Earthenware in Southeast Asia

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Contents

Macassar Historical Decorated Earthenwares: Preliminary Chronology and Bajau Connections

David Bulbeck & Genevieve Clune

Introduction

Our chapter provides a first chronology of the motifs on decorated earthenwares from Macassar (or Makasar) and its environs, South Sulawesi, as recorded at historical sites spanning the present millennium. The earthenware sherds were collected by Bulbeck in 1986–87 during the South Sulawesi Prehistoric and Historical Archaeology Project (SSPHAP). This involved an intensive survey of *circa* thirteenth- to seventeenth-century burial sites, and the recording of any spatially associated habitation debris, within the area indicated in Map 7.1. The dating and interpretation of most of these sites are supplied by Bulbeck (1992, 1996–97) who also dated the remainder, following the same methodology, for the purposes of Clune's study. Including slipped, burnished and painted monochrome sherds, Clune (1996) recorded 455 decorated earthenware sherds in SSPHAP's surface collections, and focused on the 309 sherds which present a total of 34 incised, impressed, stamped, combed, moulded, modelled, or applique elements.

Clune's elements can be dated by association, under the assumption that most of the decorated sherds would be contemporary with the other surface materials from the same site or sub-site (see Methodology). This assumption converts the frequencies of the various elements into double lenticular distributions or "battleship curves" through time, as would be expected of correctly seriated archaeological traits (e.g. Marquardt 1978:299). However, the chronology we develop is tentative, and would require confirmation through the excavation of stratigraphically intact historical sites within the general area of Macassar, and study of the decorated earthenwares.

The term "Macassar" is the usual European spelling for the state which arose in the south of the South Sulawesi peninsula, an area inhabited by speakers of Makasar languages (Grimes and Grimes 1987). The first historical reference to Macassar is its listing among the "vassals" of the classical Javanese empire of Majapahit in the fourteenth-century poem *Nagarakertagama* (Robson 1995). But this Macassar, Pelras (1981:154) and Reid (1983) argue, did not spatially coincide with the city of Macassar which emerged as a sixteenth century emporium. Instead, according to Reid, the name Macassar was originally applied to the South Sulawesi islands, probably the coral atolls directly northwest of Ujung Pandang, where the local Bajau sea gypsies had based themselves. Bulbeck, on the other hand, sees no reason to believe that the Macassar place name had been moved. First, by at least the thirteenth century, large quantities of high-fired Asian tradewares were already being imported through the selfsame port as sixteenth-century Macassar (Bulbeck 1992:398). Second, while Reid appears correct in his nomination of the Bajau as the people who largely opened up Macassar to long-distance trade, their operating base appears to have been the mouths of all the four main rivers between Ujung Pandang and Sanrabone (Bulbeck 1996–97:1033–1034), rather than South Sulawesi's offshore islands.

Traders from the north Java ports would also seem to have been heavily involved, by at least the fifteenth century (Bulbeck 1992:381, 436 [cf. p. 138]). Then, in the early sixteenth century, Macassar received its first Portuguese traders, and witnessed the first establishment of a local Malay community,

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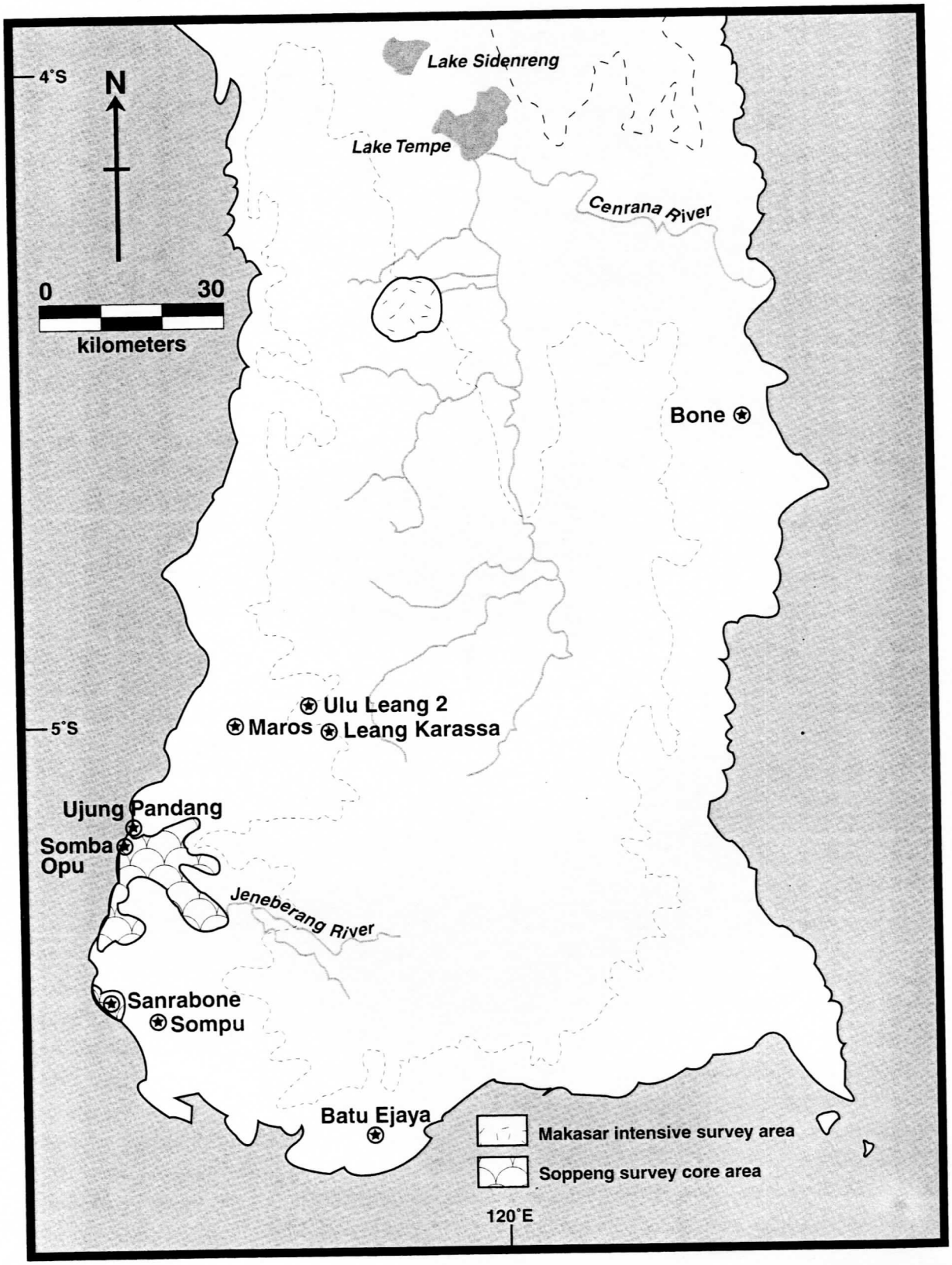
SSPHAP was sponsored by the Indonesian Research Center for Archaeology at the national level, and by Suaka Peninggalan Sejarah dan Purbakala Sulawesi Selatan at the provincial level. Campbell Macknight and Peter Bellwood supervised Bulbeck's PhD research and have maintained a keen interest in its aftermath. The Macassar earthenware sherds are now the property of Balai Arkeologi Ujung Pandang, having either been deposited in Ujung Pandang at the end of Bulbeck's field work in 1987, or shipped there in early 1998.



Map 7.1 Earthenware sites of South Sulawesi.

according to the chronicle of Gowa, the Makasar kingdom which was primarily responsible for superintending Macassar's trade (Wolhoff and Abdurrahim n.d.). At that stage the local inhabitants inhumed their dead in an extended position, accompanied by pots and other grave goods, apparently as the direct result of Bajau influence. Vestiges of this practice continued throughout the seventeenth century, even after Macassar's official conversion to Islam in 1605 (Bulbeck 1996–97). During the seventeenth century the population rose to 100,000 inhabitants, at a conservative estimate, as Macassar became the centre of a network which traded cloves and nutmeg from eastern Indonesia in defiance of the attempt by the Dutch East India Company to impose its monopoly on these spices (Reid 1987; Bulbeck 1992, 1994).

In 1667 the Dutch East India Company occupied the city and took over the trade in spices and other precious commodities (Andaya 1981). The associated disturbances appear to have stimulated the growth of extensive trading networks in eastern Indonesia made up of Makasars and their Bugis neighbours (Leirissa 1993). One of their major activities was the systematic harvesting and processing of trepang, or sea cucumbers, in northern Australia after *circa* 1700 (Macknight 1981). Following the struggles associated with the Second World War and Indonesia's independence, Macassar was renamed Ujung Pandang, and is today a modern city with nearly a million residents. The research goal of SSPHAP was to combine textual analysis and archaeological site survey in dating, describing and explaining the development of Macassar, and Gowa, up to 1667 (Bulbeck 1992; Macknight 1993a), although archaeological evidence relating to later historical developments was also frequently recorded.

Decorated earthenwares have become part of the archaeological assemblages recorded by SSPHAP in a variety of ways (see Appendix 7.1 for details). Between approximately the eleventh and fourteenth centuries, the deceased were apparently cremated and their remains were interred in earthenware or stoneware jars (Bulbeck 1996–97), along with grave goods which could have included decorated earthenwares. After inhumation became the standard practice, earthenware pots were among the grave goods placed around the corpse (e.g. Bulbeck 1992:285). Virtually all of the pre-Islamic cemeteries recorded by SSPHAP were identified through evidence of clandestine looting, including the surficial aggregate of broken ceramics left by the looters' coarse digging techniques. Additionally, many of these pre-Islamic cemeteries remained in use during Islamic times, and it is common to find the graves of revered ancestors endowed with votive earthenware pots, either as offerings, or as receptacles for burning incense and other substances. Finally, owing to high population densities, the villagers have long been living next to and above their ancestors' graves, so most of SSPHAP's sites include areas of habitation debris that abut or trespass the identifiable burial grounds. As SSPHAP's decorated earthenware sherds are all from surface collections, their precise systemic context can rarely be certified, so consideration of the utilitarian or ceremonial role of the various decorative elements lies beyond the scope of our chapter.

Methodology

To date the sites, Bulbeck (1992:Appendix B) focused on the 42,980 high-fired ceramic pieces recorded during SSPHAP's Macassar survey, and a shorter survey in Soppeng to the north (Kallupa *et al.* 1989). By assuming that high-fired ceramics of the same age would tend to occur together in the surveyed zones, Bulbeck was able to seriate his 30 recognized classes, producing a chronological order which corresponded well with that expected from the specialist literature on these tradewares. By further adopting the absolute date ranges of these classes from the literature, Bulbeck estimated the number of pieces pertaining to each half-century at each site. Finally, to compensate for the fact that very different quantities of ceramics were imported into Macassar over the ages, the raw frequencies were expressed as a percentage of the total pieces per half-century from all the Macassar sites. (These steps involved essentially the same arithmetic procedures as used in this article, Tables 7.1 and 7.2.) The bulges in these standardized frequencies were interpreted to represent major periods of site use, as confirmed by the available references

Table 7.1 Estimated frequencies of Macassar earthenware decorative elements by century (c).

VESSEL FORM	11th c.	12th c.	13th c.	14th c.	15th c.	16th c.	17th c.	18th c.	19th c.	20th c.	Total
Long-lived elements											
No. 5	0.58	1.25	4.00	5.67	14.92	15.42	10.34	3.17	1.67	1.00	58
No. 6	1.59	1.59	1.84	1.84	7.58	7.58	6.00	3.00	0.50	0.50	31
No. 9	0.67	0.67	1.50	1.16	5.08	4.75	1.92	1.25	-	-	17
No. 13	-	-	1.58	1.95	6.25	5.92	4.67	3.33	2.33	1.00	27
Protohistoric											
No. 8	0.58	0.92	1.92	1.92	0.83	0.83	-	-	-	-	7
No. 7	-	0.33	0.33	0.83	0.50	-	-	-	-	-	2
No. 12	0.25	0.25	0.50	0.50	0.25	0.25	-	-	-	-	2
No. 22	0.33	0.33	0.59	0.75	0.75	0.25	-	-	-	-	3
No. 21	0.33	0.33	0.33	-	0.50	0.50	-	-	-	-	2
No. 31	0.25	0.25	0.25	0.25	-	-	-	-	-	-	1
No. 34	0.25	0.25	0.25	0.25	-	-	-	-	-	-	1
Protohistoric/Imperial											
No. 11a	0.25	0.25	0.75	0.75	1.08	1.58	1.08	0.25	-	-	6
No. 32	-	-	0.25	0.25	0.75	0.75	-	-	-	-	2
No. 3	-	-	1.00	1.00	0.67	0.67	0.67	-	-	-	4
No. 2	-	-	0.83	0.83	3.50	3.17	1.67	-	-	-	10
Imperial											
No. 1	-	-	0.25	0.58	12.91	12.91	8.58	1.25	0.25	0.25	37
No. 30	-	-	-	-	0.50	0.50	-	-	-	-	1
No. 33	-	-	-	-	0.33	0.33	0.33	-	-	-	1
Imperial/Islamic/ Colonial											
No. 15	-	-	0.33	0.33	1.08	0.75	1.75	2.42	2.17	3.17	12
No. 4	-	-	-	-	0.75	0.75	0.80	0.83	0.59	0.59	4
No. 16	-	-	-	-	0.34	0.34	1.58	1.58	1.58	1.58	7
No. 11b	-	-	-	-	0.25	0.25	0.75	0.75	0.50	0.50	3
Islamic/Colonial											
No. 17	-	-	-	-	-	-	0.50	0.50	0.50	0.50	2
No. 18	-	-	-	-	-	-	0.58	0.58	0.58	0.25	2
No. 19	-	-	-	-	-	-	0.50	0.50	0.50	0.50	2
No. 29	-	-	-	-	-	-	0.33	0.33	0.33	-	1
Painted	-	-	-	-	-	-	1.00	1.33	0.83	0.83	4
Centipede	-	-	-	-	-	-	-	-	-	1.00	1
Script	-	-	-	-	-	-	-	-	-	1.00	1
Total	5.08	6.42	16.50	17.86	58.82	57.50	42.75	21.07	12.33	12.67	251

to site occupancy and abandonment, and the small number of radiocarbon dates from associated organic remains (Bulbeck 1992).

Bulbeck advised Clune (1996: Appendix A) of the datings to give to her assemblages of decorated potsherds. Some datings need revision, after closer scrutiny, and so Appendix 7.1 to this chapter briefly explains the datings used here. The present analysis then continues by assuming that each of Clune's decorative elements (Fig. 7.1) has an even chance of dating to each century during which the associated site (or sub-site) was most intensively used, according to Bulbeck's chronological analysis. For instance, if a sherd with element 5 was recorded in a predominantly fourteenth- to seventeenth-century site, the analysis assigns a 0.25 chance to the element's having a fourteenth-, a fifteenth-, a sixteenth-, and a seventeenth-century date. If the same sherd has other elements too, they are also assigned a 0.25 chance per century, as just described. These cases have the additional advantage that we know that any two or more elements found on the same sherd must overlap in age.

However, sites whose main period of use spanned five or more centuries are excluded from the present analysis. This step involves sacrificing SSPHAP's richest assemblages of decorated earthenwares but, of course, sites which have attracted intensive occupation over long periods of time are the poorest candidates for producing surface assemblages which are at all discrete chronologically. A small number

Table 7.2 Calibrated % frequencies of Macassar earthenware decorative elements by century (c).

VESSEL FORM	11th c.	12th c.	13th c.	14th c.	15th c.	16th c.	17th c.	18th c.	19th c.	20th c.
Long-lived elements										
No. 5	11.4	19.5	24.2	31.7	25.4	26.8	24.2	15.0	13.5	7.9
No. 6	31.3	24.8	11.2	4.7	12.9	13.2	14.0	14.2μ	4.1	3.9
No. 9	13.2	10.4	9.1	6.5	8.6	8.3	4.5	5.9μ	-	-
No. 13	-	-	†9.6	10.9	10.6	10.3	10.9	15.8	18.9	7.9
Protohistoric										
No. 8	11.4	14.3	11.6	10.8μ	1.4	1.4	-	-	-	-
No. 7	-	†5.1	2.0	4.6μ	0.9	-	-	-	-	-
No. 12	4.9	3.9	3.0	2.8μ	0.4	0.4	-	-	-	-
No. 22	6.5	5.1	3.6	4.2μ	1.3	0.4	-	-	-	-
No. 21	6.5	5.1	2.0	0.0	0.9μ	0.9	-	-	-	-
No. 31	4.9	3.9	1.5	1.4μ	-	-	-	-	-	-
No. 34	4.9	3.9	1.5	1.4μ	-	-	-	-	-	-
Protohistoric/Imperial										
No. 11a	4.9	3.9	4.5	4.2	1.8	2.7	2.5μ	1.2	-	-
No. 32	-	-	†1.5	1.4	1.3	1.3μ	-	-	-	-
No. 3	-	-	†6.1	5.6	1.1	1.1	1.6μ	-	-	-
No. 2	-	-	†5.0	4.6	6.0	5.5μ	3.9	-	-	-
Imperial										
No. 1	-	-	1.5	3.2	†21.9	22.5	20.1μ	5.9	2.0	2.0
No. 30	-	-	-	-	†0.9	0.9μ	-	-	-	-
No. 33	-	-	-	-	†0.6	0.6	0.8μ	-	-	-
Imperial/Islamic/ Colonial										
No. 15	-	-	2.0	1.8	†1.8	1.3	4.1	11.5	17.6	25.0
No. 4	-	-	-	-	1.3μ	1.3	1.2	3.9	4.8	4.7
No. 16	-	-	-	-	0.6	0.6μ	3.7	7.5	12.8	12.5
No. 11b	-	-	-	-	0.4	0.4μ	1.8	3.6	4.1	3.9
Islamic/Colonial										
No. 17	-	-	-	-	-	-	1.2	†2.4	4.1	3.9
No. 18	-	-	-	-	-	-	1.4	†2.8	4.7	2.0
No. 19	-	-	-	-	-	-	1.2	†2.4	4.1	3.9
No. 29	-	-	-	-	-	-	0.8	†1.6	2.7μ	-
Painted	-	-	-	-	-	-	2.3	†6.3	6.7	6.6
Centipede	-	-	-	-	-	-	-	-	-	†7.9
Script	-	-	-	-	-	-	-	-	-	†7.9
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Notes: † represents our estimate of the approximate onset of the regular use of the element in question. μ represents approximately when the element appears to have gone out of fashion.

of sherds from these sites, however, exhibit an element which is apparently quite tightly dated, which allows the sherd to be dated, so if one or more other elements are present on the same sherd, these examples can also be dated. (See Appendix 7.1 for details of these sherds.)

The individual estimates of the chance that any instance of an element belongs to a particular century are summed century by century for each element (Table 7.1; Fig. 7.2). This exercise produces a set of characteristic profiles, similar to the battleship diagrams so lovingly produced in archaeological seriations, with a central peak usually spanning two to three centuries, and a lead and a tail trailing off respectively into earlier and later times. Chances are that the peak should correspond to when an element was popular, but much of the preceding and succeeding trail could reflect background noise in how our methodology assigns dates. For instance, the Pao-Pao Islamic cemetery (Gowa 38) can be dated to between the seventeenth and twentieth centuries based on the site's historical associations, its high-fired ceramic sherdage, and its styles of Islamic grave markers (Bulbeck 1992). Among other elements, No. 1 is present on a single sherd, and Nos. 17 to 19 are both represented twice (Clune 1996). At other SSPHAP sites, element No. 1 is overwhelmingly recorded in contexts earlier than or leading into the seventeenth century.

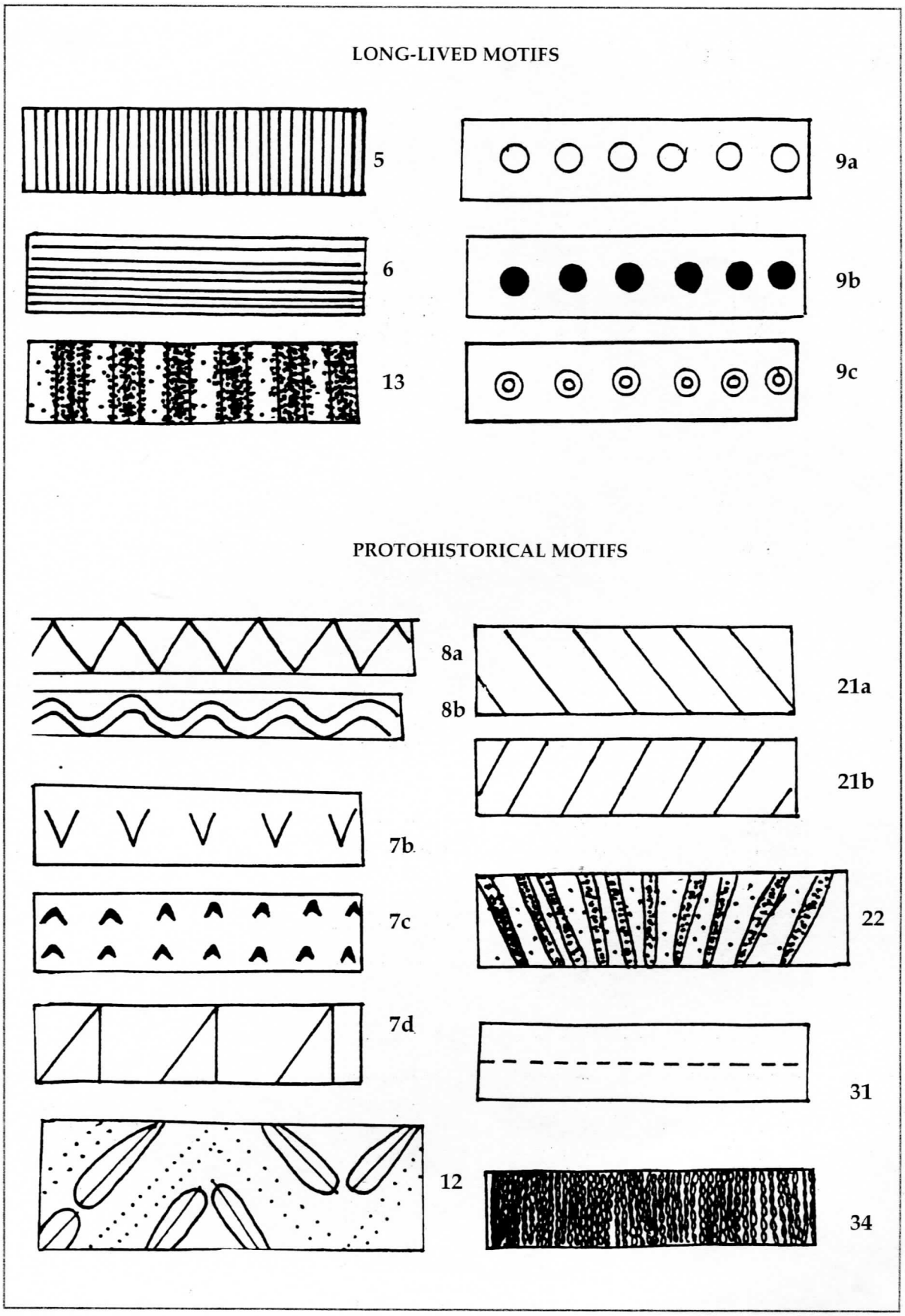


Fig. 7.1(i) Motifs displayed on Makasar historical decorated earthenwares. 5, 6, Long-lived motifs: 9a–c, 13. Protohistorical motifs: 7b–d, 8a–b, 12, 21a–b, 22, 31, 34.

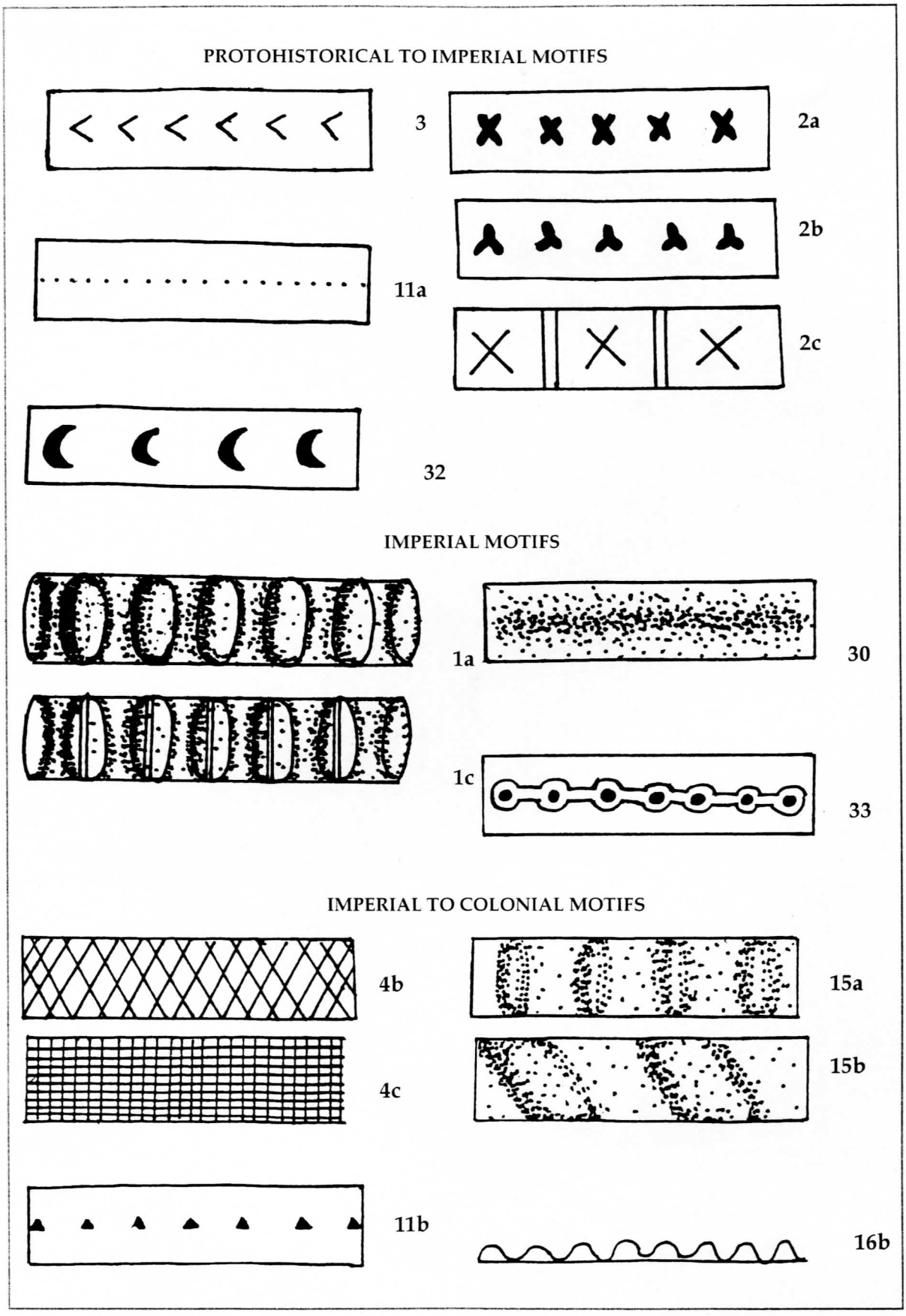


Fig. 7.1(ii) Protohistorical to Imperial motifs: 2a–c, 3, 11a, 32. Imperial motifs: 1a, 1c, 30, 33. Imperial to Colonial motifs: 4b, 4c, 11b, 15a–b, 16b.

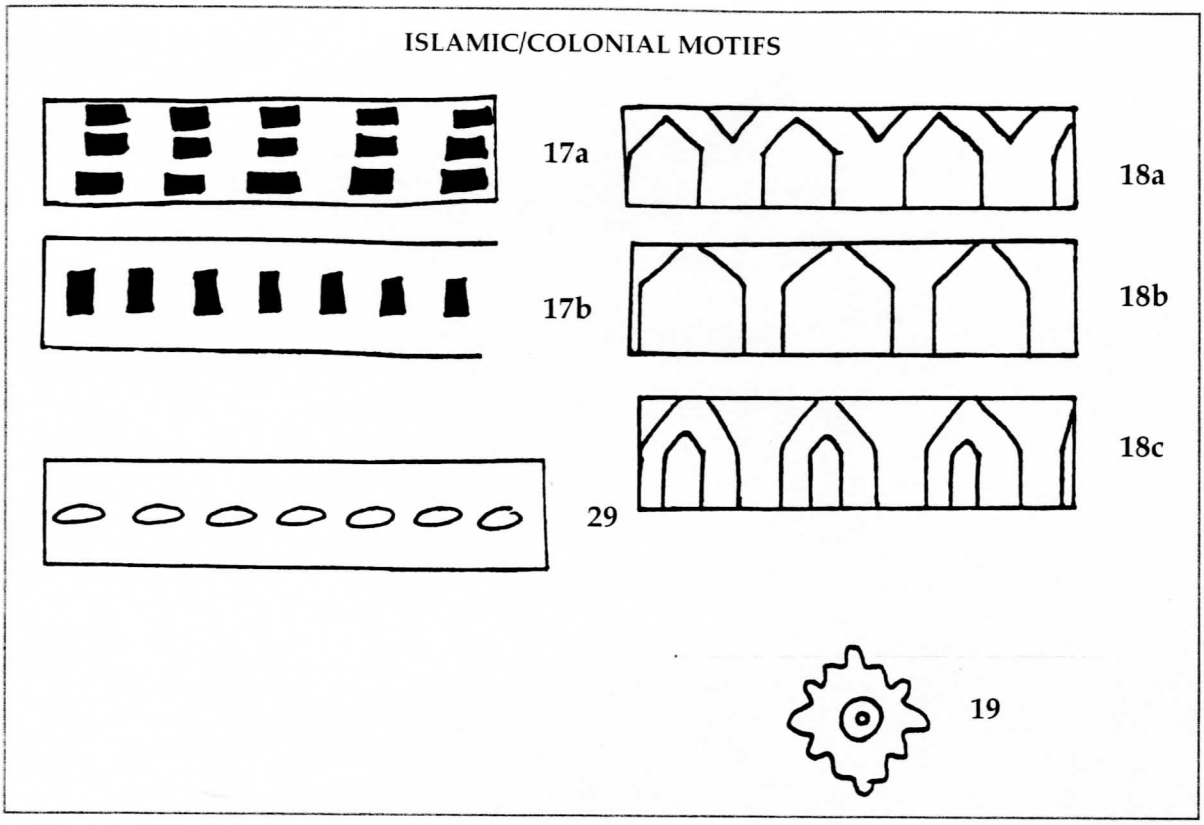


Fig. 7.1(iii) Islamic/Colonial motifs: 17a–b, 18a–c, 19, 29.

This suggests that the Pao-Pao example should date to the seventeenth century, and its mooted auxillary dating between the eighteenth and twentieth centuries is methodological noise. By contrast, elements 17 to 19 were not recorded at any of SSPHAP's numerous pre-seventeenth-century sites, rather, they belong to the same "Islamic" complex as the motifs carved onto a group of nineteenth- to twentieth-century pots manufactured at Bone (Macknight 1993b). Hence the eighteenth- to twentieth-century dating for these elements at Pao-Pao would appear correct, and the seventeenth-century option would be noise.

One potential objection to this analysis is the predominance of fifteenth to seventeenth century peaks (Fig. 7.2), which reflects the high proportion of SSPHAP's sites dated to that period (Bulbeck 1992). A relative rather than an absolute frequency may better define the period during which a given element apparently remained in currency. This can be achieved by representing the per-century occurrence of any element as a percentage of all the occurrences of elements assigned to that century. The resulting calculations spread the peak frequencies for the various elements across the millennium (Table 7.2; Fig. 7.3).

General Pattern of Results

The present data base consists of 251 instances of 29 decorative elements from dated sherds in Macassar historical sites (Table 7.1). Seven elements, Nos. 5, 1, 6, 13, 9, 15 and 2, in descending order of frequency, occur ten or more times. Six of these were also the most common elements in Clune's larger data base where they were recorded in 18 to 73 instances. As might be expected, there is a general tendency for these common elements to appear to present the widest chronological associations.

At the rare end of the scale, 14 elements have associated datings only once or twice (Table 7.1). Similarly, Clune recorded 19 elements (of her grand total of 34) with two or less occurrences. Clune (1996:45–46) suggests these rare elements may either signify imported earthenwares, or represent local

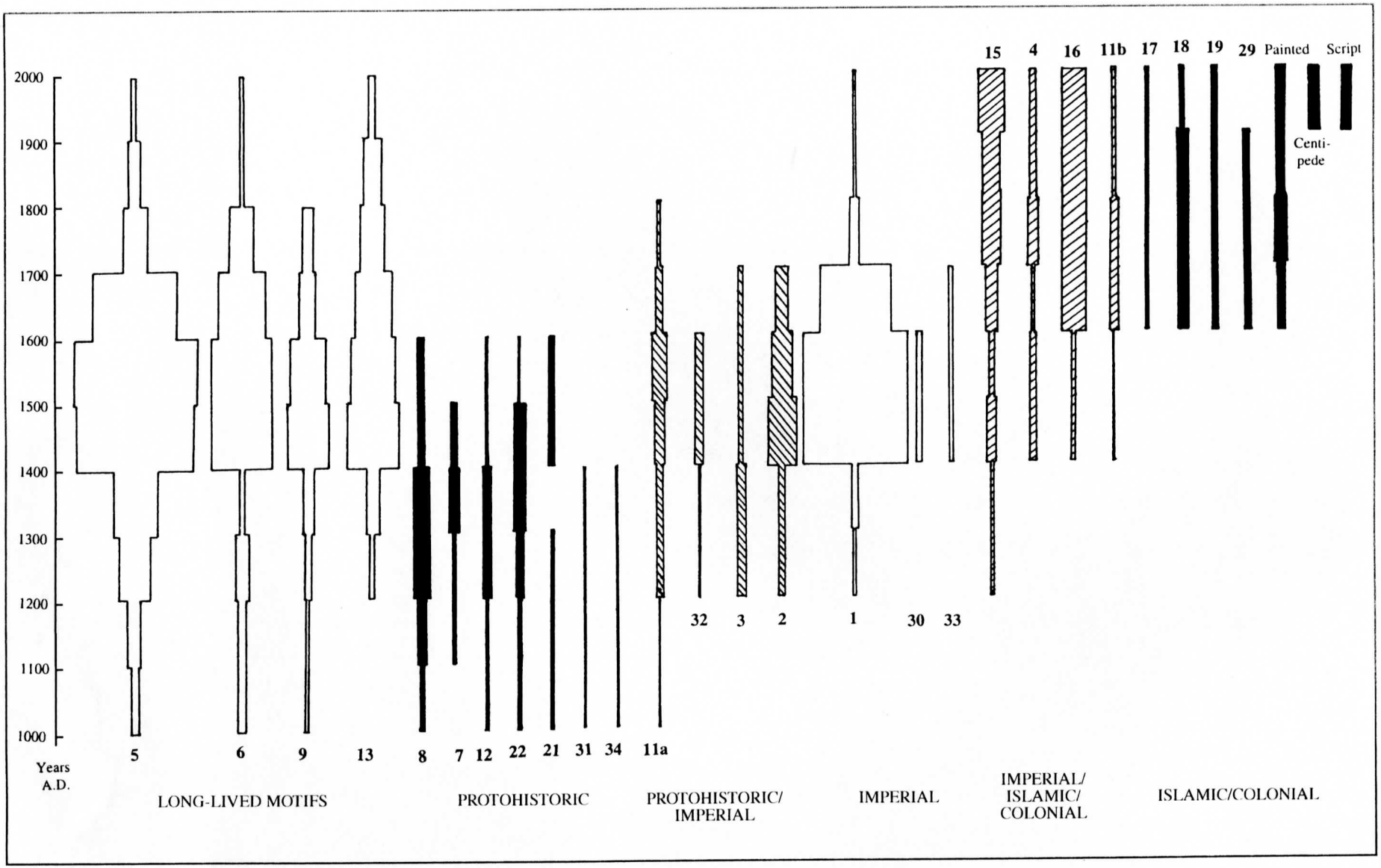


Fig. 7.2 Comparative frequencies of dated motifs on Macassar decorated earthenwares.

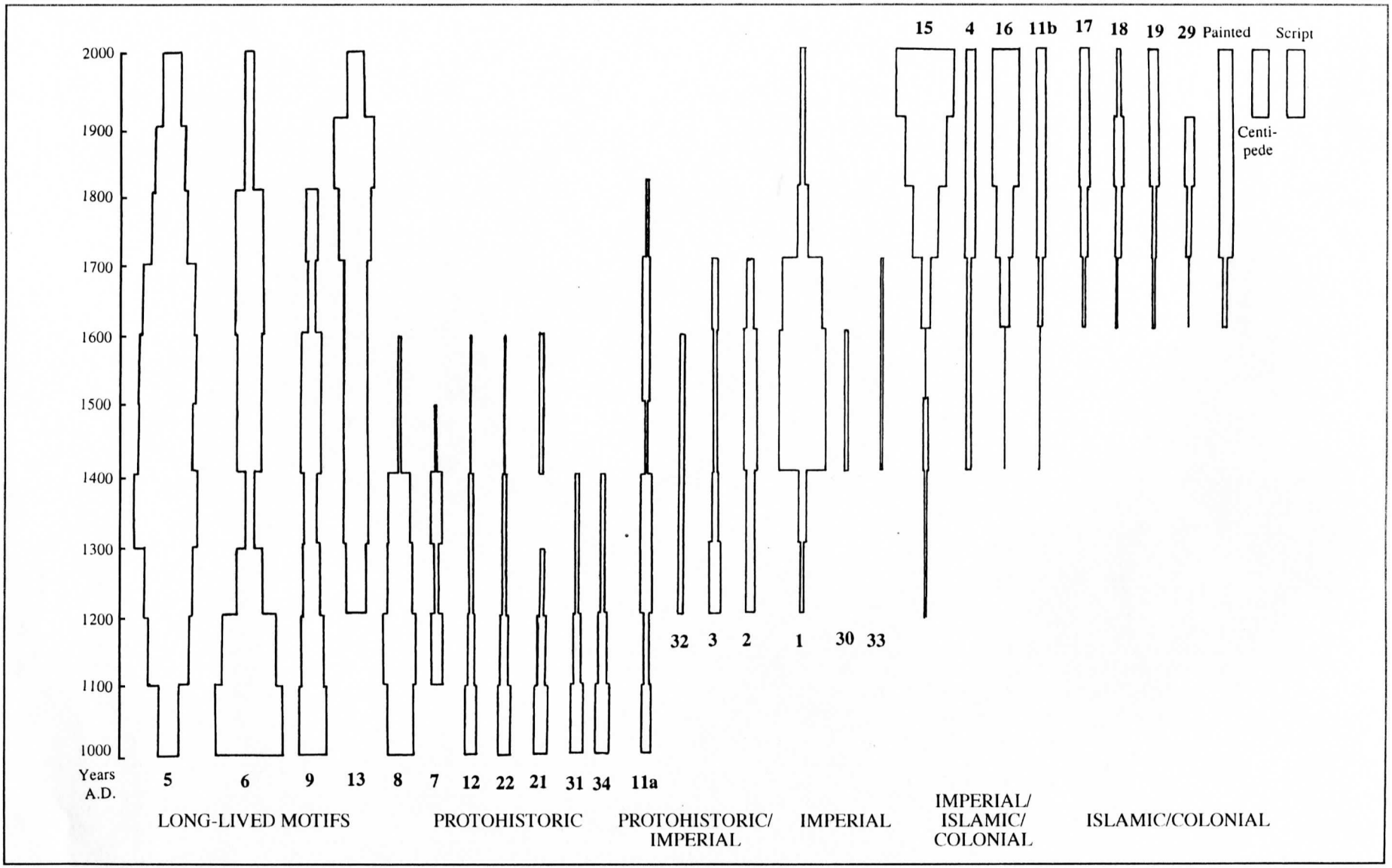


Fig. 7.3 Calibrated frequencies of dated motifs on Macassar decorated earthenwares.

innovations which were rarely copied. This would certainly seem a fair interpretation of those rare elements dating between the fifteenth and seventeenth centuries, which are comparatively well sampled, but the earlier and later instances may be weakly represented simply because of poor sampling.

Eleven elements are estimated as possibly having an eleventh or twelfth century dating, producing a grand total of 11.5 instances in the bottom row of Table 7.1. With such a diminutive sample size it is extremely likely that the variety of elements produced at the start of the millennium is grossly underrepresented by our data. Several more assemblages come "on stream" in the thirteenth to fourteenth centuries, boosting the likelihood of a reasonable match between the elements recognized in our study, and those which were indeed popular in the Macassar area then. Between the thirteenth–fourteenth and fifteenth–sixteenth centuries, the estimated instances of elements jump from less than 18 to more than 50 per century. This quantum leap agrees with the archaeological evidence of a several-fold population increase in Macassar between the fourteenth and sixteenth centuries (Bulbeck 1992). The range and relative frequencies of the elements in Table 7.1 can probably be considered fairly accurate between the fifteenth and seventeenth centuries.

Just when Macassar's population peaked, in the seventeenth century (Reid 1983; Bulbeck 1992), our data suggest a dip in the total number of decorated earthenwares. This cannot be attributed to a population decline, and would not appear to be associated with any decrease in the variety of decorative elements. Presumably, as Islamic proscriptions against grave goods began to take hold among the populace, so decorated earthenwares were interred less often with the deceased and, hence, turned up at lower frequencies in SSPHAP's sites. The most striking attrition of decorated earthenware elements, however, apparently occurred after the seventeenth century (Table 7.1). Tradeware frequencies at SSPHAP's sites do not parallel this trend, but instead remain fairly constant between the seventeenth and nineteenth centuries, before peaking in the twentieth century (Bulbeck 1992:608). These data are in accord with the commonsense assumption that the growing availability of glazed crockery, during the historians' "modern era", displaced decorated earthenwares from many of their traditional domestic and ceremonial roles in Macassar.

Table 7.2 converts the frequencies in each cell in Table 7.1 into percentages of the total estimated count per century, to compensate for chronological changes in the production and consumption of decorated pots in Macassar. Our percentage values may be fairly reliable between the fifteenth and seventeenth centuries, especially as regards the seven common elements, but when we consider the earlier or later centuries, or the rarer elements, so should we acknowledge the fuzzy stitch of our results. Nonetheless our analysis attempts to classify the elements into six chronological classes, as supported by the internal design logic of these groupings of elements.

Tentative Chronology of the Elements

Long-lived Motifs

Four motifs appear to occur at a fairly constant rate throughout most or all of the millennium. Three of them are the simplest motifs recorded: No. 5, which consists of two or more parallel vertical incised lines (Fig. 7.4); No. 6, which consists of two or more parallel horizontal incised lines; and No. 9 which is made up of small circles, either open or filled in. The fourth motif, No. 13, involved a band of parallel, vertically gouged grooves which typically occur on round-bodied vessels, where they stretch from the base to the lip. It could be seen as a simple transformation of No. 5, with the incised vertical lines replaced by ribs and flutes. All four are common, Nos. 5 and 6 are the two commonest motifs overall (Clune 1996) and, except for No. 13, may occur as adjuncts within more complex bands of decoration.

The values in Table 7.2 hint at a trend whereby the horizontally incised lines were most popular in the eleventh–twelfth centuries, while the vertically incised lines dominated between the thirteenth and

Fig. 7.4 Flanged bowl with three panels of vertically incised lines delimited by paired sets of horizontal lines, excavated at Sompu (cf. Tjandrasasmita 1970:Photo 13), stored at the Ceramic Museum, Jakarta. Photograph by Campbell Macknight.

seventeenth centuries (and continued to the present). The apparent thirteenth-century appearance of vertically fluted vessels would also reflect this focus on vertical lines, in this case involving a motif that was virtually restricted to South Sulawesi (discussed below).

Protohistorical Motifs

Five motifs, represented on between two and seven sherds, appear by the twelfth century and disappear by the fourteenth or fifteenth century. In all of these motifs, the lines are neither vertical nor horizontal but lie in between, and so play on the simple geometry of the long-lived motifs. Motif 8 consists of incised zigzags, often as two or more parallel curvilinear lines incised with a comb. It is the continuous version of motif 7, horizontal bands of stamped or incised, vertically-oriented chevrons. Motif 12, arguably the peak of decorative elegance on Macassar earthenwares, features paired leaves arranged along diagonal lines of punctate points. Motif 22 consists of radiating grooves and is similar to motif 13 except that it involves radial rather than vertical symmetry. Finally, motif 21 features slanting incised lines, typically bounded above and below by parallel incised lines. Considered together, the long-lived and the protohistorical motifs indicate a focus on repetitive geometrical motifs during the early centuries of the present millennium, with elaboration provided by slanting lines and, especially, the leaf motif of motif 12.

However, the last two motifs in the protohistorical group, each represented in our data base by a single sherd, do not conform to this general pattern. They are No. 31, a single line of incised dashes, and No. 34 (cordmarking). Their inclusion here relies entirely on their co-occurrence with other dated motifs on sherds from Garassi' (Clune 1996:116, 145). As Clune (1996:117) notes, Garassi' was a major early port, so these sherds may have came from imported pots, or else from pots with decorations copied from imported pots. On the other hand, No. 31 is present among the late prehistoric decorative repertoire from Batu Ejaya, and No. 34 occurs in spits A2 and A4 at Leang Karassa', dated to between 2700 and 370 BP (Flavel 1997), so both motifs are present in rock shelters near Macassar. Further, the Archaeology

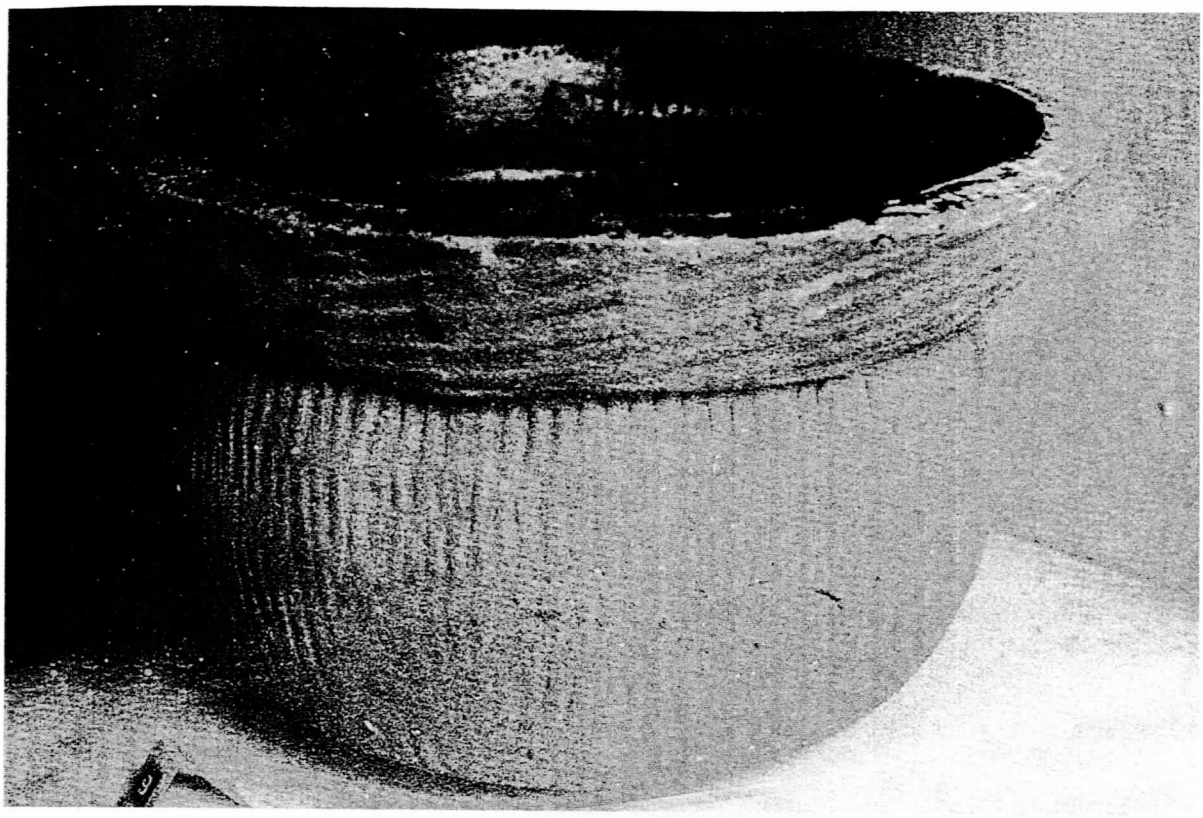


Fig. 7.5 Cord-marked bowl on display at the I La Galigo Museum, Benteng Ujung Pandang Complex, provenance unstated. Photograph by David Bulbeck.

Museum in Ujung Pandang has a complete cord-marked bowl on display (Fig. 7.5), and the Garassi' cord-marked sherd also has motif 22 which, as discussed later, would appear to have been a specifically South Sulawesi motif.

Protohistorical to Imperial Motifs

Four motifs, all consisting of horizontal bands of simple geometric designs, exhibit a chronological range spanning the thirteenth and sixteenth–seventeenth centuries. These are dots in motif 11a, stamped crescentic moons in motif 32, horizontally-oriented chevrons in motif 3, and stamped or occasionally incised crosses in motif no. 2. All of them tend to be accompanied by parallel bands featuring other examples of the simple motifs noted here or above. Thus, elaboration of early Macassar historical earthenware decorations, such as it was, usually depended on banded combinations of horizontally repeated motifs (e.g. Fig. 7.4). The same design strategy, albeit employing more complex motifs as a general rule, characterizes the vessels from Leang Paja, a mortuary site near Ulu Leang 2, which Flavel (1997) dates to the first half of the second millennium A.D.

Imperial Motifs

Over 20% of the cases which can be dated between the fifteenth and seventeenth centuries are assigned to motif 1, which involves regularly spaced, moulded, ovaloid or rectangular protrusions that typically run along the rim of unrestricted vessels (Fig. 7.6). These cogwheel pots, as they are affectionately called, appear to be unique to Makasar-speaking parts of South Sulawesi (Clune 1996:38, 111). The most similar vessel which has come to our attention is an undated bowl, with regularly spaced ribbing of the upper body, which Azis and Awe (1984) recorded as a heirloom in Ende-Lio, Flores. This region, Endeng, was

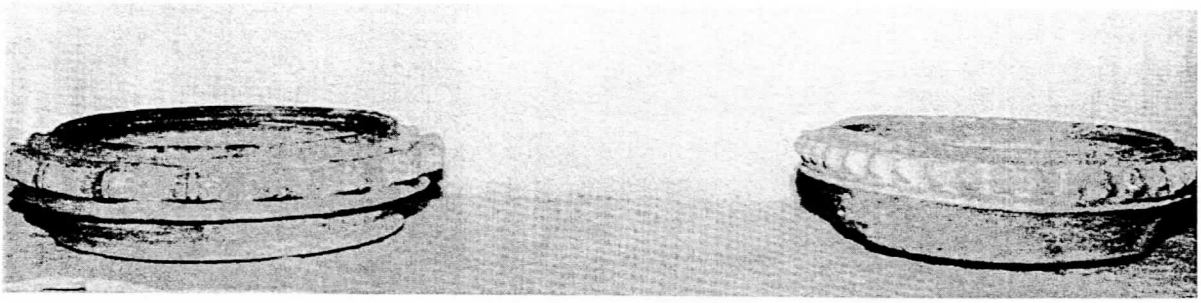


Fig. 7.6 Two Cogwheel pots on display at the I La Galigo Museum, Benteng Ujung Pandang Complex, Provenance unstated. Photograph by David Bulbeck.

subjugated by Macassar forces in the seventeenth century, so it is possible that the Ende-Lio bowl was a local imitation of cogwheel pots brought in by the invading forces (Clune 1996:118). Cogwheel pots do not appear to have been produced before the fifteenth century nor after the seventeenth century (Table 7.2), which suggests an intimate association with the Gowa-Macassar state, even though Gowa's state apparatus did not specifically include a division for potters (Bulbeck 1992:108–109).

A precursor of the design may be the deeply crenulated, "saw-tooth" bands sometimes applied to the shoulders of mortuary jars at Ulu Leang 2, which dates to the first millennium A.D. (Flavel 1997:73). Even more relevantly, Flavel (1997:114) recorded a single instance of motif 1 in spit A5 at Leang Karassa', i.e. at a level directly above the site's circa 2700 BP radiocarbon date. Hence the design would appear to have had prehistoric origins within the vicinity of Macassar, before its rediscovery or rehabilitation, and production at archaeologically visible levels, in the fifteenth century. A reduced version of the saw-tooth band has continued to be manufactured till modern times in the form of the "piecrust band" (discussed below). The unique features of the cogwheel pots are that the crenulated band dominates the vessel, and is typically very regular because the cogwheel pots were almost always made in moulds. The cogs would have provided a firmer grip on what would appear to have been serving bowls, as well as constituting a visually striking decoration (Clune 1996).

Two other, isolated motifs can be dated to these centuries, represented by a single sherd each. They may be rare innovations rather than imports, as both scarcely appear beyond South Sulawesi in island Southeast Asian assemblages which date to the second millennium A.D. (Table 7.3). One is No. 30, a depressed line running around the circumference of the vessel. Flavel (1997) records its quite frequent occurrence in prehistoric "Sa Huynh Kalanay" assemblages, as well as at Leang Paja. The other, No. 33, is made up of stamped interconnected circles with a smaller infilled circle in the middle of each outer circle. It may be an elaboration of motif No. 9c and, on current evidence, is unique to Macassar (Clune 1996; Flavel 1997; Table 7.3 below). These two motifs provide scant indication that the consolidation of the Gowa-Macassar state was associated with any flourish of decorated earthenware traditions, apart from the cogwheel pot.

Imperial to Islamic/Colonial Motif

Motif 15, the piecrust band, consists of longitudinally or diagonally pinched clay found at the rim or, occasionally, the basal carination of a vessel, pinched into shape after extra clay was applied to the area. Such a reduced saw-tooth band is commonly present on the carinations of ethnographic pots from South Sulawesi (e.g. Fig. 7.7), including a votive pot left at the revered grave of the fourth Soppeng raja, We Tekkewanua (cf. Kallupa *et al.* 1989). Saw-tooth rims also usually characterize the modern brass serving vessels on display at various South Sulawesi cultural museums, indicating the popularity of saw-toothed (and piecrust) bands and rims until the twentieth century. They appear to have come into production

Table 7.3 Macassar decorative motifs in other island Southeast Asian assemblages.

Decorative Motifs	JAVA		SUMATRA		EASTERN INDONESIA			BORNEO			PHILIPPINES		
	Anyar Lor	Plawangan	Gunung Wingko	Kota Cina	East Timor	Gunung Piring	Warloka	Morotai	Kupang	Madai	Pilar	Patang Brown	Batangas
5	-	x	x	-	-	-	x	-	x	x	x	x	x
6	-	x	x	x	x	-	-	x	x	x	x	x	x
9	-	x	x	x	-	-	x	-	x	x	x	-	x
13	-	-	-	-	-	-	-	-	-	-	x	-	-
8	-	x	-	x	x	-	-	x	x	x	x	x	x
7	-	-	x	-	-	-	-	-	x	-	x	x	-
12	-	-	-	-	-	-	-	-	-	-	-	-	-
22	-	-	-	-	-	-	-	-	-	-	x	-	-
21	-	-	x	x	-	x	-	x	x	x	x	x	x
31	x	-	-	-	-	-	-	-	-	-	-	-	-
34	-	x	x	x	x	-	-	-	x	x	x	-	-
11a	x	-	-	x	x	x	x	x	x	x	x	x	x
32	-	-	-	-	-	-	-	-	-	-	x	-	-
3	-	x	x	x	-	-	-	-	x	-	x	-	-
2	-	x	-	-	-	-	-	-	x	-	-	x	x
1	-	-	-	-	-	-	-	-	-	-	-	-	-
30	x	-	-	-	-	-	-	-	-	-	x	-	-
33	-	-	-	-	-	-	-	-	-	-	-	-	-
15	-	-	-	x	x	-	-	-	x	x	x	x	-
4	x	x	x	-	-	x	-	-	-	x	x	x	-
16	-	-	-	-	-	-	-	x	-	x	x	x	x
11b	-	-	-	-	-	-	-	-	-	-	x	x	-
17	x	x	x	x	-	-	-	-	x	x	x	-	-
18	-	-	-	-	-	-	-	-	-	-	-	x	-
19	-	-	-	-	-	-	-	-	-	-	-	-	-
29	-	-	-	-	-	-	-	-	-	-	-	-	-

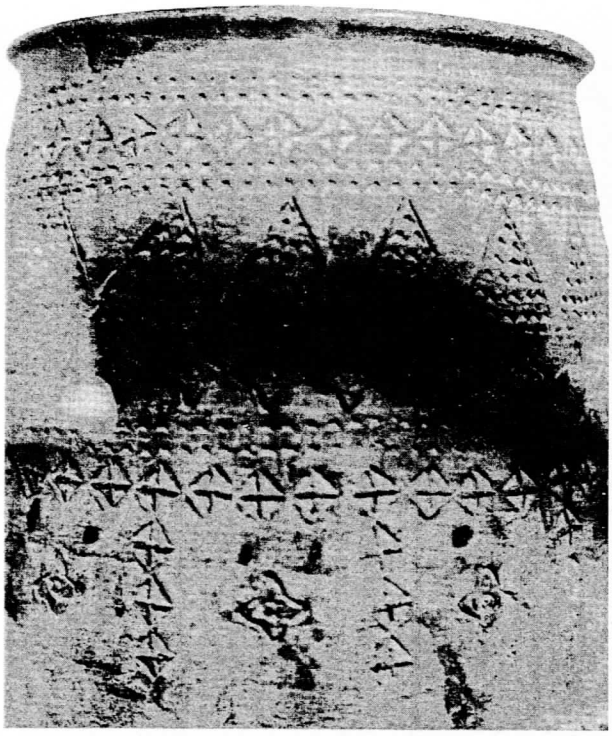


Fig. 7.7 Ethnographic jar from Sulawesi (presumably South Sulawesi) stored at the Ceramic Museum, Jakarta. Photograph by Campbell Macknight.

a couple of centuries earlier than the similar rim decoration, motif 16, which features picket fences connected into a single scroll.

Motif 11b, a row of triangular punctations, appears to be a late survival of the ancient Macassar tradition of punctate bands. The ethnographic pot depicted in Fig. 7.7 combines this motif with the related motif of triangles inside triangles, which would appear to be the most common decoration on vessels brought by Macassan trepangers from Macassar to the Northern Territory in Australia (Macknight 1976: Plate 28; Rowley 1997:83–85). This "triangles in triangles" ware has been collected in South Sulawesi during the nineteenth and twentieth centuries (Macknight 1976:80), but is not represented in SSPHAP's pottery assemblage, possibly because it was produced especially for trepangers, although far better sampling of the late historical decorations in Macassar would be required to confirm this point (Rowley 1997:150).

Finally, motif 4, incised crosshatching, apppeared by the sixteenth century but remained a rare motif (Table 7.1), despite the popularity of checked clothing among the Makasar ethnographically (Morrell 1996). This observation suggests that Makasar iconography on pottery and clothing has carried distinct symbolic messages in recent times.

Islamic/Colonial Motifs

Four designs dating after the eighteenth century in Macassar are associated with votive pots placed at the ancestors' Islamic graves. These are Clune's No. 17, which comprises a series of small impressed rectangles, No. 19, a floral emblem (e.g. Fig. 7.7), No. 29, cylindrical rolls of clay approximately 8 mm long attached in a row on the vessel's surface, and No. 18, stamped interlocking rectangles with peaked tops.

Late historical decorated earthenwares also include painted sherds, either covered by an acrylic coating (as still used to decorate flowerpots made in Pattallassang, south of Ujung Pandang), or else embellished with red lines subtended down the outer surface of the vessel. Finally, the Bayoa cemetery at Sanrabone contained a unique votive pot

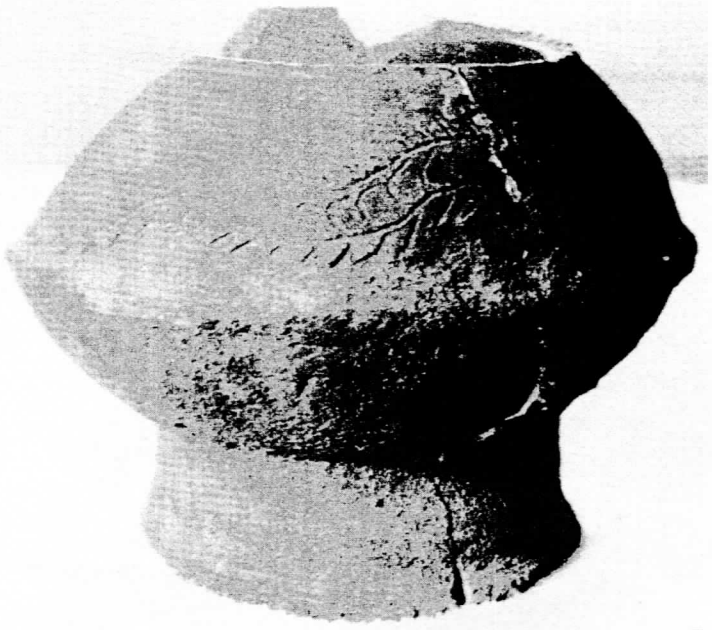


Fig. 7.8 Reconstruction of the centipede pot from Bayoa cemetery, Sanrabone. The Romanized script is on the other side of the pot at the same level as the centipede. Photograph by David Bulbeck.

which could be reconstructed to its virtual entirety (Fig. 7.8). It is presumed to be of twentieth-century date because an older vessel would probably have been too broken and scattered to permit full reconstruction. This "centipede pot" features an incised centipede motif, an unreadable Romanized script, a pinched piecrust rim, and a weakly-notched piecrust band at the vessel's central carination (Clune 1996:45).

Discussion

Throughout the present millennium, Macassar earthenware decorations have retained a clear focus on simple geometric motifs repeated in horizontally arranged bands. Applied singly, these bands would produce a minimally decorated vessel, but employed in combination the effects were often elegant. Expanding a single element to cover most of the sides of a shallow vessel appears to have been a local specialization, as represented by the bands of vertically gouged grooves, which are very rare outside of South Sulawesi, and the cogwheel pot which enjoyed an intimate association with the Gowa-Macassar state.

The local earthenwares were decorated very differently from the imported high-fired ceramics, which would suggest they retained distinct domestic and ceremonial roles. However, several elements with a thirteenth–fourteenth century component evoke decorations found on the early white-wares and monochrome tradewares of the twelfth to fourteenth centuries (cf. Bulbeck 1992). Vertical fluting is an example. The combed curvy lines on the tradewares find a faint echo in the combed zigzags on the earthenwares, while the rare leaf motif (element No. 12) resembles some underglaze plant incisions. In general, however, the depictions of plants, people and animals, which increasingly dominated the tradewares as painted decorations became standard, were minimally transferred to locally-made pots. One of the rare instances of figurative decorations at Makasar sites involves the human figurines found on the coast near Batu Ejaya, but these probably reflect a direct influence from Majapahit (Bougas 1998). In this context the ethnographic pottery, with its modelled human figurines (Bulbeck, personal observation), centipede incision and Islamic motifs, represent a comparative "explosion" of figurative ceramic design.

Some interchange of designs between pottery and other media is suggested. The carvings on the Bone Islamic pots are strikingly similar, in their motifs and overall style, to the decorations found on metalwork, grave markers, and other South Sulawesi items employed in an Islamic context (Macknight 1993b). We have already noted that saw-toothed rims could be added to brass as well as ceramic vessels, and that crosshatching on some sherds resembles checked cloth. It is also possible that the lines of stamped and punctate circles, crosses and dots, and the incised zigzags, were related to designs tattooed on the skin or applied to clothing. Richly embroidered clothing remained popular among the Bugis-Makasar until the sixteenth and seventeenth centuries, even if any tradition of tattooing would have been discontinued by then (Gervaise 1701:77–79; Pelras 1981:172).

However, earthenware decoration appears to have constituted a specialized sub-tradition in Macassar throughout the present millennium. The four most common elements (5, 6, and especially 1 and 13) would appear ideal for round-bodied pots, but poorly suited to other media. The same could be said for the general Macassar style of parallel horizontal panels. Radiating grooves (No. 22) are as appropriate to ceramics as to metal, if not moreso, while cordmarking and applique are difficult to execute on non-plastic media. Accordingly, the great variety and high turnover of decorative elements (Table 7.1) can be treated as an issue for explanation in terms of a distinctive iconographic sub-tradition.

Of the various factors which may affect a repertoire, external contact is a major possibility in a cosmopolitan setting such as Macassar has been since at least the fourteenth century. Decorated vessels, imported in their own right or simply as containers, may inspire local imitation, especially if the products are then acquired by members of the same group who introduced those vessels. New groups having established themselves would add to the variety of locally-produced earthenwares, if they brought their

own potters with them. Exchange of potters through marriage, either long distance or between contiguous but distinct communities, would also tend to result in the transmission of new motifs. The transfer of motifs from other media would also tend to be intensified if the pool of potters, who could effect the transfer, were enlarged as a result of a widening exchange of potters. Finally, it should be noted that in any comparison of Macassar and non-Macassar repertoires, profiles of similarity need not suggest exotic influences on Macassar, but could just as easily reflect Macassar influences on external pottery traditions.

Wider Comparisons

Detailed comparisons with other South Sulawesi decorative repertoires, especially the late prehistoric to protohistoric "Sa-Huynh-Kalanay" tradition (Flavel 1997), lie beyond the scope of our article. It is however worth noting that the 31 decorated sherds collected from the surfaces of Soppeng historical sites (Bulbeck 1989) show 11 instances of agreement with the Macassar motifs considered here (Nos. 2a, 4b, 5, 6, 8b, 9b, 11a, 13, 15, 21b, 31). This is a high level of agreement when we consider the small sample size of the Soppeng assemblage, and suggests that the Makasars, and their Bugis neighbors, applied substantially similar decorations to their earthenwares. Such a result is expected given the proximity of the Bugis and Makasars, their history of continuous interaction including marital exchanges, and their highly comparable material culture and social structure (e.g. Andaya 1981; Bulbeck 1996). However, our interest here is in comparisons with repertoires outside of South Sulawesi.

Table 7.3 lists instances of the dated Macassar motifs as they occur in a cross sample of described earthenware assemblages from island Southeast Asia. Anyar Lor, west Java, approximately A.D. 1000, and Plawangan, north Java, mainly first millennium A.D., are from Flavel (1997). Chronology and motifs are taken from Clune (1996) for the following: Kota Cina, east Sumatra, thirteenth to sixteenth centuries; Warloka, Flores, thirteenth to seventeenth centuries; Batangas (Kay Thomas and Pulong Bakaw complexes), Luzon, approximately fourteenth to sixteenth centuries. The motifs for the south Java site of Gunung Wingko, dated approximately from the ninth to sixteenth centuries A.D. (Van de Velde and Goenadi 1990), come from that source, Van de Velde (1983/84) and Clune (1996). The motifs for Gunung Piring, Lombok, come from Goenadi *et al.* (1978), whose excavations suggest a relatively late "Paleometallic" dating in the last centuries of the first millennium A.D. (based on one unidentified tradeware sherd from the site's middle layers, and one Chinese coin). East Timor is represented by four rock shelters with pottery dating between about 3500 B.P. and the present (Glover 1986). Morotai is represented by the Tanjung Pinang and Sabatai Tua pottery dated between approximately 2000 B.P. and A.D. 1500 (Bellwood *et al.* 1993, 1998). Matussin (1978) is our source for the Kupang pottery, Brunei, interpreted as dating between the eleventh and thirteenth, or fourteenth, centuries A.D. (see also Bellwood and Matussin 1980). Madai, east Sabah, is represented by second millennium A.D. archaeological pottery from MAD3, MAD4, and the top layers of MAD1 (Bellwood 1988a:189, 195 [0–10 cm], 198 [MAD3], 208–210, 225). Finally, Spoehr (1973) is our source for the Parang Brown ware of Jolo, and the Pilar ware of Mindanao, Sulu-Zamboanga area, both in the southwestern Philippines; the associated trade ceramics date both of these wares from the seventeenth (or sixteenth) to the nineteenth centuries.

The first point to remark is the presence of three elements which we cannot find outside of South Sulawesi, and six more which we have observed only once. Elements apparently unique to South Sulawesi are restricted to the imperial (Nos. 1 and 33) and Islamic/colonial phases (No. 29). Element 19, the floral emblem, is also not matched up in Table 7.3 but it is, however, common at the sixteenth to eighteenth century Islamic emporium of Banten Lama, northwest Java (Clune 1996:112). Elements with only one match in Table 7.3 include long-lived (No. 13), protohistorical (Nos. 12, 22 and 31), protohistorical/imperial (No. 32), and Islamic/colonial examples (No. 18). Two of the elements — the vertical fluting (No. 13), and especially the cogwheel band (No. 1) — can also be considered diagnostic in that they

crop up frequently in Macassar historical sites (Table 7.1). The other elements, however, appear to have been merely minor decorative adjuncts, barely more popular in Macassar or, indeed, elsewhere in South Sulawesi (cf. Flavel 1997) than in the Indo-Malaysian Archipelago generally.

At the other extreme we have six widespread motifs found in eight to eleven of the comparative cases listed in Table 7.3 and, moreover, all present in the Soppeng surface collection. They are Nos. 5, 6, 8, 9, 11a and 21. All involve the repetition of a simple shape such as a line, a circle or a dot; or a zigzag as the greatest elaboration. All appeared on Macassar earthenwares by protohistorical times, although three of them may have been discontinued by the seventeenth century (Table 7.2). The remaining ten elements in Table 7.3 have been noted on two to seven instances in the other assemblages. Hence, excluding the four motifs without matches in Table 7.3, we have a balanced composition of six rare elements, ten moderate elements, and six widespread elements on which to base our comparisons.

The assemblages from Java and Sumatra show healthy levels of agreement, between five and nine matches, with the Macassar historical repertoire. Moreover, the agreement increases as we progress in time from Anyar Lor (c. 1000 years B.P.), to Plawangan (which spans both millennia), to Gunung Wingko and Kota Cina (mainly or entirely second millennium A.D.). Some of this agreement could reflect the shared inheritance of a broad "Sa Huynh Kalanay" tradition, as discussed by Flavel (1997). Certainly, it is difficult to see any pattern of specific similarities between the earlier Macassar elements and the Java assemblages, or the imperial Macassar elements and Kota Cina. On the other hand, our comparison is consistent with the historical evidence for increasing levels of trading contacts, and political relations, between Macassar and western Indonesia during the present millennium (e.g. Reid 1983; Bulbeck 1992).

Conversely, there are substantially fewer matches, between three and five, when we compare the eastern Indonesian and Macassar assemblages. The sparse degree of agreement may reflect the restricted range of the illustrated repertoire in the case of Warloka (five elements) but not in the other cases (nine to about 25 elements). Flavel (1997) has remarked on the alien appearance of the eastern Timor motifs in the context of island Southeast Asian pottery assemblages outside of Nusatenggara. Our most critical comparison may be with the Morotai sample given its wide spectrum of illustrated motifs and its apparent overlap in time with early Macassar. The seeming lack of reconciliation between the eastern Indonesian and Macassar repertoires would suggest rather little contact, at least until the late sixteenth century, after which point Macassar traders began penetrating eastern Indonesia (Andaya 1991).

The most similar profiles are evinced by the Kupang, Madai, Pilar and Parang Brown assemblages, all excavated from sites around the Sulu Sea. All show ten to fifteen elements in common with Macassar; furthermore, Parang Brown and Madai include painted pottery (Spoehr 1973:170; Bellwood 1988a:208). Not only that, but the Kupang repertoire, dating to no later than the fourteenth century, is similar to Macassar only in terms of Macassar motifs practised by protohistorical times. Conversely, the seventeenth- to nineteenth-century Parang Brown and Pilar ware exhibit elements dated specifically to the seventeenth century and later at Macassar. Hence decorative change appears to have occurred "in sync" between Macassar and the Sulu Sea. There is also a strong concordance between the Luzon Batangas and Macassar repertoires, with eight elements in common. While our results suggest a primary axis of interaction involving the Sulu Sea, the northern Philippines were implicated too, if more peripherally.

Matussin (1978:24–27; Bellwood and Matussin 1980:169) recognized the category "Tanjung Kubor ware" for approximately 80% of the Kupang-decorated sherds which had been impressed with a carved paddle. They stressed the lack of Tanjung Kubor ware at known sites in Sabah and Sulu (Matussin 1978:97; Bellwood and Matussin 1980:173), a point subsequently confirmed by Bellwood (1988b:251) for eastern Sabah. Certainly, carved paddle impressions never appear to have become established in Macassar, where occasional cordmarking would have been the most similar technique. However, Bellwood (1988b:251) did note that the stamped motifs on Pilar ware may align with Tanjung Kubor ware in the same broad tradition. While we have not attempted to split up the Kupang motifs according

to their technique of decoration, the concordance between Kupang and Pilar is striking (Table 7.3). Parang Brown ware and Madai perform well too, by the same criteria, as does the Macassar repertoire. The similarities we note (Table 7.3) lie almost entirely in the areas of stamped and incised motifs, except at Kupang where the same motifs may be paddle-impressed. Hence we deduce that Brunei (Kupang) may have been the zone where Tanjung Kubor and related paddle-impressed ware, extending to the west towards the Malay Peninsula, overlapped with a broad Sulu Sea tradition represented by the commonly occurring elements in the fifth- to second-last columns of Table 7.3. Separating the issues of Tanjung Kubor ware and circum-Sulu Sea motifs is critical to interpreting the Sulu-Macassar relationship.

A Conclusion — Some Historical Speculations

Our comparisons in Table 7.3 confirm Macknight's (1983:95–96) opinion that the southern Philippines were the main thoroughfare for most of the mainland east Asian tradewares imported into South Sulawesi. However, any direct Macassar-Sulu trade would probably have been two-way, unless the Sulu traders were to come back empty handed. Major Macassar earthenware motifs which turn up at low frequencies in Sulu, such as No. 13 (recorded in Pilar ware), confirm the suggestion of a return journey. While Macknight avoids speculation on which South Sulawesi goods might have been traded in return, he does note that the indigenous Philippine writing systems may have been derived from a South Sulawesi model (see also Macknight 1986).

Discussing the Tanjung Kubor ware, and the similar Johore Lama ware (sixteenth to seventeenth centuries), Matussin associated them with the development of Malay as a trading language. He therefore predicted the future discovery of Tanjung Kubor ware in eastern Sumatra (Matussin 1978:97; Bellwood and Matussin 1980:173), as would be expected from the origins of the Malay language in Sumatra. Interestingly, at the end of the first millennium A.D., a Brunei embassy to China submitted an official document whose description likens it to the strip rolls traditionally used for writing in South Sulawesi (Macknight 1986:222–23). There is considerable debate on where the South Sulawesi script might have originated, but a distinct possibility is Sumatra (cf. Macknight 1986:221). All this may suggest that by a thousand years ago, Malay speakers had brought to Brunei the script which would form the basis for South Sulawesi scripts, written on strip rolls. Even more speculatively, we may wonder if the Sulu-Sulawesi link did not provide the channel for Brunei scribes to bring literacy to South Sulawesi, where the appearance of writing is now dated to around A.D. 1300 (Caldwell 1995).

We suggest the Sulu-Macassar link was pioneered and, initially at least, primarily mediated by the Bajau. We are not supporting Tom Harrisson's view of a connection between Tanjung Kubor ware and the Bajau, rejected by Bellwood and Matussin (1980:173; Matussin 1978:97) because of the lack of Tanjung Kubor sites in Sabah and Sulu, where the Bajau abound. Instead, we have gone to some pains to show that Sabah and Sulu decorations of the second millennium A.D. were only present incidentally in Tanjung Kubor ware, at Kupang anyway. We hypothesize that the Bajau acted as ferriers of motifs between Macassar and the Sulu area, and so provided a link between distinct, but related, earthenware traditions.

A Bajau connection is more plausible than any Malay linkage for Macassar, where the Bajau appear to have established themselves earlier than the Malays, and may have had the greater impact overall. This view does not contradict the speculation, outlined above, that early Malays in Brunei could have brought writing to South Sulawesi. They could have introduced it to a part of the peninsula far away from Macassar, as indeed would be supported by the claim that the Makasar script was developed no earlier than the sixteenth century (Wolhoff and Abdurrahim n.d.). Alternatively, it would be no surprise had Malay aristocrats in Brunei employed Bajau seafarers to transport goods or, possibly, a scribe to a faraway land. We can be certain that the polities involved were multi-ethnic. We focus on the Bajau as the most plausible identifiable seafarers, not to block out other ethnic groups from consideration.

On a wider temporal and spatial canvas, the interconnectedness of island Southeast Asian earthenwares may owe a greater debt to the Bajau, and the "sea gypsies" who preceded them, than is generally acknowledged. Discussing first millennium A.D. pottery, Bellwood (1988b:250) notes a specific link from Sabah through Sulu towards southern Mindanao and Talaud — i.e., the area which would appear to correspond to the centre of Samar Bajau origins by at least A.D. 800 (Bellwood 1997:136). There would now seem to be fair agreement that the widespread similarities of assemblages assignable to the "Sa Huynh Kalanay tradition" were bound up with the intensification of maritime trade during the Early Metal Phase (e.g. Bellwood 1997), and we may expect Orang Laut groups, such as the Bajau, to have pioneered the ocean linkages. Bellwood's research at Bukit Tengkorak, Sabah, with its pottery stoves (similar to those on Bajau boats) and maritime economy dating back to 1000 B.C., suggests to him that the Bajau lifestyle may continue very early Austronesian adaptations in island Southeast Asia (Bellwood 1997:136). Are we on the point of rehabilitating Solheim's (1984–85) "Nusantao hypothesis" to the degree of accepting a primary role of specialist seafarers in the spread of island Southeast Asia's early pottery, usually interpreted to mark the arrival of the "Neolithic" in the region? Regardless of the problems of uncertain dating (Solheim 1996) and historical linguistic considerations (Bayard 1996), is it pure coincidence that Solheim's "Nusantao centre", the axis of sea between eastern Indonesia and the southern Philippines, appears to have continually re-emerged as a crucial thoroughfare?

APPENDIX 7.1. Dates for the Macassar Assemblages with Decorated Earthenwares

Following Bulbeck (1996–97), eleventh- to thirteenth-century datings are assigned to two sites with local reports of metallic grave goods associated with cremated human remains, but lacking any evidence of high-fired ceramics: Galoggoro (Gowa 89), and Gowa 85, zone 10 (Bonto Ramba). Sites dominated by early whitewares and monochromes among their tradewares, lacking blue-and-white ceramics, are assigned to the twelfth to fourteenth centuries if "northern Song Dynasty" types are present, as at Talaborong or Gowa 24 (here supported by a radiocarbon date on cremated human bone) and at Kalukuang or Takalar 30, otherwise to the thirteenth–fourteenth centuries if "southern Song Dynasty" types appeared to be the earliest wares, as at Manjalling Lompoe, zones 14–15 (Gowa 21). A few more assemblages contain healthy proportions of these early tradewares, along with slightly later tradewares such as Ming whitewares, early Chinese blue-and-white, and Vietnamese blue-and-white (Bulbeck 1992). They derive from the areas looted for antiques at Kanjilo Lama or Gowa 6 (thirteenth to fifteenth centuries), at zone 4 near the southern extension of Benteng Somba Opu, Gowa 3 (thirteenth to sixteenth centuries), at Sero or Gowa 26 (also thirteenth to sixteenth centuries), and at Likuloe or Gowa 86 (fourteenth to sixteenth centuries). The small pre-Islamic burial grounds at Bonto Jalling (Gowa 10) and at Jipang Bidaraya (Ujung Pandang 11) are both dated to the fourteenth–fifteenth centuries from the occurrence of Ming whitewares and early blue-and-white.

SSPHAP's most common class of sites involves burial grounds where local reports indicated the recovery of predominantly Ming ceramics and contemporary wares from Vietnam and Thailand. These were associated with extended east-west inhumations, where the local soils permitted the preservation of bone, and log coffins along the coast and occasionally in the hinterland (Bulbeck 1992, 1996–97). This burial tradition lasted into the seventeenth century, after Macassar's official adoption of Islam, as shown at those sites with abundant Swatow or Kraaksporcelain wares, and at the Bayoa fishpond where two radiocarbon-dated samples from a remnant log coffin suggest it dated to the seventeenth century. SSPHAP collected surface assemblages from these looted cemeteries which can be dated to the fifteenth–sixteenth centuries at Kaluku Bodoa in Galesong (Takalar 17), to the sixteenth–seventeenth centuries at Mamampang (Ujung Pandang 5), and between the fifteenth and seventeenth centuries at the Bayoa fishpond (Ujung Pandang 1, zones 1 to 7), Jamarang Tua (Takalar 5), Mandalle' Toa (Gowa 20), Talla-Talla (Gowa 50) and Pattallassang Toa (Gowa 52).

In two cases dated to the fifteenth–sixteenth centuries, tradeware assemblages dominated by these Ming-period wares appear to represent the remnants of habitation: Balang Sari (Gowa 63, zones 1–4), and a stratified exposure at Dampang (Gowa 77, zones 10–15). In a third case, east Moncongloe Lappara (Maros 6, various zones), the survey included the occupation centre of the local nobility, as well as scattered burial grounds.

Islamic cemetery areas with seventeenth-century beginnings, as evidenced by sporadic looting or very early styles of Islamic grave markers, sometimes contained sherds of decorated earthenwares which SSPHAP collected. These include the Pannujuang (Gowa 19, zones 1–2) and Daeng Bane Islamic cemeteries (Gowa 36), which can be dated between the seventeenth and nineteenth centuries, and Manyampang Tua (Gowa13), Kaledu Paya (Gowa 22), and the Pao-Pao Islamic cemetery (Gowa 38), which can be dated from the seventeenth to twentieth centuries. A couple of the recorded Islamic cemeteries probably had eighteenth century beginnings, before continuing in use till the present day: Jipang Islamic cemetery (Ujung Pandang 12) and Batu Pute (Takalar 8).

More usually, decorated earthenwares associated with Islamic-period tradewares (Ch'ing Chinese, Japanese, European) were collected in contexts representing mainly or entirely the vestiges of habitation. At Sampulungang, Takalar 10, erosion had exposed a thin band of pottery of seventeenth–eighteenth century dating, stratifed beneath the Islamic graveyard. Zones 1 to 5 at Bonto Ramba (Gowa 85)

correspond to a hamlet, dated between the seventeenth and nineteenth centuries from its tradewares, which had certainly been abandoned by 1922 when the Dutch colonial government mapped this area. A mound of earth from a recently dug well at Kanjilo (Gowa 6, zone 22) contained abundant pottery, of which SSPHAP's team collected the rims, and a few tradewares dating between the seventeenth and twentieth centuries (Bulbeck 1992:Photos 8–19). Other seventeenth- to twentieth-century decorated earthenwares were collected at west Moncongloe Lappara (Maros 6, zones other than those of East Moncongloe), Karunrung (Ujung Pandang 13), and Bangkala-Palembang (Gowa 65). Eighteenth- to twentieth-century sherds were collected at Bontona Songkolo (Gowa 83), a recently-established village, and Saukang Boe (Gowa 80) which used to be a pre-Islamic cemetery before its habitation in more recent times.

Two sites span the "Ming" and "Ch'ing" periods but are still chronologically precise enough to be included here. They are Biring Balang (Gowa 64) where habitation continued till the eighteenth century adjacent to a burial ground with fifteenth-century beginnings, and Campagaya Lama (Takalar 14) which is a cemetery of predominantly fifteenth- to eighteenth-century use. Other sites which span our notional periods were used for five centuries or more — especially the Makasar fortresses and the sites around the old port of Galesong — and are excluded from the present analysis. They are Kale Gowa fort (Gowa 1/Ujung Pandang 10), Garassi' fort (Gowa 5), Pekalla' Bua (Gowa 16), Kassi' Utara (Ujung Pandang 20), Aengtoa (Takalar 2), Sanrabone fort (Takalar 6), Gotong (Takalar 26), and Galesong, excluding Kaluku Bodoa (Takalar 16, 20 and 21). Some individual sherds from these sites could however be dated by possessing a chronologically discrete element which allowed other elements on the same sherd to be dated: G.5.4.13, eleventh to fourteenth centuries (by elements 8 and 22); G.5.5.12, eleventh to fourteenth centuries (by element 8); U.20.15.1 and G.5.6.74, thirteenth to sixteenth centuries (by element 2).

The results provided here diverge from the chronological inferences presented in Clune (1996) for two reasons. First, some of the datings have been changed, as discussed above. Second, on Bulbeck's advice Clune included the sherds from sites with a main period of use spanning five or more centuries, and assigned all the instances of elements to three periods, i.e. eleventh to fourteenth, fifteenth to seventeenth, and eighteenth to twentieth centuries; when the available dating cut across two of these periods, Clune assigned it to the period with the best fit (e.g. Kale Gowa, dated between the thirteenth and eighteenth centuries, was assigned to the fifteenth- to seventeenth-century period). While this procedure should generally produce acceptable results, it does incorporate relatively high levels of chronological noise, so that some of Clune's findings are not confirmed in our re-analysis.