

A lost radiocarbon date for Shetland

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In 1949, C S T Calder excavated the site of Stanydale on the W side of Mainland, the largest island in the Shetland group. He later described this site as a Neolithic temple on the basis of some very broad morphological similarities with the Maltese temple of Mnajdra (Calder 1950, 203–5). His subsequent identification and excavation of a dwelling 200 m SE of this structure and known by the same name suggested to him the architectural and thus the temporal connexions between house and ‘temple’ and also prompted a fresh perception of the prehistoric landscape of Shetland. His hypotheses were tested favourably by further excavations at Gruting School – perhaps less ambiguously called Scutta Voe – and at Ness of Gruting (*ibid*, 343–56).

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Four house-sites and their congruent field systems were noted in an area of abandoned croftland at Ness of Gruting. Two of these sites (NGR HU 277484 & 277845) were briefly examined with trial trenches; the latter has since been reclassified by the OS as a burnt mound. The interior of a third site (HU 281483) was totally excavated. The walls of the structure were cleared and have been left standing. The excavated house measured 17.4 m by 11.6 m. Its walls were up to 4.7 m thick and attained a maximum height of 0.9 m. Within the core of the walling an enormous quantity of peat ash was found, sometimes supplemented by stones and brown soil, containing numerous sherds which were tentatively explained as the residue of a potter's workshop. Sealed under the deepest deposit of ash were 12.7 kg of pure carbonised grain, identified by Hans Helbaek as hulled and naked barley, which lay next to half a trough quern. The pottery was assigned by Henshall (1956, 381–91) to the western Neolithic tradition although Beaker influence was suggested by some of the ceramic motifs and by the full and miniature battle-axes (Roe 1966, 222) and a sponge-finger stone (Smith & Simpson 1966, 149–51).

Despite the affinities of the Ness of Gruting assemblage with artefacts from the mainland, the prehistory of Shetland still possessed only the most rudimentary chronologies. The only stratified find of metalwork and metallurgical debris was the product of the Irish smith at Jarlishof whose work was assigned to the Adabrock phase of the later Bronze Age (Hamilton 1956, 29; Coles 1960, 48). This provided the only certain terminus in the Shetland sequence. Persuasive arguments for the cultural retardation of the islands could be readily advanced (Henshall 1963a, 152) and were given obvious support by the evidence for lithic continuity. Identical stone implements and trough querns were found in contexts which were possibly a millennium apart. For example, the stone tools from Ness of Gruting match those from a site at Wiltrow associated with pottery which is said to have been splashed with iron from smelting operations (Curle 1936, 155 & fig 8), although the connection has been vigorously challenged (Calder 1956, 379).

In 1970, however, Professor Stuart Piggott submitted two samples of carbonised barley for radiocarbon determinations to the Laboratorium voor Algemene Natuurkunde at the Rijksuniversiteit in Groningen. One sample was from the well-known site of Itford Hill in Sussex and yielded a date (GrN - 6167) of 1000 ± 35 bc (Holden 1972, 89). The other sample was registered as GrN - 6168 and gave a result of 1760 ± 55 bc. In the same year, Professor Piggott delivered one of a series of four lectures in honour of Professor Eric Birley; this was later published (Piggott 1974). In the paper, reference was made (*ibid*, 3) to field systems, barley cultivation and the use of ards in Shetland in the 18th century BC. In a footnote (*ibid*, 10), the source of this date was described as burnt grain from Stanydale. Yet Calder's reports make no mention of burnt grain having been found at either site of that name (*pace* Megaw & Simpson 1979, 136).

The implications of a radiocarbon date for either Stanydale site were exciting. Since both sites were presumed to be related by reason of their proximity and the similarity of their construction and their assemblages, a date for one would indicate a comparable date for the other. At the same time, a distinct horizon for the larger Stanydale site would help to furnish chronological links with both the heel-shaped tombs of Shetland and the numerous house-sites (including Ness of Gruting) reported by Calder. Moreover, a site which has never comfortably accommodated an ordinary domestic role (Henshall 1963a, 153; Thom & Merritt 1978, 57) could be firmly correlated, within the limitations of a single date, with sites of a similar (though more insubstantial) nature further S. A further correlation – of radiocarbon date and Beaker sherds (from Stanydale: Clarke 1970, 521) – would rebuff those who believed in the backwardness of the islands during the 2nd millennium BC.

Neither of the Groningen assays has yet (Jan 1980) been published in *Radiocarbon*; however,

a second Shetland radiocarbon date was published in that journal in 1971 (Barker, Burleigh & Meeks 1971, 177): this was the product of a radiocarbon assay on burnt grain from Ness of Gruting. The sample had been submitted by R B K Stevenson nearly 20 years after its collection from its place of storage in the National Museum of Antiquities. The resultant date was 1564 ± 120 bc (BM-441).

It is unfortunate that Dr W G Mook, the Director of the Groningen laboratory, was unable to find any information on the Stanydale sample, in response to a query from the writer. Professor Piggott helped to bridge this strange hiatus when he wrote (*in lit*, 17 2 79) that the second sample which had been submitted to Groningen (GrN - 6168) had *also* been from the grain cache at Ness of Gruting. At some point, it had been misattributed to the Stanydale sites, a mere 2 km away.

Thus, there are two radiocarbon dates for Ness of Gruting. The better known date (BM-441) had until recently only seldom been discussed (Henshall 1974, 162; Coles & Harding 1979, 251; Whittle 1979, 170). The discrepancy between the two dates is unremarkable; they are statistically indistinguishable (*vide* Ward & Wilson 1978, 20-1) and should be appraised in the light of the suggestion that a realistic standard deviation of at least 100 years should be applied to all routine radiocarbon measurements (Pilcher & Baillie 1978, 220-1). In addition, the error potential in radiocarbon dating of short-lived samples (in particular, carbonised grain) has recently been noted (Campbell, Baxter & Alcock 1979, 35). It is also worthwhile to stress again that the grain had been in storage for two decades.

The importance of the Ness of Gruting dates is that they place the assemblages from Calder's excavations unequivocally within a Beaker/earlier Bronze Age context. They compare well with the dates derived from an intermediate phase of occupation at a house-site at Sumburgh (Table 1), 1 km from Jarlshof (Department of the Environment 1975, 126). In addition, chronological depth has been given to the prehistory of Shetland by the first of a series of radiocarbon dates from the settlement of Scord of Brouster (Calder 1956, 370-1; Whittle 1979, 169). Some detail can be added to the outline of the later Bronze Age in Shetland with the aid of an hypothesis that some of the Shetland burnt mounds should have dates comparable with those noted for such sites in Orkney (Hedges 1975, fig 23). The general similarity of the pottery from the sites excavated by Calder (and Curle) indicates a distinct chronological horizon, although A W R Whittle (*pers comm*) has suggested a likeness between the pottery from Ness of Gruting and Scord of Brouster; indeed, much of the pottery once thought to be extraneous to the main cultural sequence and proof of casual occupation (Stevenson 1960, 1) has been reassigned to the earlier tradition (Henshall 1963b, 68). Yet discussion of the material culture of prehistoric Shetland remains ill-informed. Tacitus records one cursory inspection of Shetland (*De vita Agricola*, 10, 4); there have been many others. The failures of perception which have been articulated for Orkney (Clarke 1976, 240-5) are distinctly pertinent to Shetland as well.

TABLE 1

Archaeological radiocarbon dates for Shetland (to 31 xii 79)

	Site	NGR	Radiocarbon date (years bc)	Reference
1	Hill of Shurton	HU-441403	$2850 \pm ?$ (UB-2122)	Whittle 1979, 170
2	Scord of Brouster	HU-257516	2220 ± 80 (HAR-2413)	Whittle 1979, 169
3	Ness of Gruting	HU-281483	1760 ± 55 (GrN-6168)	Piggott 1974, 10
4	Ness of Gruting	HU-281483	1564 ± 120 (BM-441)	Henshall 1974, 164
5	Sumburgh	HU-392107	1679 ± 53 (GU-1006)	Whittle 1979, 170
6	Sumburgh	HU-392107	1550 ± 153 (GU-1015)	Whittle 1979, 170

Date 1 is from charcoal beneath a field-dyke; dates 2-6 are from house-sites.

The few radiocarbon dates obtained from prehistoric houses are hardly sufficient for the establishment of a definitive chronology. In particular, some reliable dates are required for the funerary sites of Shetland. On a group of islands where more than 50% of the land surface is covered in peat (Robertson & Jowsey 1968, 13), a wider application of radiocarbon dating to palaeoecological problems would be of special value. It would, finally, be interesting to obtain a series of radiocarbon dates for the Stanydale sites. Three unexcavated house-sites and several cairns lie within 250 m of the 'temple' (Calder 1956, 371-2).

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