

TYPE X: DESCRIPTION AND DISCUSSION OF A PREHISTORIC
CERAMIC WARE FROM NORTHEASTERN PAPUA NEW GUINEA

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This paper considers a distinctive but previously undescribed prehistoric ceramic ware found in the Vitiaz Strait-west New Britain region in northeastern Papua New Guinea (Figure 1). The ware is labelled Type X because, despite the work outlined below, it is still an "unknown quantity"; its origins, precise period and place of manufacture and relationships with other Melanesian potteries, as well as the cause(s) of its demise, have yet to be ascertained.

DISTRIBUTION AND SYNONYMY

Type X was first recorded by Neuhauss around Finschhafen in 1911 (Neuhauss 1911:148, Plate 64). Most of the sites now known to contain the ware occur between Finschhafen and Sio on the north coast of the Huon Peninsula (Figure 1) (Specht 1973 and pers. comm.; Groube pers. comm; pers. obs.). Limited quantities have been recovered from shallow, disturbed sites on the Tami Islands off Finschhafen (Abramson 1969:88, Plate IB i), one sherd was found on Arop (Long) Island (Egloff and Specht 1982) and a small amount has been discovered in sites in the Arawe Islands off southwest New Britain (Specht, Gosden pers. comm.). I recovered nearly 1,300 Type X sherds from excavations at the KLK and KLJ sites on Tuam and Malai in the Siassi Islands and the KBQ site at Sio during the course of archaeological research in the Vitiaz Strait region in 1983-84 (Figure 1) (Lilley 1986, 1987, 1988). In 1988, I found a handful of sherds in severely disturbed contexts on Poi Island, some 35 km west of the Willaumez Peninsula in northwest New Britain.

Type X has previously been called "heavy sand-free ware" (Specht 1973), "[Tami] Type IID" (Abramson 1969:88) and "[Arop] Style Group III" (Egloff and Specht 1982:439).

None of the other scholars who have found Type X have described it in any detail. The following outlines the characteristics of the material from the KLK, KLJ and KBQ sites I excavated in 1983-84, supplemented when possible with information from other sites.

RIM FORMS

Seventy-five Type X rims were recovered from the three sites. Four were too broken to classify. The

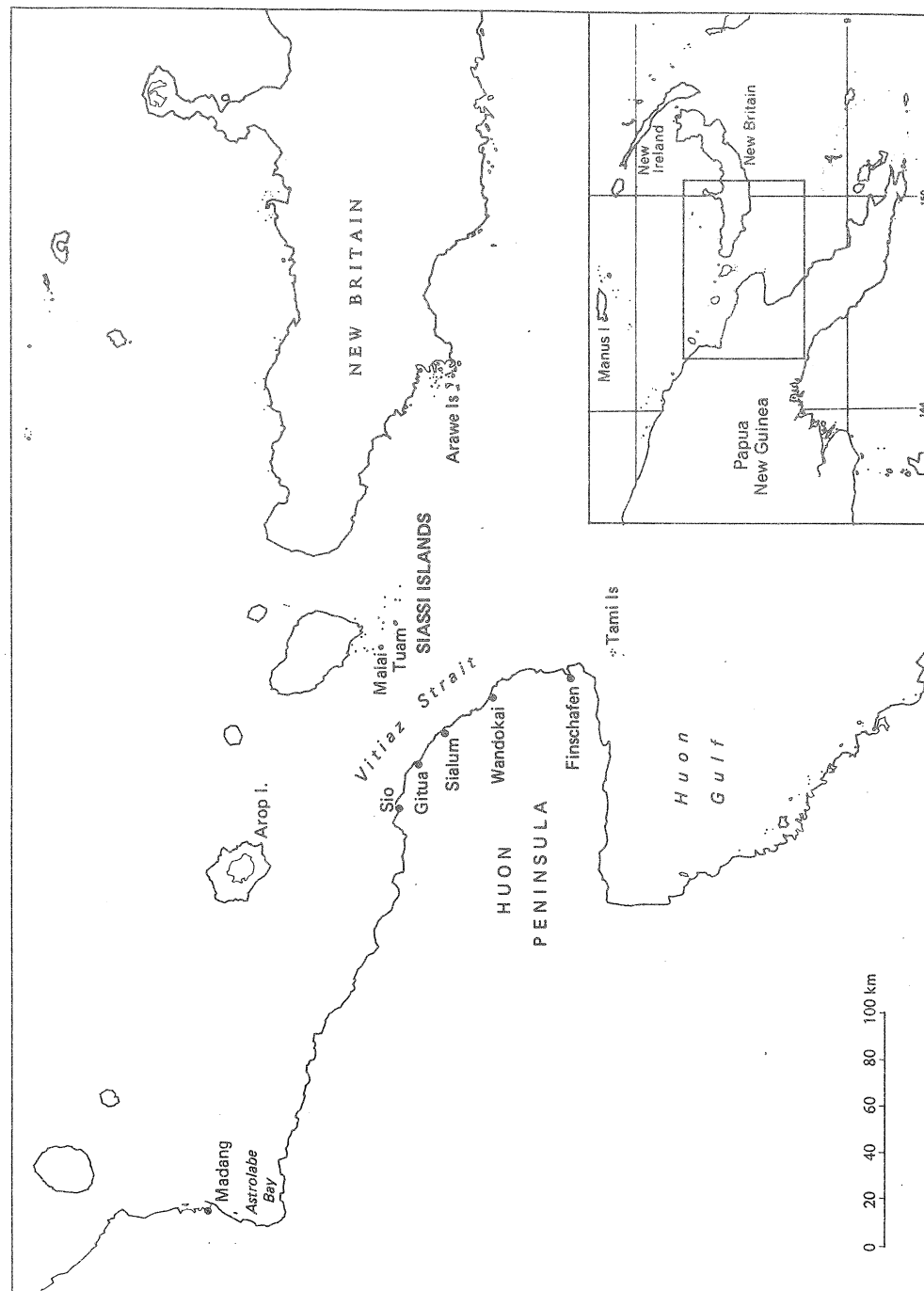


Figure 1. The study area showing places mentioned in the text.

remainder were split into two classes (Figure 2). Class 1 includes about 60% of classifiable rims and consists of sherds which vary considerably in size and possible orientation but always exhibit "T"-shaped lips. Class 2 covers all rims which are not "T"-shaped and encompasses a limited variety of typically near parallel-sided, flat-lipped forms. Finds on the Huon Peninsula indicate that Class 2 rims were everted.

DECORATION

All Type X sherds have a hard and usually shiny and greasy-feeling red-brown finish on both interior and exterior surfaces. This finish is somewhat similar to a very thick slip and is the most distinctive feature of the ware. When it deteriorates the finish can become crazed or dull but does not seem to disappear entirely as a slip can do. Kennedy (pers. comm.) recently suggested that the finish may result from polishing or burnishing with a (?resinous) vegetable product, a possibility which will be investigated in the future.

Additional forms of surface treatment are exhibited by only about 10% of the 1,202 body sherds recovered from the three sites. Such decoration invariably consists of simple, sometimes cross-hatched, linear incision (Figure 3). Similarly, only about 13% of all classifiable rims exhibit surface (i.e. other than lip) decoration, again exclusively linear incision (Figure 2, bottom row left). Such decorated rims comprise 2% of Class 1 and 28% of Class 2 forms. About 30% of Class 1 rims and 24% of Class 2 rims exhibit lip decoration. On Class 1 rims this consists of notching on the exterior edge and, on Class 2 rims, notching on the top of the lip (Figure 2).

VESSEL FORMS

There is almost no positive evidence for Type X vessel forms. Only one Class 1 rim is large enough to indicate possible shape and orifice diameter. It suggests a slightly restricted round-bodied pot with an orifice diameter of about 16 cm (reconstructed in Figure 4). There are also two carinated sherds, which indicate that some Type X pots had distinct shoulders. Finds on the Huon Peninsula suggest that pots with Class 2 rims had globular bodies and restricted necks of perhaps 15 cm diameter.

MANUFACTURE

There is no positive evidence for the method(s) of manufacture. X-radiographs of the large Class 1 rim and the larger of the two carinated sherds mentioned above did

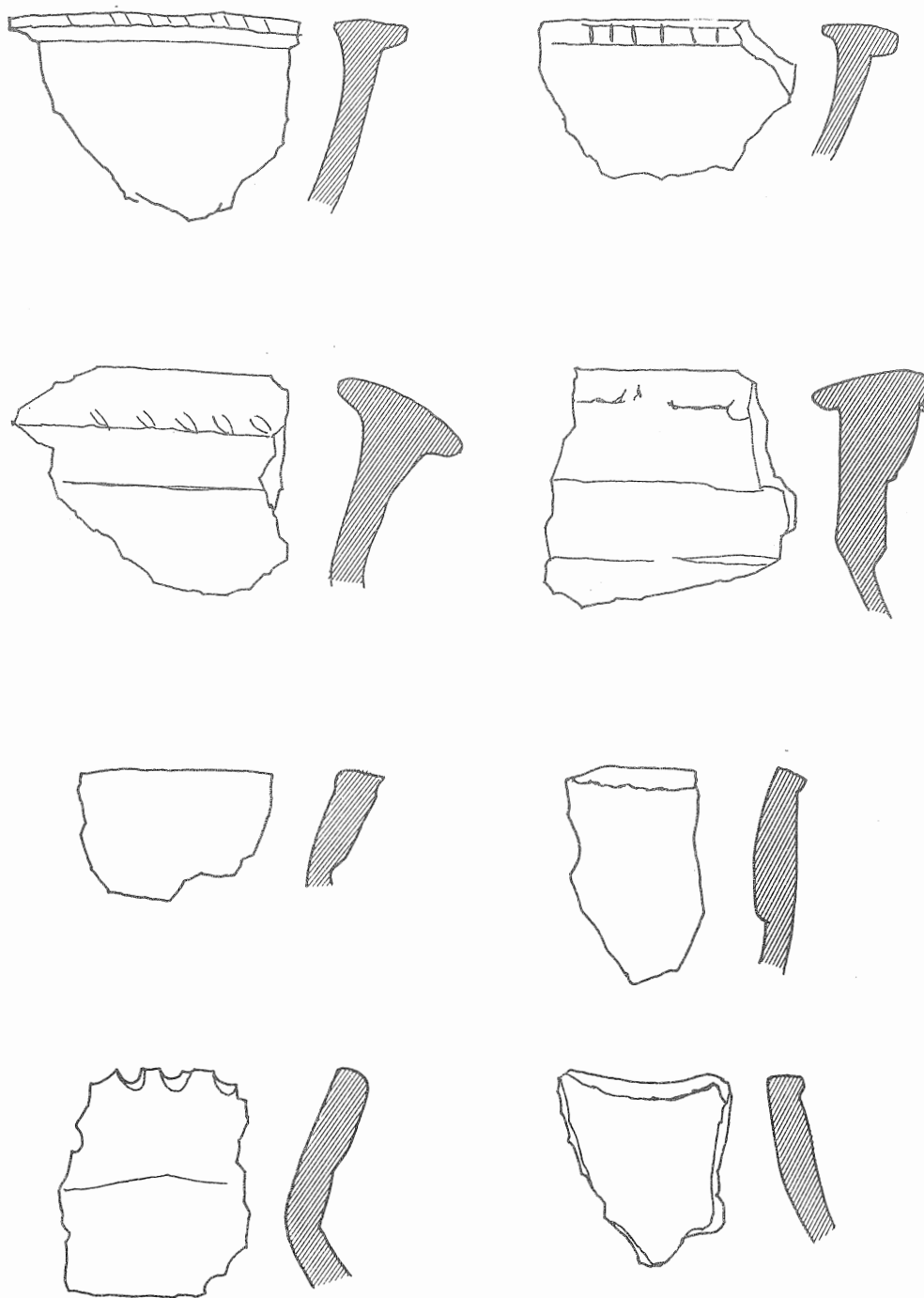


Figure 2. Profiles of Type X rims, exterior of vessel to right.

not reveal any of the characteristics of paddle-and-anvil or coiling documented by Rye (1977, 1981) for Papuan pottery. On the other hand, it is noteworthy that the paste is characteristically laminated in the same manner as the Yapese "Laminated Ware" described by the Giffords (1959:179-185, 215 Plate 32a). While a historical connection between the two wares seems very unlikely, it is possible that Type X was manufactured without using coiling or paddle and anvil techniques, in a similar way to the Yapese pottery (Gifford and Gifford 1959:180-181).

PETROLOGY

The thin-section petrology of 17 Type X sherds was examined as part of a larger preliminary study of the petrology of pottery from the three excavated sites. The work was done in two parts. The first attempted to determine whether paste could be correlated with stylistic characteristics. The second tried to ascertain whether the pastes of various wares could be matched with clays and potter's mixes from nine traditional pottery-making centres on the north coast of New Guinea, or with clay from Tuam Island, where there is no tradition of, or archaeological evidence for, pottery manufacture.

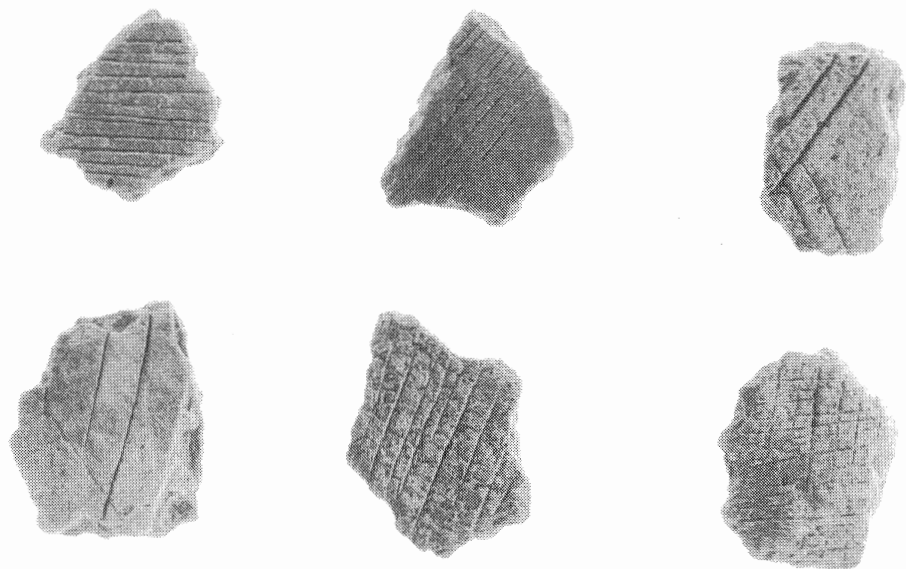


Figure 3. Type X decorated body sherds.

The first part of the study classed 14 (82%) of the Type X sherds in the same paste group. None of the three remaining pieces is decorated and none has any other features which distinguish it stylistically from the other Type X material examined. The second part of the study, sourcing, found that 15 (88%) of Type X sherds could be matched with a single clay source and were the only sherds to correspond with that source. Neither of the other two sherds can be stylistically differentiated from the other Type X material in the sample. Nor are they among those which stood out in the first part of the study. This minor discrepancy between the two sets of results is taken to indicate that there are slight variations in the generally very homogeneous composition of Type X paste.

The clay with which Type X was matched is that from Tuam Island, because non-plastic inclusions are virtually absent from both. As most of the Type X-bearing sites found to date are along the north coast of the Huon Peninsula, while there is no archaeological or historical evidence for potting on Tuam, the results of the sourcing work prompted a more detailed assessment of the posited correspondence between Tuam clay and Type X paste. Three Type X sherds and a sample of Tuam clay were submitted to the Australian Mineral Development Laboratories (AMDEL) for characterization by emission spectroscopy. The pottery sample included one sherd from Tuam, one from Sio and one from UPNG excavations in the KIC rockshelter near Wandokai at the eastern end of the Huon Peninsula (Figure 1) (Groube pers. comm.).

The results of the emission scans appear to support the correspondence between Tuam and Type X clays, insofar as the similarities among the samples are sufficient to indicate some consistency as to origin (Lilley 1986:235-237, 533-534). Given the archaeological evidence (or lack of it on Tuam), the problems created by this agreement should be obvious. However, in informal discussion of the problem, Chappell (pers. comm.) raised another possibility. He pointed out that all the Huon coast clays used in the sourcing study are from Holocene deposits and are quite different from the Tuam clay, but that the latter is probably of the same origin as late Pleistocene clays at the eastern end of the Peninsula between Sialum and Wandokai (Figure 1). A preliminary comparison of my emission scans and the results of a previous AMDEL analysis of soil from a Rhodudalf soil profile on a Pleistocene landform at Sialum (Bleeker 1983:298-299) supports Chappell's suggestion.

Locating the Type X industry towards the eastern end of the Huon Peninsula would make sense of the positive and negative archaeological evidence mentioned above and on

this basis I hypothesize that Type X was made there rather than in the Siassi Islands. In the near future, emission scans of Pleistocene Huon Peninsula clays and additional samples of Tuam clay and Type X sherds will be obtained in order to test this proposition.

DATING

Prior to my work in the Vitiaz region, the only date for Type X was a radiocarbon determination of ca. 350 BP obtained from the base of the highly disturbed KBQ site on Sio Island (just offshore from KBQ), where the ware was spread throughout the cultural deposits (Specht pers. comm.). In the KKK, KKK and KBQ sites it occurs throughout deposits radiocarbon dated from 1600 BP to modern (i.e. <200 BP) (Lilley 1987:56-73). In the KID site, a sea cave in uplifted limestone on the Huon Peninsula, Type X has recently been found in strata immediately above basal non-cultural gravels and sealed by a volcanic ash layer (Groube pers. comm.). The cave is now about 7 m asl, but the gravels were deposited when the cave was at sea level, which, on the basis of Chappell's work (1973), was around 2300 BP. If it is assumed that no cultural remains were deposited in the cave until it was about 2 m asl, Chappell's uplift rates suggest that the Type X was laid down about 1650 BP. Groube thinks the ash above the Type X may be Olgaboli tephra derived from an eruption on Arop (Long) Island dated to 1100-1200 BP (Blong 1982:10).

While the foregoing strongly suggests that production of the ware commenced around 1600 years ago, its presence in modern deposits is of some concern, primarily because there is no documentary or oral historical record of its manufacture.

The lack of historical evidence indicates that production of Type X ceased at least 100-150 years ago and that its presence in more recent deposits results from redeposition (for discussion of processes probably implicated see Lilley 1986:139-140; also Lilley 1987:65-66). Detailed comparison of vertical variations in the distribution of the ware in the three excavated sites allows me to go further and hypothesize that the date of the demise of the Type X industry can be pushed back to 550-850 BP (Lilley 1986:247-343, esp. 338-339).

DISCUSSION AND CONCLUSION

The foregoing has described the salient characteristics of Type X pottery excavated from three sites in the centre of the region in which it occurs. Two hypotheses concerning the ware have been offered. The

first is that Type X industry was made towards the eastern end of the Huon Peninsula and the second that its production ceased between 550 and 850 years ago.

Accounting for the disappearance of the Type X industry is not a simple matter because production of the ware appears to have ceased during a gap in the archeological record: none of my excavations revealed deposits dating between 550 and 850 BP. To explain my position on the matter, I should first outline ethnographic and what is known of archaeological patterns of pottery production and trade in the Vitiaz Strait region.

At the time of European settlement, three groups of coastal potting communities operated in or on the edges of the Vitiaz Strait Region (Figure 1): one centred on Astrolabe Bay (the Madang industry), one on the north coast of the Huon Peninsula (the Sio-Gitua industry) and one centred on the south coast of the Huon Gulf (Harding 1967). Three groups of specialist maritime traders transported these wares around the region. The operating areas of these traders overlapped to some extent, and each group moved quantities of at least two and possibly all three kinds of pottery, but Madang ware was usually transported by its makers, Sio-Gitua pottery was moved mainly by Siassi Islanders and Huon Gulf pottery was carried by Tami Islanders (although only rarely beyond the Huon Gulf).

On present evidence (Lilley 1986, 1988) the ethnographic system of pottery manufacture and trade is only about 300-350 years old and was preceded by three networks which differed considerably in configuration, content and intensity. The earliest of these, a Lapita system dated to between 2800 and 2200-2400 BP, is not of concern here as it is only remotely connected with later networks. The second of these systems is the earliest which can be considered as ancestral to the ethnographic network. It appeared between 1300 and 1600 BP and lasted until some time between 550 and 850 BP. During this period only small quantities of pottery were made and traded. Most of the little that was deposited in Siassi is Type X, while at Sio nearly all of it is ancestral Sio ware, but a few pieces of Sio ware were found on Tuam and some Type X and ancestral Madang pottery was recovered from Sio. From this and other evidence it has been inferred that both pottery manufacture and trade in pottery and other items were not well-developed, that Sio and Siassi were only weakly and possibly only indirectly linked, and that Siassi's closest mainland ties were with the makers of Type X.

As implied above, this phase of activity ended during the gap in the archaeological record mentioned earlier. On the basis of data from the phase of deposition immediately following the hiatus, which relate to the third of the systems alluded to at the start of this discussion, it is apparent that two major changes must have occurred during the gap in addition to the posited disappearance of the Type X industry. First, Sio pottery changed from a highly variable ware to a much more standardized one closely resembling ethnographic trade ware. Second, the rate of deposition at Sio of all classes of cultural material - especially local pottery and valuable or ornamental manufactures and consumables (e.g. pig) - increased dramatically. These changes are taken to imply that a new system of pottery manufacture and trade evolved during the archaeological gap and continued into the following phase of deposition.

I contend that the changes in the nature and rate of deposition of Sio pottery, which must have occurred during the hiatus, indicate that between 550 and 850 BP the Sio industry shifted from low-volume non-specialist production to more intensive semi-specialist manufacture (for detailed discussion see Lilley 1986:468-479; cf. Irwin 1985:240-241; Rice 1981).

I further hypothesize that the developments at Sio allowed its role in pottery manufacture and trade to expand to such an extent that it swamped and forced the collapse of the Type X industry. The reason that the makers of Type X were unable to compete may be rooted in the size and accessibility of their market. Taking the ethnographically recorded distribution of population as a guide (Harding 1967:114-115; Lilley 1986:51, Table 3), it seems that unlike Sio, the Type X industry probably would not have had much of a market inland or on the coast beyond Sialum in the west and Finschhafen in the east. Moreover, the fact that only small amounts of Type X have been found in Siassi and other places away from the mainland suggests that its makers had few overseas customers.

It is possible that the fortunes of the Type X industry are also connected with the development of specialized overseas trade amongst the Tami Islanders and shifts in systems of pottery production and trade centred on the Huon Gulf. Together with the testing of the various hypotheses offered above, this is a matter for further research.

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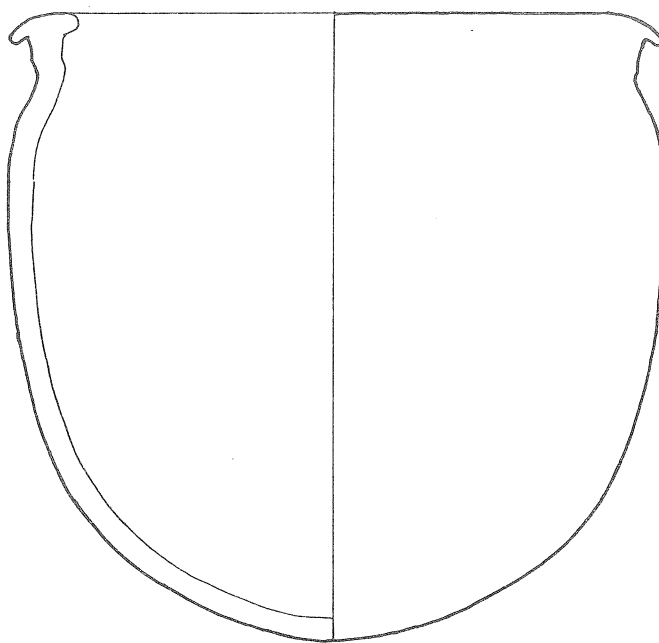


Figure 4. Type X vessel with Class 1 rim.