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NEOLITHIC Bottery from Isbister, South Ronaldsay

TITLE

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Samples for petrological examination were submitted from forty-six out of the forty-seven identified vessels like doing the catalogue. The remaining vessel (no.10) was represented too small a shord to allow an adequate sample to be taken. All the samples submitted were thin sectioned and studied under the polarizing microscope. This allowed a division into five groups based on the principal types of inclusions present in the pottery.

<u>Group 1</u> 1,2,3,4,5,6,7,8,9,12,14,16,17,18,19,20,21,22,23, 24,25,26,28,29,30,31,32,33,34,35,36,37,38,39,42.

The principal inclusions consist of irregular fragments of limestone, white crystals of calcite, commonly in the form of rhombs with sharp angles, and medium-grained sandstone. Also present are fairly frequent grains of quartz, and in some of the samples a scatter of siltstone grains.

Group 2 13,15,41.

This small group is fairly similar to the previous one, except that it appears to lack inclusions of sandstone.

Group 3 11,40,43,46,47.

Fragments of medium-sized sandstone are common, together

with a little siltstone and quartz grains.

Group 4 44,45.

These two samples are characterized by large inclusions of what appears to be fresh shell. Also present are a few small fragments of sandstone and some quartz grains.

Group 5 27.

The distinguishing feature of this shord is the presence of large grains of biotite mica scattered throughout the clay matrix. Also present are limestone, calcite, sandstone and quartz grains.

<u>Viscussion</u>

The majority of the pottery recovered from Isbister chambered temb is of the Unsum Ware type. Only two vessels seem to be outside this tradition, nos. 44 and 45 (thought to be Grooved Ware in the catalogue), and it may be significant that these samples contain shell, distinguishing them from the other shords. The majority of the Unstan Ware samples contain a permutation of limestone, calcite and sandstone, all of which can be obtained in the vicinity of Isbister (Mykura, 1976, 78), and supports the suggested stylistic homogeneity of the group (see Henshall, p.14). It is possible that the biotite present in no.27 was derived from the local Boulder Clay deposits, since the sherd also centains the same range of inclusions as the other samples.

Petrological analysis of Unstan Ware pottery from five Orcadian chambered tombs, Blackhammer, Rowiegar, Taiverso Tuick and Unstan (Phemister, 1942), and now Isbister, has not suggested other than a local source for the pottery in each case. The type of inclusions present have all been within the range of raw materials local to the find-sites. This situation contrasts with the results of the only petrological analysis to be made on Grooved Ware pottery from a chambered tomb, that of Quanterness on Mainland (Williams, forthcoming a). A detailed examination of the pottery from Quanterness suggests that a number of Grooved Ware vessels show every likelihood of being made some distance from the tomb. This also appears to be true for Grooved Vare pottery from the settlement site of Skara Brae, where the writer has found some vessels which contain inclusions likely to be non-local. At the Unstan Ware site of Knap of Howar, however, it seems that the pottery was made exclusively from local materials (Villiams, forthcoming b).

The results so far achieved from petrological analysis of Neolithic pottery from the Orkneys would appear to indicate a movement of Grooved Vare pottery not at present recognized for Unstan Vare. Obviously more work needs to be carried out on both types of ware and local clay deposits before firm conclusions can be reached. It is worth pointing out for instance that in the case of Isbister, Rousay Flags and Boulder Clay deposits cover much of the southern half of South Ronaldsay, and so it is possible that pottery made in one part of the Island may appear petrologically

similar to that made from the same common materials some distance away in another part of the Island.

Mykura, V. (1976) Orkney and Shetland (Edinburgh, 1976).

Villiams, D.F. (forthcoming,a) 'Appendix D: Petrological analysis of pottery', in Renfrey, A.C.,

Investigations in Orkney (forthcoming).

Williams, D.F. (forthcoming,b) 'Petrological analysis of
Unstan Ware pottery from Knap of Howar',
in Ritchie, A., Excavations at Knap of

Howar. Orkney (forthcoming).

Phemister, J. (1942) 'Report on samples of Neolithic pottery from Scottish sites', <u>PSAS</u>, 76 (1942),131-132.