of monuments dating to the end of the 3rd and earlier 2nd millennia cal BC (Fig. 10), some of which may have been inspired by earlier passage graves. Their main phase of use, as currently demonstrated, probably dates to the Early Bronze Age. However, their distribution on the western edge of Cornwall raises the question of why they should have been restricted to that area.

Several writers have highlighted the importance of the Atlantic sea zone throughout prehistory (Bradley 1997; Sheridan 2000; Waddell 1991/2; papers in Cummings & Fowler 2004) and recently Cunliffe (2001, 154–8) has reasserted the possibility of an ‘Atlantic identity’ borne out of mobile seaborne fisher communities in the Mesolithic period. It is certainly true that the earliest monuments in this region are found close to the sea and the significance of the coastal zone to prehistoric communities is demonstrated around the Atlantic façade area by the location of monuments on the coast or in sight of the sea (Bowen 1972, chap. 2; Cummings 2004).

The western and coastal areas of Cornwall show evidence for being receptive to new ideas and engaging with communities across the sea. From the earlier Neolithic, monuments such as portal dolmens (Cummings & Whittle 2004, 88–91) are found in west Cornwall and some artefacts, including Group I axes, could have travelled from the south-west peninsula to other parts of the Atlantic region (Cooney & Mandal 1995). In the 2nd millennium artefact types, including lunulae (Taylor 1980, 40) and possibly star-shaped faience beads (Sheridan & Shortland 2004), which are more widely found around the Atlantic façade, arrived in Cornwall through seaborne contacts, whereas Cornish Trevisker pottery has been found in France, South Wales, and Dalkey Island in Ireland (ApSimon & Greenfield 1972, 375).

As Waddell (1991/2) has pointed out, it would be easy to overstate the evidence for exchanges around the Irish Sea but it is important not to overlook them either. With this in mind it is worth reviewing the evidence for small tombs along the Atlantic seaboard (Fig. 10).

The southern end of the Atlantic façade presents few comparisons, the seaboard of Brittany contains a number of passage tombs, and although several show evidence for reuse in the latter part of the 3rd or 2nd millennium cal BC, they are much earlier in date and none can be demonstrated to have been constructed in the 2nd millennium cal BC (Patton 1993, 162–7; Giot,

*et al.* 1998, 233–337). Daniel (1960, 67) suggested a relationship between Cornish entrance graves and some of the simple passage graves, which are found in the Channel Islands. These sites are usually considered to be of Neolithic date (Kinnes 1986). However, there are a number of small megalithic tombs on Guernsey, such as Le Creux es Faies and Le Trepied that have similar orientations, plans, and size to Penwith entrance graves. Furthermore, excavation has revealed that they contain late 3rd or early 2nd millennium cal BC artefacts, including Beakers and barbed and tanged arrowheads (*ibid.*). Unfortunately, all of the finds are from chamber deposits, which mean that they could all represent latter reuse of the tombs.

As Piggott (1954) pointed out, the closest parallels for Penwith entrance graves lies with a small group of tombs, in south-east Ireland to the south of the major Neolithic passage tomb concentrations. The Tramore group consists of at least five sites close to the coast around Waterford. Although none has been radiocarbon dated, they are very close in size and form to the Penwith tombs (Powell 1941; O’Nuallain & Walsh 1986) and excavated examples have comparable deposits within them; cremated bone, flintwork, and Early Bronze Age pottery (Hawkes 1941; Herity 1975, 179–80). Similarly, all but one of them is oriented towards the eastern to southern part of the horizon. However, there are some differences from the Cornish entrance graves, notably in topographical setting, as like the passage graves in the area, most of the Tramore tombs are sited on high-lying ground (O’Nuallain & Walsh 1986).

The Tramore tombs may be related to the wedge tombs (Grogan 2004), which are most commonly found in the west of Ireland (Walsh 1995). Although wedge tombs are by definition set within ‘wedge’-shaped cairns, there are structural similarities with Tramore tombs, as they are comprised of simple, probably single-construction phased chambers which, as at Streedagh, are sometimes set within circular kerbs (Kytmanov, pers. comm.; Borlase 1897, 128). Wedge tombs are associated with a number of radiocarbon determinations which places them at 2400–2100 cal BC with evidence for reuse in the later Bronze Age (Brindley & Lanting 1991/2; O’Brien 1999, 61). In common with the Penwith tombs, they contain cremated bone, quartz pebbles, and cup-marked stones and are often found close to and overlook good agricultural land (O’Brien 1999, 197, 202, 238). However, unlike Cornish entrance graves

they have a strong orientation towards the western part of the horizon (O’Brien 1999, 82).

Perhaps unexpectedly, none of the surveys of Welsh megaliths has identified comparable sites (Barker 1992; Cummings & Whittle 2004; Nash 2006), although passage tombs of possible later Neolithic date, are found close to the western seaboard (Lynch 2000, 75) and, like the Breton tombs, they were sometimes reused during the 2nd millennium cal BC (O’Kelly 1969). One comparable site has been identified in the Isle of Man at Ballakelly (Darvill 2000). The site is undated; however, its large kerb and small chamber are very similar to Bosiliack, and it is likely that it dates to the late 3rd or 2nd millennium cal BC.

In Scotland there are two groups of tombs, one on the west coast and another on the east, which provide comparanda for entrance graves. The Bargrennan group consists of around 12 sites in Galloway (Henshall 1972, 3; Cummings & Fowler 2007, 5). As with the Tramore tombs, they are sited away from more fertile areas, and none is more than a few kilometres from the coast. However, they are a morphologically diverse group, with two sites having multiple chambers and some having short chambers within the body of the cairn; although the latter aspect may be associated with deliberate chamber blocking (Henshall 1972, 13). Similarly, there is a variation in orientation of tomb entrances. With its single chamber and south facing entrance, the site of Bargrennan itself provides the closest parallel for the Penwith entrance graves in terms of morphology and orientation (Henshall 1972, 610; Cummings & Fowler 2007). This site has provided evidence for cremation deposits in a pit within the chamber along with charcoal and fragments of what has proven to be Early Bronze Age pottery (Piggott & Powell 1949). Recent excavations at Bargrennan identified further deposits of cremated bone in Early Bronze Age urns outside the entrance to tomb. Cremated bone was also recovered from Cairnderry (Cummings & Fowler 2007, 17–23, 43–6); although inhumations have been documented at other sites (Henshall 1972, 12). Radiocarbon determinations from Bargrennan and Cairnderry indicate that tombs of this type were the focus for activity during the first centuries of the 2nd millennium cal BC, *c.* 2100–1700 cal BC (Cummings & Fowler 2007, 53). These dates are broadly comparable with the suggested date range for Cornish entrance graves, however, as at Bosiliack, none of the

dates was obtained from primary contexts and the sites could be older.

The Clava group is found on the eastern side of Scotland (Henshall 1963, 13). These tombs share a number of similarities with entrance graves, in that they are small tombs with large kerbs, which are sometimes adorned with cup-marks (Bradley 2000, 45). Cremation deposits and inhumation burials have also been recovered from the chambers of excavated sites and it appears that some passages may have been blocked with infilling deposits (Henshall 1963, 29–30; Bradley 2000, 87–9). It is also the case that, unlike the Bargrennan tombs, they are generally low-lying, being sited on or close to fertile ground (Henshall 1963, 20). Radiocarbon dating of the tombs at the Balnuaran of Clava also suggest that they were in use *c.* 2150–1700 cal BC, which is likely to be contemporary with at least some of the Penwith entrance graves. However, there are also notable differences, Clava tombs tend to be found in clusters and are associated with ring-cairns, and many are oriented towards the south-south-west and the midwinter sunset (Bradley 2002, 110). Furthermore, most Clava tomb passages end in a circular chamber, although undifferentiated chambers are occasionally found as at Croftcroy (Henshall 1963, 370).

The final group of Bronze Age megaliths are found on the Isles of Scilly, which lie about 45 km to the south-west of Cornwall. With around 80 entrance graves (Robinson 2007a, 122), there are a far greater number of sites than are found in West Penwith. Morphologically Scillonian entrance graves are clearly related to those in Penwith and demonstrate maritime links with the mainland. However, they include a wide variety of sizes, ranging from large constructions, such as Bant's Carn (Ashbee 1974, chap. 4), down to much smaller, almost cist like, structures such as Knackyboy (O'Neil 1952), which may in fact be better viewed as being related to more typical Bronze Age cairns that are found in Penwith (G. Robinson, pers. comm.). Unlike Penwith, there is a great deal of variety in the orientation of entrances, with most facing inland and away from the sea, rather than to the south-east. The siting of the Scillonian group is also different, as tombs may have been situated in relation to the sea, beside significant granite outcrops or on higher ground (Robinson 2007b), while those in Penwith were not. Furthermore, in contrast to Penwith, some Scillonian entrance graves are, as at Porth Hellick, found in clusters or cemeteries.

Finally, although most Scillonian entrance graves have not been properly excavated, the recorded artefactual assemblages have both similarities and contrasts with those from Penwith. As on the mainland, Scillonian tombs were often filled with earth and ashes and, where burials have been recovered, they have been found to be cremation deposits (Ashbee 1974, 101–19). However, although plain vessels such as those from Salakee Down (Grimes 1960) have been recovered, many Scillonian entrance graves have been found to contain highly decorated Biconical ceramic vessels, such as those from Bant's Carn (Ashbee 1976), whereas the Trevisker ware vessels, which are found in Penwith, are absent. The available evidence therefore suggests that, although the Scillonian entrance graves were closely related to those in Penwith, their usage was embedded into insular island traditions. Indeed, given the large number of tombs, it is also possible that they had a longer currency than, and may in fact pre-date those on the mainland.

It is apparent that, in addition to similarities, there are significant regional differences between the tomb groups in terms of siting, architecture, and artefactual associations. For example, as we have seen in Cornwall, the artefactual repertoire is of a local character. Likewise, entrance graves on Scilly may have been sited in relation to the sea, beside granite outcrops, while those in Penwith were not. It is also conceivable that in some areas, such as the east of Ireland, Brittany, or west Wales, some communities may have elected to reuse or respect older Neolithic passage tombs rather than construct new monuments (Savory 1980, 153; O'Kelly *et al.* 1983; O'Sullivan 2005, 228–32). By contrast, in other areas the situation was different and communities chose to build monuments, which may have been inspired by contacts with areas such as Brittany where passage tombs were known.

It is apparent from this overview that small tombs were established in coastal areas in the late 3rd and 2nd millennium cal BC. It may be no coincidence that entrance graves probably appeared when other forms of exotica such as gold lunulae, Beakers, and copper alloy objects reflecting distant contacts were also appearing – especially in the coastal parts of the county (Jones & Quinnell 2006; Jones *et al.* in prep.). However, the spread of small tombs is unlikely to have been entirely related to economic gain and is also likely to have been associated with journeys

undertaken by certain community members (Cummings 2007). As Helms (1988, chap. 2) has argued, travel is often associated with the search for esoteric knowledge, and this may have led to proliferation of monument types between spatially separated communities.

### Summary

The available evidence shows Bosiliack was one of a number of small tombs located along the seaboard of the British Isles and Ireland, which were in use in the Bronze Age. However, there is little evidence for the model of diffusion that has been associated with tombs in the past (for example, Childe 1957, 325–9). During the late 3rd or 2nd millennium cal BC travellers around the Atlantic façade, in search of objects or of knowledge, may have encountered earlier megaliths and bought stories about them back home. Outward looking communities in the west of Cornwall may have wished to demonstrate their connection with the wider world by constructing architecture which spoke of these links. This adoption may also have occurred at the same time that some communities in Penwith were altering the way that they occupied their land and the new tombs may have suited a new world view. However, this architecture was also embedded in more localised understandings of the world, which had developed over the preceding millennia, and this is reflected in their contents.

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