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28 February 2001



**ARCHAEOLOGY AT SALANGO, ECUADOR:  
AN ENGOROY CEREMONIAL SITE ON THE SOUTH COAST OF MANABI**

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**DISSERTATION**

**Submitted in fulfillment of the requirements for the degree of**

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## **ABSTRACT**

Engoroy ceramics were first identified sixty years ago at La Libertad, on the Santa Elena Peninsula of the province of Guayas, southwestern Ecuador. Since then, little progress has been made in understanding the Late Formative society that produced this material, and most work has been limited to ceramic studies in the area of initial discovery.

This dissertation is based on the results of excavation carried out by the author at Salango (Site OMJPLP-141B), in southern Manabí, a site lying near the northern limits of the Engoroy zone.

The core of the material presented is a complex sequence of ceremonial clay structures of Middle and Late Engoroy and the succeeding Regional Development Period. Associated features include human burials, Late Engoroy stone figurine depositions, and other artefact offerings.

A sample of the Middle and Late Engoroy pottery is analysed with close reference to the stratigraphy. The transition from Middle to Late Engoroy is firmly identified, with special attention to changes in the designs of iridescent wares, key components of the Engoroy ceramic inventory. Comparison with other assemblages is made in order to establish the position of the site with respect to more general patterns of Engoroy ceramic development.

Data from other sites are then used to draw together the evidence on Engoroy ritual activities, and to demonstrate the dynamic pattern of Engoroy society, particularly in the Late stage. Suggestions are made as to the origins and further development of buildings, ritual features and artefacts, so as to relate the Engoroy material to the wider sequence of coastal Ecuadorian prehistory.

Emphasis is laid throughout on contextual analysis. The

Salango site is used to show the importance of a grasp of sequence and change if archaeological data are to be properly assessed.



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## CHAPTER 1 INTRODUCTION

### 1.1 SCOPE AND ORIENTATION

For much of the first millenium BC, the people of the central Ecuadorian coast decorated their fineware pottery with a distinctive iridescent paint. The region, now comprising the provinces of Manabí and Guayas, then included several smaller ceramic zones. Along the coast proper, from La Libertad northwards into Manabí, the pottery has been called Engoroy. At site OMJPLP-141B Salango, on the south coast of Manabí, Engoroy occupation saw the building of a sequence of ceremonial structures. One area of the site, Trench 3 (T3), was excavated under the author's direction. What the excavation revealed, with its implications for understanding of Engoroy period ritual and interaction, is the central subject of this dissertation.

The Salango building sequence represents a major addition to knowledge of the period in its own right. It is also valuable context for all that was found with it. Although much of the associated material has been reported also at one or more of several other sites, it has never before been seen in so integrated a fashion.

Description and analysis of context, then, are of central importance in this study. Hodder (1992, 14) has emphasized a "dynamic relationship between an object and its context.... The context both gives meaning to and gains meaning from an object." I am at one with the principle set down. The approach is especially appropriate for the material considered here, which is often highly organised and of symbolic significance. The route by which I came to this view in my analysis is described later (Chapter 3). On a wider scale, the common absence of good archaeological context in earlier studies, and the extraordinary richness of detail at Salango, also required the

treatment that I bring to the subject.

The biggest problem throughout my work was setting its limits. Ceremony and ritual were by no means the exclusive preoccupations of Engoroy Salango. They do, however, dominate the record, were clearly the main purposes of the area excavated, and their remains provided a unique opportunity to bring together evidence from many other sites of the period. To do them justice, it was necessary to give relatively little immediate attention to other aspects, such as diet and internal economy.

This introductory chapter follows with a history of previous Engoroy research, a description of the environmental setting of Salango, and a summary of previous excavations in Salango.

Chapter 2 describes the site layout at OMJPLP-141B-T3, site conditions, and the method of excavation. Chapter 3 explains how the stratigraphic sequence was analysed.

Chapter 4 then describes that sequence, which falls into two parts. These parts I initially label Salango 1 and Salango 2. Salango 1 is subsequently shown to belong to the middle and late stages of Engoroy, while Salango 2 post-dates Engoroy. Both parts, however, are included here, as the later material is helpful in gaining a clearer perspective on what came before. First there are accounts of each phase of building and subsequent occupation. Then there are sections describing different aspects of site activity. To maintain focus, artefacts (other than pottery) are discussed in detail only when associated directly with structured depositions and other ritual features. However, there is also a brief summary of small finds to put the nature and quantity of those particular objects in perspective.

Chapter 5 considers the pottery. The aims and method of the analysis are discussed, and the separate vessels categories are each

described. The different strands of the sequence are then brought together to assess general stylistic trends, the more precise sequence of stylistic change, and functional composition. There is a summary account of imported vessels. Comparison with assemblages from other sites then shows how Salango fitted into the wider picture of Engoroy and Engoroy-related pottery.

Chapter 6 looks at the fragments of pottery figurines found. Chapter 7 discusses chronology.

By Chapter 8, we are in a position to look out from Salango. After reviewing the evidence for Engoroy settlement and subsistence, I present an interpretation of the ceremonial structures at Salango and their associated ritual. Three succeeding sections then compare data from other sites, in and around the Engoroy zone, where buildings, human burials, and stone figurines and related artefacts have been recorded. I then assess the relation of Engoroy Salango, through exchange of ritually employed goods, to the world around it. Chapter 9 concludes with an evaluation of the contribution of the dissertation, and makes suggestions for future work.

## 1.2 PREVIOUS ENGOROY RESEARCH, AND RELATED QUESTIONS.

The first discovery of Engoroy-related material was made in 1892, during a visit to the Island of La Plata, 23 km off the shore of the province of Manabí (Figure 1). There, Dorsey (1901) found thousands of fragments of ceramic figurines, which, sixty-five years later, were ascribed to the mainland Bahía culture (Estrada 1957). Amongst the pottery pieces, there were three stone figurines, and these, as we shall see, were products of the Engoroy region itself.

In 1917, Jijón y Caamaño (1997a, 1997b) excavated at Manta, returning in 1923 to obtain data that he hoped would allow relation of

a coastal chronology to his established highland sequence. But in spite of impressive efforts to develop a unified Ecuadorian prehistory and connect it to discoveries in countries ranging from Mexico to Bolivia, his terms *Proto-panzaleo* and *Tuncahuan* have long since been forgotten on the coast, discredited by Estrada (1957); and any attempt to make sense of them now, reveals immediately that his ceramic lots were very mixed.

In the 1930's, Bushnell (1951) excavated the remains of a small prehistoric cemetery close to the beach at La Libertad. Associated pottery included vessels with a technique of decoration subsequently termed iridescent painting (Evans and Meggers 1957, 237). He decided that this represented a previously unidentified tradition, which he called Engoroy, after a local hill.

Bushnell put Engoroy somewhat earlier than the Manteño culture that had flourished on the central coast until the Spanish conquest. Comparing the pottery with material found by Marshall Saville (1910) at Cerro Jaboncillo, he suggested that Engoroy extended well into the province of Manabí. But, although Bushnell's study was mostly complete by 1940, the second world war intervened, and a further decade passed before results of this excavation were properly published.

In 1940-41, Edwin Ferdon Jr. excavated a trench into a midden mound of the same general area as Bushnell had investigated. He named the site La Carolina, and two short reports appeared immediately after (Ferdon 1941a, 1941b). But again the war brought an interruption, and it was not until 1970 that a full analysis of the pottery was completed (Simmons 1970), amplifying greatly the data on Engoroy ceramics.

By then, the broad structure of a developmental scheme had

been applied to Ecuadorian prehistory (Estrada 1957, 1958, 1962; Evans and Meggers 1961; Meggers 1966), using the terms (and rough dates) Preceramic (10,000-4000 BC), Formative (3000-500 BC), Regional Development (500 BC - AD 500) and Integration (AD 500 - AD 1532) Periods to designate successive and progressive stages in its cultural evolution.

Specifically, Valdivia ceramics, which Bushnell (1951, 123-131), leaving unnamed, had suggested were post-conquest, had been shown to be the earliest pottery of the Ecuadorian coast (Estrada 1956; Evans, Meggers and Estrada 1959), belonging to an Early Formative (Meggers, Evans and Estrada 1965). Guangala had been isolated as a ceramic phase and named by Bushnell (1951, 2-84), but he had placed it before Engoroy. This position had since been corrected (Estrada 1957; Meggers 1966), leaving Engoroy at the end of the Formative, with Guangala as a Regional Development phenomenon between Engoroy and Integration Period Manteño. Finally, a third Formative tradition, Machalilla (Estrada 1957), also isolated by Bushnell (1951, 17-21) but not named by him, had been set between Valdivia and Engoroy.

The full story, however, is less simple. First, there were problems with the period scheme's relative and absolute chronology, as well as with its conceptual adequacy (Zeidler and Pearsall 1994, 3-7; Beckwith 1996, 7-20; Zeidler, Buck and Litton 1998, 160-162). Secondly, Estrada and Meggers did not use the term Engoroy, but various equivalents.

In 1954 a midden site, R-B-1, on the hacienda La Chorrera on the Babahoyo river in the Guayas basin, was excavated by Meggers and Evans (Evans and Meggers 1954, 1957; Evans 1957; Estrada 1958). Of the three-stage occupation sequence identified, the earliest ceramic



phase, which included iridescent painted ware, was named Chorrera, after the site itself, and dated to the end of the Formative Period.

The question then arose of the relation between Engoroy and Chorrera. Since there is a great deal of confusion in the literature from this point on (Norton 1992, 28), an historical outline of the principal points of the debate over nomenclature will leave us able to examine the excavated data more freely later.

Estrada investigated much of the coast from La Libertad up to Cojimíes in north Manabí. Initially (Estrada 1957), he felt that differences between the ceramic assemblages of a general Late Formative horizon should be recognised. So he proposed a provisional Olón phase and an Ayangue phase as coastal variants of Chorrera in northern Guayas, with Tabuchilla as its equivalent in northern Manabí. And he related all of these, through the presence of iridescent wares, to Bahía I, the first stage of a longer-lived culture of southern and central Manabí.

Estrada defined Bahía on the basis of ceramic vessels and figurines from a series of cuts at Estero, just south of Manta. He noted that Bahía pottery was very like that of Guangala, and posited a rough geographical boundary between the two cultures around Callo and Machalilla on the south coast of Manabí (Estrada 1957, 163). He also showed that the ceramic figurines found by Dorsey (1901) on La Plata Island were part of Bahía I ritual (Estrada 1957, 62). Bushnell's term Engoroy, however, he did not refer to, talking instead later (Estrada 1958) of the "Libertad" phase for pertinent material of the Santa Elena peninsula.

At this stage, Estrada was intent on revising and clarifying the chronology proposed by Jijón y Caamaño (1997a, 1997b). And following advice from Evans and Meggers, he ditched his subregional

names in favour of Chorrera, keeping only Bahía I as a distinct entity, albeit part of the wider Chorrera complex (Estrada 1958, 69).

But an additional aim for this man of Guayaquil was to liberate coastal archaeology from the rule of Jijón y Caamaño's inappropriate highland cultural denominators. And he now sought to extend the influence of Chorrera, asserting its importance, and with it that of the coast, at the expense of the sierra so recently dismissed (Estrada 1958, 78).

Four years later, Estrada (1962) had two more sites, Véliz and La Sequita (Pepa de Huso), to supply material for his analysis of the Manabí sequence, and he defined an early Bahía-Chorrera component beneath the successive stages I and II of Bahía. Two dates (Meggers, Evans and Estrada 1965, 153) for Bahía-Chorrera at La Sequita were of the later 6th century BC, while eight dates from Estero put Bahía I into a range from 500 BC to 100 BC (*ibid.*).

In 1957, Matthew and Marion Stirling (1963) recovered iridescent pottery and ceramic figurine fragments from a cut at Tarqui, across the river to the south of Manta, and north of the area of Estrada's Estero excavations. A radiocarbon date of 220+/-200 BC was produced. Following Estrada, they identified the material as belonging to the Bahía de Caraquez culture. They ignored, however, Estrada's distinction between Bahía I and Bahía II.

Nonetheless, Engoroy had its defenders. Bischof joined the fray in 1960 when, working next to Zeller, he excavated three cuts into midden deposits in the valley of the Río Javita, about four kilometres east from Palmar (Bischof 1982). Following Estrada's original position, he asserted the difference between the Late Formative material of the Guayas basin and that of the coast, such as he found near Palmar. But he adopted Bushnell's term Engoroy for the

Palmar material, placing it alongside Bahía I, Chorrera and Guayaquil (Parducci and Parducci 1970, 1975) as one of several regional manifestations of a Chorreroid Series.

Bischof proposed a sequence of Early, Middle and Late Engoroy. (He also postulated a stage transitional to early Guangala. This stage was later confirmed by Paulsen (1970, 50) with material recovered from another cut at Palmar.) For his dates, Bischof used five radiocarbon samples from Palmar itself, three samples from a Machalilla component at nearby La Cabuya, and the results from other investigators' work on Late Formative sites in Manabí and Guayas. He suggested a start to Engoroy around 900 BC, with Middle Engoroy beginning around 600-500 BC, Late Engoroy around 300 BC, and transition to early Guangala in the first century BC (Bischof 1982, 162-5, 171). He defined the Engoroy zone as extending east-west from the Colonche Hills to the ocean, and from the Santa Elena Peninsula in the south, to Joá in the north.

In 1964, Lanning (1967) surveyed the Santa Elena Peninsula. He decided that coastal Late Formative ceramics were only thinly related, through the use of iridescent paint, to the Chorrera material of the Guayas Basin, and called them Engoroy so as to maintain the distinction. His reasons were not too solidly based (Simmons 1970, 429f.), but it was important as an affirmation by a prestigious investigator.

In the same year as Lanning's visit, Zevallos and Parducci excavated a "Chorrera" cemetery at Los Cerritos, about three kilometres inland from the fishing village of San Pablo, and sixteen kilometres east of La Libertad. The site produced two radiocarbon dates, 840+/-90 BC (Zevallos 1965, 24) and 590+/-80 BC (Bischof 1982, 171). In a first report (Zevallos 1965), Engoroy is mentioned twice,

as the earlier, but superseded term for what had since become Chorrera. But then in his posthumous publication, Zevallos (1995, 138-189) emphasized that the Engoroy material of the Guayas coastline should be distinguished from that of the basin site of Chorrera itself.

In 1970 Marcos, with Norton and Jarrín, excavated occupation mounds at Los Morros, close to Los Cerritos, with the aim of establishing the relation between Engoroy and Guangala (Marcos 1982). Like Zevallos, Marcos spoke of Engoroy as "coastal Chorrera". To demonstrate the Engoroy-Guangala transition, he used two vessel sets: polypod bowls with iridescent decoration, and cooking jars with red and black paint.

1970 also saw Simmons finish his typological study of the La Carolina ceramic sequence. He too emphasised the need (Simmons 1970, 55, 428-443) for a clear distinction between coastal Engoroy and inland Chorrera. For the Engoroy component, he identified twenty-seven ceramic varieties and three phases. He equated Middle Engoroy with Bahía I. Using Estrada's Bahía dates from Manabí, he proposed ranges of about 850-500 BC for Early Engoroy, and 500-100 BC for Middle Engoroy, while Late Engoroy he saw as a brief stage transitional to Guangala (Simmons 1970, 443).

In 1971, Paulsen and McDougale (1974, 1981), seeking to refine the post-Valdivia Formative ceramic sequence of the Santa Elena Peninsula, put three cuts into a midden mound at the La Carolina site (OGSE-46D) already excavated by Bushnell, Ferdon, Estrada and two other investigators. Disselhoff (1949) and Osgood (Bennett 1946). Cross-trench correlation of the excavated deposits produced a sequence of twenty-three units, spanning the period from terminal Valdivia through Machalilla and Engoroy to early Guangala.

The 1974 analysis of the Engoroy pottery focused on variable associated attributes of a single general form of fineware bowl. This resulted in the definition of a two-part Engoroy sequence, each part comprising three phases. Eight of their own radiocarbon dates, associated with Early Engoroy material, ranged from 870 to 525 BC. With a Late Engoroy-associated date of 200 BC from Paulsen's OGSE-46B site, they proposed 900-500 BC for Early Engoroy, and 500-100 BC for Late Engoroy.

Paulsen and McDougale also highlighted differences in the application of iridescent paint between Guayas Basin Chorrera (straight lines and dots) and coastal Engoroy (loops, arcs and rays), and in the absence from the Chorrera material of bowls with hollow cylindrical legs. Finally, they suggested that identity of style, between the iridescent pottery found by the Stirlings at Tarqui and that from La Libertad, pointed to a single zone of Engoroy and Engoroy-like material stretching between the two sites.

In 1977-78, Marcos and Norton ran a program of survey and excavation on the south coast of Manabí, with initial specific interest in *Spondylus* trade (Paulsen 1974; Marcos 1977-78; Murra 1982; Norton 1990) during the Manteño period, and in the role in this of La Plata Island (Marcos and Norton 1981). However, work on the island at Drake's Bay revealed an unsuspected wealth of pre-Manteño deposits, including "Chorrera" and Bahía material.

Work at two other sites in the early 1980's produced Late Formative material more recently analysed by Beckwith (1996). One of these was the settlement at Loma Alta (OGSEMa-182), excavated by Raymond in 1980 and 1982. The other was the Achallán albarrada (OGSE-45), a few miles south of La Libertad. This was investigated by McDougale in 1980-81, following an interest (Lanning 1967; Sarma 1974;

Paulsen 1970. 1976; Paulsen and McDougale 1974) in climate change as a cause of major cultural upheaval in prehistory, but with more a more specific focus on the mechanics of water management (Stothert 1995).

In the main, however, field-work on Engoroy and related material had focused on ceramic chronology, ceramic typology and competing ceramic terminologies (see Beckwith (1996, 41) for similar conclusions). Variability in the ceramics themselves had led to enormous difficulties in deploying the ever more tangled nomenclature. Investigation and reports paid little or no attention to the general context of ceramic manufacture and use. Stratigraphy, in general, was understood to refer to little more than the physical superpositioning of one set of material over another, a function of simple time rather than the product of often complex activity and intrusive deposition. The effects, indeed, of any such activity were seen to hinder the elaboration of typological sequence, rather than provide opportunity for study of the detail of depositional behaviour and the broader context of site use.

In 1971, a conference at Salinas examined evidence for contact between Ecuador and Mesoamerica (Marcos and Norton 1982). Particular reference was made to Chorrera and Engoroy and to their relations with the Ocos and Conchas phases of the Guatemalan coast (Coe 1960, 1961; Coe and Flannery 1967). Four years later, Lathrap, Collier and Chandra (1975) put Chorrera in the context of a Chavín-Olmec horizon. These were laudable and stimulating attempts to make fuller use of the data. But Lathrap's synthesis also served to highlight the lack of firm context for discussion of specific artefacts, most of the Ecuadorian pieces having no provenance beyond general region. At the same time, Engoroy was presented as a cultural phenomenon more or less lacking in anything other than borrowed

identity, relegated to the status of an artistic side-show, "retarded compared to the [Chorrera] areas to the north and east" (Lathrap, Collier and Chandra 1975, 15).

In sum, Engoroy ceramics, primarily identified though iridescent finewares, seemed to extend from La Libertad up the coast to southern Manabí, possibly even as far as Manta. While there was broad agreement for a time span for Engoroy of about 900-100 BC, there was less certainty on the dating of an emerging three stage sequence of chronological subdivisions (Table 1). In addition, competing versions for the ceramic sequence, arising from different analytical approaches to assemblages drawn from different sites, resulted in a far from unified view of Engoroy as an entity in itself. Further, while Engoroy and Chorrera were obviously related phenomena of the coast and interior respectively, a clear idea of their interrelationship had yet to develop, particularly as Chorrera, in spite of its fame, remained an extremely nebulous concept. The slowness and difficulty of the process was in great part hampered by the confusion over names. But the main problem was the absence of solid data.

Even at the largest and most often excavated Engoroy site at La Libertad, not one building had been described. Areal excavations had in general been almost non-existent, and only Raymond's work at Loma Alta had been designed specifically to look for settlement structure. La Plata (Marcos and Norton 1981, 146ff.) and Los Cerritos (Zevallos 1965, 23) had both provided obvious instances of close contextual association among artefacts deriving from distinct cultural zones; but generally, neither ceramic nor other material components were articulated to any dynamic whole save in the most broad and unspecific terms.

Table 1. RADIOCARBON DATES USED FOR THE ENGOROY SEQUENCE BEFORE 1983

SITE AND CONTEXT	SAMPLE	CENTRAL DATE	SOURCE
<b>EARLY ENGOROY</b>			
Véliz B 40-60cm	1307	850+/-115 BC	Meggers et al. 1965:153
Los Cerritos 200cm	WIS-115	840+/-90 BC	Bischof 1982:171
Los Cerritos 150cm	WIS-125	590+/-80 BC	"
La Sequita 300-320cm	SI-43	590+/-125 BC	Meggers et al. 1965:153
La Sequita 260-280cm	SI-35	575+/-105 BC	"
La Carolina OGSE46D RR		870 BC	Paulsen & McDougale 1974
La Carolina OGSE46D O		825 BC	"
La Carolina OGSE464 MM		625 BC	"
La Carolina OGSE46D L		1040 BC	"
La Carolina OGSE46D KK		750 BC	"
La Carolina OGSE46D J		810 BC	"
La Carolina OGSE46D JJ		425 BC	"
La Carolina OGSE46D H		825 BC	"
La Carolina OGSE46D C		825 BC	"
<b>MIDDLE ENGOROY</b>			
Palmar 3 C1, Level 3	Hv-1293	435+/-80 BC	Bischof 1982:171
Palmar 2 I105, Level 5	Hv-2978	345+/-75 BC	"
<b>MIDDLE/LATE ENGOROY</b>			
Estero A 400-420cm	M-1316	170+/-120 BC	Meggers et al. 1965:153
Estero A 400-420cm	M-1319	160+/-120 BC	"
Estero A 380-400cm	SI-55	480+/-60 BC	"
Estero A 340-360cm	SI-52	400+/-65 BC	"
Estero A 320-340cm	SI-49	350+/-65 BC	"
Estero A 320-340cm	M-1315	100+/-120 BC	"
Estero 1 280-320cm	W-833	200+/-240 BC	"
Estero 1 40-80cm	W-834	250+/-240 BC	"
Tarqui 250cm	M-734	220+/-200 BC	Stirling & Stirling 1963
La Carolina OGSE46B		200 BC	Paulsen & McDougale 1974

Notes: 1) It was only in the cases of Los Cerritos, La Carolina, and Palmar that the term Engoroy was applied (or is indeed properly applicable). At Véliz, the material was described as Chorrera, at La Sequita as Bahía-Chorrera, at Estero as Bahía I, and at Tarqui as Bahía. 2) All dates are given uncalibrated.



The importance of Salango, then, was to be that it offered a sequence incorporating all lines of evidence previously seen only in fragmentary fashion, with much also that was new. It thus provided the opportunity not only to tie the earlier scattered fragments to its own coherent story, but also to expand the view of Engoroy and its significance.

### 1.3 SALANGO: THE SETTING

The fishing village of Salango lies, at 1° 35' 30" S, 80° 50' 30" W (Instituto Geográfico Militar, Map CT-MIV-3), on one of the sandy bays that characterize the southern coastline of the province of Manabí (Figure 1). Pre-Columbian occupation centered at the very south of the bay, a spot sheltered from the prevailing southwesterly winds by the headland known as Punta Piedra Verde (155 m tall) and by Salango Island, less than a kilometre off-shore (Figure 2). The archaeological site is now largely occupied by a fishmeal and canning factory, whose boats take advantage of this, the most favourable anchorage for large vessels between the ports of La Libertad, 70 km south, and Manta, 70 km to the north.

Just north of the site and village of Salango, the flood plain of the Rio Salango reaches about 2 km into the hills, but is only a kilometre across at its widest point. North again, there is just a thin line of dune vegetation between the sea and cliffs as far as the rise. La Bola de Oro, that intervenes before one reaches Puerto López. As one passes to the next drainage south, that of the Rio Chico, there is a less steep slope behind Punta Piedra Verde. Salango is, then, somewhat shut off by land. Until recently, as was the case for many of the coastal villages, transport in and out was mainly by boat.

The island opposite is about 1300 m across, and 135 m high. Smaller islets lie close to the mainland further north at Machalilla and Puerto Cayo. 44 km northwest from Salango, out in the open sea and next to the continental shelf, is La Plata Island, 4 km long by 3.5 km wide, and 160 m high. There is occasional brackish water on La Plata, but although, until the recent imposition of national park restrictions, fishermen used to occupy temporary shelters there, neither it nor Salango Island are inhabited.

Between the sands and rock of the great Peruvian desert to the south, and the humid forests that run up to Panama, this central coastal strip of Ecuador is largely a region of tropical dry forest and thorn scrub. It extends north as far as Jama, another 100 km beyond Manta, and eastwards to a range of small mountains, the Cordillera Chongón Colonche, beyond which is the more humid Guayas basin. To the casual visitor, the climate and vegetation of the area can be as surprising as the behaviour of its people. Much of the mainland from Salango to Puerto Cayo and up to the watershed of the Cordillera Colonche, along with the off-shore islands, now forms the Machalilla National Park. The three population centres within the park, Puerto López, Machalilla and Agua Blanca, are also important archaeologically.

The ecology of the zone is largely controlled by the alternating regimes of the two Pacific ocean currents that converge along this stretch of the coast. From around June, the Humboldt Current sweeps up from the Antarctic, bringing masses of cool, moisture-laden air that condense as fog, or garúa, for several kilometres either side of the shoreline. In December, the Humboldt is displaced by the Equatorial Countercurrent, which brings much warmer air and heavy rains from the north. Every few years, as in 1983 and

1998. the strength and duration of this displacement is greatly increased by the phenomenon known as El Niño (Philander 1990). On these occasions, the rains may fall for the best part of a year, the heat is overwhelming, there are fierce electrical storms, strong winds blow from the northwest, and the beaches are lashed by dangerous and often lethal surf.

Average annual rainfall at Puerto López, 9 km north-east of Salango, is 250 mm, while the higher hills inland may catch over 1000mm (Hernández and Jose 1997, 8). During the hot rainy season, temperatures average 26° C, while during the garúa, they may fall by five degrees close to the sea (Zambrano and Vargas 1998, 84). Temperatures and humidity rise quickly as one moves further away from the ocean breeze.

But, although these regimes are easily summarised, their precise rhythm and intensity are far from predictable. The wet seasons may be separated by short dry seasons. Sometimes there may be no rain or garúa. Further, variations in the topography upon which they act result in a complex botanical mosaic.

The principal factor of the landscape is the Chongón Colonche range, as it approaches and recedes from the sea. About 10 km south from Salango, just beyond the Rio Ayampe, the hills run in five fingers right to the water's edge. This area, the Cinco Cerros, attracts a heavier cloud mass and higher rainfall than the low ground to north and south. Its rugged contours are consequently thickly forested, and act as a serious obstacle to land traffic. Similar terrain lies relatively close to the shore to just beyond Puerto Cayo, about 30 km north from Salango. and the road up to Jipi Japa, the main commercial town in the area.

The geological map of the region (IGM CT-MIV-C, 3489) shows

that its base is constituted by the pillow lavas, dolerite and basalt of the Late Jurassic Piñon Formation. Covering this, are the yellow clays, shales and sandstone of the Late Cretaceous Cayo Formation, though outcrops of the earlier material form the headland at Salango, and the islands of Salango and La Plata (Wilkinson 1987). At Salango, there is an upper layer of yellow clays and sandstones belonging to the Eocene San Mateo Formation. With the exception of the hard igneous formations, cliffs and hillslopes are unstable and subject to massive erosion when exposed. The lower reaches of the river valleys are covered with quaternary alluvial deposits.

Of all the water courses between the Cinco Cerros and Puerto Cayo, only the Rio Ayampe flows all year round. The lower ground is dominated by xerophytic vegetation. Characteristic are candelabra and opuntia cacti (*Armatocereus cartwrightianus*, *Pilosocereus tweedianus* and *Opuntia dillenii*), the aromatic palo santo (*Bursera graveolens*), algarrobo (*Prosopis juliflora*), and barbasco (*Jacquinia sprucei*) with its poisonous, orange fruit. Occasionally there are ceibo (*Ceiba trichistandra*). Few trees are bare of epiphytes. More bushy plants include muyuyo (*Cordia lutea*), whose soft white fruit provide a natural glue. During the hot rainy season from December on, the trees and shrubs erupt with leaf and flower, and there emerges a blanket thickness of different creepers (Cucurbitaceae and Convolvulaceae). During the cooler period of the garúa, the greenery dies back, leaving a wintry grey thinness.

Up the valleys and into the hills, different forest populations take over, initially deciduous and then evergreen, with a steadily wider variety of hardwood trees such as guayacán (*Tabebuia chrysantha*), laurel (*Cordia alliodora*) and cedro (*Cedrela odorata*). There are palms such as the tagua (*Phytelephas aequatorialis*), balsa

trees (*Ochroma pyramidale*) and strangler figs (Moraceae). Epiphytic and parasitic plantlife increases also. And there is a wealth of edible fruit available from trees and creepers, such as guava (*Inga* sp.), cerezo (*Malpighia puniceifolia*), frutillar (*Muntingia calabura*), guayaba (*Psidium guajava*) and tomatillo (*Lycopersicon pimpinellifolium*). Other plants that may be used as food are described by Hernández and Josse (1997).

Closer to the sea, rarer niches survive. Along the lower Rio Ayampe, there are stands of huge bamboo (*Guagua angustifolia*), and mangrove (*Rhizophora* sp.) is to be found still just south of Salango at the estuary of the Rio Chico.

Thirty-three species of terrestrial mammal have been found in the Machalilla Park (Albuja 1997). These include (Zambrano and Vargas 1998) possums (Didelphidae), howler and capuchin monkeys (*Alouatta palliata* and *Cebus albifrons*), anteaters (*Tamandua mexicana*), sloths (*Choloepus hoffmanni*), armadillos (Dasypodidae), squirrels (*Sciurus* spp.), rabbits (*Sylvilagus brasiliensis*), guatusa (*Dasyprocta punctata*), guanta (*Agouti paca*), perros de monte (*Dusycion sechurae*), cusumbos (*Potus flavus*), cuchuchos (*Nasua narica*), tigrillos (*Felis pardalis*), the occasional jaguar (*Panthera onca*), peccaries (Tayassuidae) and white-tailed deer (*Odocoileus virginianus*). There are also twenty-nine species of bat (Phyllostomidae, Vespertilionidae and Molossidae). The most common reptiles are iguanas (*Iguana iguana*) and toads (*Bufo marinus*), but snakes such as boas (*Boa constrictor*) and equis (*Bothrops atrox*) often find their ways under and into houses.

There is rich bird life, with two hundred and fourteen terrestrial species recorded for the Machalilla National Park, most of them in the higher forest (Zambrano and Vargas 1998). They range from

the rarer king vultures (*Sarcoramphus papa*) and their ubiquitous black cousins (*Coragyps atratus*), to tiny hummingbirds (Trochilidae). Fowl include partridge (*Crypturellus spp.*), guacharacas (*Ortalis erythroptera*) and turkeys (*Penelope purpurascans*). Raptors include Valdivia hawks (*Herpetotheres cachinnans*) and caracaras (*Polyborus plancus*). Night herons (*Nyctanassa violacea*), egrets (*Egretta spp.*) and great blue herons (*Ardea herodias*) stalk the margins of sea and lagoon, while common marine species are pelicans (*Pelecanus occidentalis*), frigate birds (*Fregata magnificens*) and boobies (*Sulidae*).

The sea itself is a varied environment, as warmer or colder currents prevail, with surface temperatures ranging from 19°C to 25°C (Béarez 1996, 16). The pools, shelves and submerged faces of the rocky headlands are host to many invertebrate species, still to be systematically documented. Lobsters (*Panulirus spp.*) and octopus are the most sought after, but there is a wide range of crustaceae, sea urchins, star fish and corals. Important shellfish include the large conches *Strombus galeatus* and *S. peruvianus*, the two large and brightly coloured oysters, *Spondylus princeps* and *S. calcifer*, the smaller *Ostrea iridescens*, and the mother-of-pearl, *Pinctada mazatlanica*.

Béarez (1996) lists six hundred and twenty-two fish species for the waters off southern Manabí, and indicates that still more remain to be identified (Béarez 1996, 141). Larger species include requiem and hammerhead sharks (Carcharhinidae and Sphyrnidae), and the manta rays (*Manta hamiltoni*) that occasionally break water in the bay at Salango. Big game fish are marlin and sword fish (Xiphidae). Those most commonly sought include robalo (Centropomidae), sea bass (Serranidae), dorado (*Coryphaena hippurus*), huayaípe (*Seriola spp.*),

snappers (Lutjanidae), corvina (*Cynoscion spp.*), mackerel and tuna (Scombridae), and lenguado (Paralichthyidae); though connoisseurs would also mention caballa (*Caranx caballus*) and carita (*Selene spp.*). Schools of dolphins and porpoises (Delphinidae) frequently pass close to the shore.

Towards the end of the year, as the rainy season approaches, a number of migrant species appear or disappear. One hears the cry of the ospreys (*Pandion haliaetus*) high above, as they come to range from their cliff-top perches. Hump-backed whales (*Megaptera novaeangliae*) head south with their new young. Female turtles, most commonly the green (*Chelonia agassizi*), but also the hawksbill (*Eretmochelys imbricata*), drag themselves out of the sea to lay their eggs in the sand. The sea-lions (*Zalophus californianus*) that had come to the rocks of La Plata, and less commonly to Salango Island, are suddenly gone. Less welcome visitors are mosquitoes (*Anopheles spp.* and *Aedes aegypti*), bringing malaria and dengue, and grillos (*Grillus assimilis*), which are simply a nuisance. (A full insect inventory has not even been attempted.)

To supplement the natural resources of sea and land, some agriculture is practised, though the absence of adequate irrigation for generally thin soils often leads to poor harvests. Bananas and citrus fruit are gathered from trees in the semi-wild forest. The two main cash crops are maize and coffee. There are also yuca, water melons and peppers, and green vegetables are increasingly grown in garden plots as an effort is made to encourage a more varied and health-conscious diet. Cattle and donkeys are left to forage at will. Chickens and pigs are kept around the houses, though the latter are periodically wiped out by swine fever.

The main economic development of the past ten years has been

international tourism. As with much else, this has been subject to the vagaries of fashion, and currently focuses on whale-watching. The ecologically-minded visitor is met off the bus at Puerto López by the representatives of a dozen guide agencies. But the site museums at Salango and Agua Blanca are popular, and *Spondylus*, the shell on which much pre-Columbian wealth in the area was based, has been taken up to name bars and a housing estate. Replicas of Manteño stone seats can be bought. And whereas the nuts of the tagua (*Phytelephas aequatorialis*) were once sent to Europe to be made into buttons, they are now harvested for the local production of beads and ornamental figures for sale in the smart shops of Quito and Guayaquil.

Yet most people have their water delivered by tankers, mains electricity fails in the rain, and the telephone link is far from dependable. Little resists for long the attack of insect life, mould and the damp. And the busiest time of day is around dawn, when fish are landed and sold on the beaches.

While the local people have lost their native language, and wear no more traditional costume than T-shirts, shorts and flip-flops, they carry the same beaky profiles as are depicted on Manteño and earlier figures. How much the environment has altered since the earliest occupation is difficult to assess. Sea level five thousand years ago, as indicated by lagoon plant remains at the Valdivia base of Site OMJPLP-141A (Norton, Lunniss and Nayling 1983, 15), was the same as it is today. Marine fish species have not changed (Béarez 1996, 115). In the absence of findings to the contrary, it is reasonable to suppose that the main changes in the region have been in the quantity and distribution of floral and faunal species. With an increasing human presence and loss of the primary habitats (Dodson and Gentry (1991) provide some disheartening estimates of recent



destruction), forest populations have diminished in number and retreated to the less accessible interior. Likewise, marine populations will have decreased. On the whole, though, the range of species available for exploitation is probably very close to that still found today.

#### 1.4 PREVIOUS WORK IN SALANGO.

In August 1979, the presence of archaeological remains at Salango, in the area of the Empresa Pesquera Polar fish-factory (Figure 3), was officially recognised in a survey carried out by the Programa de Antropología para el Ecuador (PAE). Two site designations were made (Norton, Lunniss and Nayling 1983, 13). OMJPLP-140 was the number applied to a pair of partly buried man-made terraces running, at 6-10 m above sea level, from the factory, along the base of Punta Piedra Verde, to a point about 700 m to the south-west (Allan 1988). OMJPLP-141 was to be the level ground at the base of the hill, immediately below and to the north of OMJPLP-140, at approximately 5 m above sea level. Two small test pits of 2 x 3 m were excavated to a depth of 30 cm to confirm the presence of stratified deposits suggested by surface finds in these areas.

In 1980, news of disturbance to Site 140 led to six months of intensive rescue excavation, under the direction of Michael Muse. In the area affected, exposed features were mapped, surface finds collected and stratigraphic profiles drawn. Four trenches (of 5 x 5 m, 7 x 0.5 m, 2 x 3 m and 8 x 3 m) were then excavated, the smallest of them through 3.5 m of stratified deposits and down to bedrock. At Site 141, the test pit of the previous year was carried further down by Judy Kried.

In February 1982, work on Site 141 was resumed, under Olaf

Olmos and then Alicia Kurc. and continued until the rain and flooding of the Niño of 1983 brought about the collapse of the 6 x 6 x 5 m pit that had been created. In June 1982, a 2 x 3 m test pit was opened 20 m west of the original Site 141 excavations, halfway to the factory buildings. Subsequently, a further twelve neighbouring units of similar size were begun, and then all thirteen were amalgamated as an independent site, designated 141B, while the earlier hole was renamed 141A. Expansion of 141B continued during 1982 and through the months of 1983 that permitted work, opening up a total area of roughly 22 x 25 m.

With the rains of 1982-83, Sites 141A and 141B were completely flooded. A small lake formed to the east. Its waters drained along the outside of the north wall of the factory precinct, exposing a 100 m profile of archeological strata, 2 to 3 m deep. A 20 m section of this was cleaned up and recorded, and, 50 m north-east of 141B, a 2 x 4 m unit was excavated as Site 141C, under Alicia Kurc.

Full analysis is still a long way off, but the general nature of the sites has been described by Norton, Lunniss and Nayling (1983), and some specific aspects have been tackled: Kurc has reported the excavation of Site 141C (Kurc 1984) and part of the funerary assemblage from 141B (Kurc n.d.); Jackson (1987) has analysed Valdivia lithics from 141A and 141B; Allan (1988) has assessed evidence at Site 140 for Manteño *Spondylus* shell processing; and Everett (1990) has analysed the Machalilla ceramics from 141A. Beckwith's (1996) analysis of the 141C Late Formative ceramics will be referred to later, but is omitted from further mention here as it post-dates the 141B-T3 excavations.

#### 1.4.1 OMJPLP-140

Evidence was recovered of occupation from Engoroy times on, but Manteño activity was the most intense and extensive. Overlying the natural bedrock were strata containing a mix of Engoroy and Guangala sherds. Next were layers with sherds of Guangala 3-6 (Paulsen 1970). On the basis of various pits and post-holes, Engoroy and Guangala occupation was interpreted as relating to building construction and domestic activity. It is not certain whether there was continuous occupation between Engoroy and Guangala.

Following Guangala 6, the site was "abandoned until apparently well into the Manteño period" (Allan 1988). Activity is then interpreted as sporadic processing of *Spondylus* and *Pinctada mazatlanica* shell under light, temporary shelters, which were rebuilt each season. There were large quantities of *Spondylus calcifer* fragments with the coloured exteriors removed, and smaller numbers of *Spondylus princeps* similarly treated. While the coloured exteriors appear to have been taken to another area or site for further processing, the white interiors were used for the manufacture of beads and for the production, through burning, of lime.

Pottery from the sequence of Manteño levels was considered to be relatively unchanging and dominated by domestic types suitable for cooking. "The homogeneity of the ceramic assemblage also implies a short-term occupation" (Allan 1988). Glass beads, three fragments of iron and a lead ball indicate Spanish contact towards the end of Manteño occupation.

#### 1.4.2 OMJPLP-141A

Following the test excavation of 1979 to a depth of 30 cm, a further 11 adjacent units of 2 x 3 m were tested to various depths in

1980, before an area of 2 x 1.40 m was taken down through 5 m of stratified archaeological deposits. In 1982, next to this latter area, 6 units of 2 x 3 m were opened up to provide a more ample view of the strata and features met in 1980. The evidence from 141A was of a much longer and more complete sequence than that of 140.

5 m below ground level, roughly at current mean sea level, there was a hard layer of encrusted material of irregular formation, interpreted (Norton, Lunniss and Nayling 1983, 42) as the calcified remains of a mangrove root system. Associated was a bowl, fractured but otherwise complete, of Valdivia IV/V (Hill 1972-74). Sitting on top of the formation, were three bundles of *Pinctada mazatlanica* shells: one valve had a perforated centre, and another group was placed around and over a *Strombus peruvianus* conch.

Reaching back up from the lower edge of the formation was a 25 cm thick layer of mixed worked and unworked shell, stone and bone. Several sherds seemed to differ significantly from Valdivia pottery of the Santa Elena peninsula, but it was not clear whether they represented a local variant within the wider Valdivia tradition or an intrusive element from something and somewhere distinct.

Overlying all this and filling the lagoon, was a metre thick layer of almost sterile sand. Though perhaps the result of natural processes, it included some sherds, in particular the fragments of a narrow-necked jar of Valdivia VI/VII (Hill 1972-74). Around the upper half of this vessel was an appliqué decoration highly suggestive of the spines of a *Spondylus princeps*. This motif was also found on a sherd from one other vessel.

The Valdivia habitation site has not been found, but was presumably further away and higher up, at a spot from which the few sherds found of those phases could have been washed down with the sand

that filled the lagoon.

There is no uncertainty, however, as to where the Machalilla settlement may have been. A metre of dark grey to black sand with large quantities of charcoal, fish-bone, shells, pottery, chert and shell tools and ornaments itself covered the lagoon infill. Features included post-holes, compacted floors, and twenty-eight graves containing the skeletons of thirty-eight individuals. While the position of the grave was, in most cases, marked by a stone, only one male was buried with surviving internal grave goods: over the skeleton was an upturned ceramic vessel, with a shape closely comparing to that of a sea-turtle, and over the head, two complementary *Pinctada mazatlanica* valves, and two hand-sized grinding stones.

Everett (1990) recognised four Machalilla ceramic phases. She identified transitional forms between Valdivia and Machalilla, and between Machalilla and Chorreroid. She then inferred continuing occupation in the area right through these ceramic stages.

Several sherds were identified (Norton, Lunniss and Nayling 1983, 49; Everett 1990) as belonging to the Kotosh Wairajirca phase of the central Peruvian Andes, and others as of the eastern Ecuadorian Pastaza phase. Obsidian from an Ecuadorian highland source, and beads of turquoise and lapis lazuli, also exotic, were further evidence of long-distance trade (Norton, Lunniss and Nayling 1983, 49).

Of Engoroy occupation at 141A, nothing was specifically reported. But much of the material identified as Bahía belongs to this phase. The Bahía layers were variously coloured, compacted clays, overlain by a thin deposit with high charcoal content (*ibid.*, 54-57). There were many features, irregularly distributed, and many areas of burnt soil. There was one arrangement comprising a clay-filled trench running parallel to a wall also of clay. A high percentage of

iridescent pottery was noted. Groups of stone figurines, similar to others from La Plata island, were found "fixed firmly in the floor". There were two moulded ceramic figurines, one male, the other female. Large numbers of stone beads indicated close connections between the "Bahía" occupation at Salango and that on La Plata.

In the light of work on 141B-T3, it is clear that the stone figurines are of the terminal stage of what Bushnell (1951) called Engoroy. And the moulded ceramic figures correspond to Estrada's (1957; 1962) Bahía I. But the term Engoroy is not to be found at all in Norton, Lunniss and Nayling (1983). And the term Bahía was used without attention to Estrada's distinction between its earlier and later stages. This confusion is the symptom of an impetus to support the established sequence of regional ceramic phases at the expense of the particularity of individual site histories.

The Guangala occupation at 141A was reported as immediately succeeding the Bahía, with the supporting evidence of two radiocarbon dates (Norton, Lunniss and Nayling 1983, 61). While there is no need to doubt the dates and the dating of the contexts from which the samples derive, it is again striking how important it then seemed to demonstrate cultural succession in terms of the over-arching concepts of Bahía and Guangala. But Norton (*ibid.*, 56), while stating the temporal priority of Bahía at Salango, acknowledged that the relationship between Bahía and Guangala remained unclear. As with the Valdivia material, some uncertainty with the terminology was developing.

Of the Manteño occupation at 141A, nothing is said except that the post-holes were larger than those found at Site 140 (*ibid.*, 67).

#### 1.4.3 OMJPLP-141B

The ceramic sequence encountered at 141B was similar to that for 141A. But in terms of general context and feature type there were some major differences.

Valdivia and Machalilla layers were reached only in one or two of the thirteen test pits opened up in 1982, and altered nothing of the impressions gained from 141A. And once more, there was no material identified as Engoroy.

The principal interest was the finding of a steadily increasing number of graves, for the most part accompanied by high quality pottery considered to be Bahía. It slowly transpired that these burials were located within a low mound formed by a sequence of superimposed square enclosures (measuring about 13 x 13 m), with a main entrance at the centre of the NE side. (It so happened that the first test pit was sited at the very centre of these structures.)

Once it became clear that small pits were inadequate in scale and logic for investigating this site, the former individual units were amalgamated, and the excavation area expanded. The post-Manteño, Manteño and immediately sub-Manteño levels (these latter being culturally sterile) were removed from around the test-pitted area until the four corners of the uppermost and most easily identifiable enclosures had been exposed. While most of this was done manually, the process was accelerated by using shovels rather than trowels, and a mechanical earth-mover cleared parts of the outer limits.

Access to the site was conditional on the co-operation of the fish-factory management, and was constrained by the location of their various installations. There were also plans, realised in 1989, to build a new warehouse precisely over Site 141B. This excavation, then, like that of Site 140, was something of a rescue dig. And it was

unlikely that there would have been time to work methodically down through the upper layers and still have long enough to make an adequate investigation of the unparalleled structures and associated burials beneath.

But as it happened, this expansion of the site was almost immediately followed by the onset of the 1982-83 Niño phenomenon, which brought a temporary halt to work there.

A preliminary report on the graves of Site 141B has been written (Kurc n.d.). At the time, however, there was little understanding either of the relation of the burials to the enclosures, or of the enclosures themselves. Much material of relevance has been recovered since. Norton, Lunniss and Nayling (1983, 27-37) included a detailed description of one of the later clay structures; but this was more by way of illustration of the excavating and recording methods then being used for 141B-T3, than as part of a wider description of the site.

Also, while the pottery was generally considered to be Bahía, it was recognised that 1) Guangala material had been found contained in Bahía graves (*op. cit.*, 61); 2) the Bahía pottery bore a strong resemblance not so much to that of Bahía itself as to material looted from a cemetery at Salaite, 22 km to the north (Simons 1985); and 3) one of the Bahía bottles seemed strikingly similar to examples from Vicús, in northern Peru.

#### 1.4.4. OMJPLP-141C

The excavation reached a depth of 4 m, the level of the water table. Although Valdivia sherds were recovered during a collection from the base of the channel created by the flood waters, no contexts containing Valdivia material were met during excavation. This suggests



that the sherds were redeposited from another area.

Machalilla levels were domestic (Kurc 1984), with highly organic soils. No evidence was found of structures. Two burials appeared to be of this period, one each being excavated from the cut itself and the cleaning of the long profile. In general, the material was similar to that of 141A.

The overlying "Chorrera" levels were also highly organic in soil type, and suggestive of domestic activities. Not only did the depositional sequence of layers indicate continuing occupation, the pottery also presented a sequence of gradual transition from Machalilla to "Chorrera". One grave was found in the cut, and a further four from the profile may also have been of this period. Neither these, however, nor the possible Machalilla graves, were accompanied by goods, and cultural ascription must be provisional.

The relation between "Chorrera" and Guangala is not reported with any reference to the pottery. But features and evidence of buildings, in particular post-holes, became clear and common in Guangala levels, and were associated with yellow clay floors, alternating in succession with thin layers of midden material. "Bahía" pottery was only weakly present, "suggesting a late, marginal occupation merging with early Guangala". Twenty Guangala burials were excavated, eleven with goods, in graves probably contemporary with the living floors. The Guangala pottery sequence was tentatively divided into three phases.

Manteño occupation was represented by two large rubbish pits, any associated strata having been destroyed by the recent construction of a road.

141C was a small excavation, conducted under the difficult circumstances of a Niño. But even without close analysis, general

comparison with 141A and 141B would raise questions both about the application of the accepted terms for pottery types to the situation of Salango, and about activity there between the disappearance of Machalilla pottery and the final manifestation of Guangala. There were clearly major differences in site function. The continuing domestic occupation of 141C between Machalilla and "Chorrera" had not been recorded at 141B, nor had the domestic activity associated with Guangala pottery. 141C had only a shadowy "Bahía" presence, while at 141B the "Bahía" pottery was both abundant and associated with high-status burials and complex structures. Functional differences suggested by layers and features were reinforced by marked differences in pottery, which in turn confused attempts to discuss ceramic chronology in terms of serial development. The Late Formative and Regional Development ceramic sequences at 141A and 141B were not the same as that at 141C, even though only 50 m separated the sites.

#### 1.4.5 Conclusion

This outline has presented the excavations prior to that of OMJPLP-141B-T3 so as to emphasize: 1) variation between the sites; 2) the problems had in discussing them in the past; and 3) the necessity, at such a complex site, for the close attention to stratigraphy and context adopted in the excavation and analysis of 141B-T3.

In October 1983, I was appointed field director at Salango, and given responsibility for making sense of 141B. The immediate need was for re-excavation of the 141B sequence already tested, so as to: 1) demonstrate the nature of the complex structures; 2) demonstrate the relationship between the structures and the burials; 3) recover pottery through areal excavation that could be put in the context of buildings and burials, so allowing these to be related to other

ceramic sequences.

Beyond these specific aims, we were faced with an unusually rich site, which promised basic information about an area whose archaeology was little documented, especially as regards the Late Formative - Regional Development Periods. Furthermore, from the evidence so far recovered, the site had much to reveal concerning not only its own internal development, but also relationships with other areas, both of Ecuador and of Peru.

## CHAPTER 2 SITE LAYOUT AND EXCAVATION METHOD

OMJPLP-141B covered 494 m<sup>2</sup> (Figure 4). Its main visible component, before the excavation of Trench 3, was a low platform formed by the remains of a sequence of superimposed clay enclosures. But much of the central portion had disappeared down to Machalilla levels, mainly through excavation, but partly through the collapse of deposits around the test pits. As the west quarter of the structures was the best preserved, it was decided that this would be the area to work on first.

The extent and orientation of Trench 3 was then determined. (Trenches 1 and 2 were two modern rubbish pits to the north and east which had been earlier squared off for inspection of the stratigraphy.) Two lines were set out from a point close to the centre of the platform, perpendicular to its north-west and south-west sides, and at right angles to each other. The lines were taken towards, but not completely up to, the respective corners of 141B. The west side of 141B was followed as that for Trench 3. The trench edges were designated Sections 1, 2, 3, 4, and 5, for the SE, SW, W, NW and NE-facing sides respectively (Figure 5).

The resulting area was of 88 m<sup>2</sup>. This was 1) large enough to allow investigation of one corner of the enclosures, their interiors and their exteriors; and 2) so oriented as to provide good profiles of the same. And three quarters of the main structures, including the entrances on the north-east side, were left for future work.

Excavation method was based on the single-context system (Harris 1979) used by the Department of Urban Archaeology, Museum of London (Schofield 1980). This system is widely known, but a brief summary of its application at Salango will made here.

The unit of excavation was the context, the term being

applied both to deposits and to negative features (or cuts). For each context there was a separate record on one of the forms designed at Salango (Figure 6). To standardise the terms used in the descriptive and other sections of the context sheet, a manual was produced. This, with Spanish and English versions, listed the different aspects of the contexts to be recorded, the order of recording, and the sets of terms to be used. A sheet of single format was used for all deposits and negative features other than burials, which had their own record form.

Each layer and cut was planned separately at 1:20. Skeletons were planned at 1:10. A four metre grid was set across the site, oriented to magnetic north. (All references to building and feature orientations should be read with this in mind.) Contexts were planned for each unit of the grid under which they lay, using 1 x 1 m planning frames strung at 10 cm intervals.

Each context plan, then, could consist of one or more parts. The plans for each unit were stored separately. Stratigraphic relationships were determined initially according to grid unit, and placed on separate Harris matrixes for the relevant units. On each plan, a mini-matrix was drawn, showing all stratigraphic relationships indicated by reference to earlier context plans in the unit. These mini-matrixes were cross-referenced, adding in turn the plan numbers of underlying contexts to those of earlier excavated contexts. This was done on site.

At the end of the week, the records of contexts excavated over the previous five days were checked, and the contexts added to the overall site Harris matrix. Direct stratigraphic relationships observed on one part of a plan might well become indirect relationships when all parts of a plan had been considered together.

Only direct relationships were recorded on the context sheets and site matrix. At the same time, new stratigraphic relationships were cross-referenced. Finally, the location of the new contexts on the site Harris matrix, defined by a system of lettered rows and numbered columns, was recorded in a matrix register.

Each of the five sides of the trench was treated as a permanent section. Thus the surface contours were drawn at the start of the excavation, and as each context passing through any one of these sections was removed, the alteration to the section profile was added to the drawing. Each negative feature was drawn in cross-section. All sections were drawn at 1:10.

All finds and samples were identified by context number. Separate registers were kept for: context numbers; the site matrix; levels; the numbers of soil samples taken for flotation and analysis; photographs; and charcoal samples. No site diary as such was kept, although notebooks were used, any pertinent information or observation then being transferred to the context sheets.

The context, then, was both the unit of excavation, and the entity to which all information and material was related by record.

All excavation was with 3" to 5" hand trowels, or with smaller instruments in the case of skeletal and other delicate material. Soil from all contexts was sieved, using 3 mm and 1.5 mm mesh according to whether there was more or less clay in the soil. (Thus there was better recovery from sandy soils.) Artefacts within structured depositions were planned *in situ*. Otherwise, all material was simply bagged according to context. To help protect the site, all work was done barefoot.

A system of random stratified sampling was established for the collection of soil for flotation and chemical analysis. In

addition, judgement samples were taken from contexts with high organic content that would otherwise not have been included in the random sampling. Samples were ideally 10% of the context, and of a minimum 5 kg; but in many cases contexts were so small that only a fraction of this weight could be collected.

Measurement of the elevations of contexts were taken with a standard level, using the top of the concrete footing of one of the columns of the factory east wall as Temporary Bench Mark (TBM). Readings were recorded in a levels register, corrected for instrument height, and then put on the context plans. As there was little difference between the TBM and the site ground surface, any levels given are as written on plan, and can be taken as depths below modern ground level.

Photographs were taken as a record that would aid interpretation of the site, to demonstrate site formation at each structural phase, as records of soil colours, and as potentially illustrative material for educational purposes. All structures and burials were included, as well as artefact depositions and all other major features. The result is a corpus of eighteen hundred pictures, each in black and white and as a colour slide, that fully documents the process of excavation.

As far as possible, each context was both excavated and recorded by the same person, though this did depend on the experience and skill of the excavator. On-site personnel, changing more or less frequently, included: professional field archaeologists, for the most part British; local assistants with long experience of field work; student archaeologists of Ecuadorian, North American, Peruvian and other universities; and volunteers from the Earthwatch Foundation. Numbers varied, from a minimum of two to a maximum of ten or eleven.

During hotter weather, midday outdoor temperatures could be almost intolerable, even for local people. So a bamboo and palm thatch shelter was built at the side of the site. The heat would also dry out the soils to the extent that, under the fierce light, differences in soil colour and texture at the surface would become completely blurred. Fortunately, we were able to use fresh water from the factory to bring out the differences again. Otherwise, it is doubtful whether contexts could have been defined accurately.

Conversely, during the overcast, often drizzly weather of the garúa season, soil differences were much easier to see. But a steady drizzle or rain could also make the clay soils sticky, and under such conditions, work was stopped so as to avoid damaging the site.

Seasonal variations had other, indirect effects. An abundance of fish (usually occurring with the garúa) would be accompanied by an increase in output by the factory, resulting in the production of large quantities of noxious smoke. An off-sea breeze would drive the smoke across the site, occasionally as an impenetrable darkness. Not only did this make work impossible, but much black soot was deposited, needing removal before excavation could carry on.

Much time, in fact, was spent keeping the surface clean, but this was essential for any clarity of work. The subtlety and complexity of the stratigraphy required constant attention if errors of definition were to be avoided. This is true of all sites, but was especially so at Salango.

Soils ranged from pure clay to (very rare) pure sand. Component particle sizes were estimated using simple tests for stickiness, while colours were measured using the Munsell Soil Color Charts. Once the ground had been dampened and scraped, deposits were usually easily differentiated. There was no sign of significant



post-depositional mixing of layers, although occasionally there was some blurring of the interfaces between layers as the result of compression of the higher onto the lower deposit.

The only observed mechanical disturbance to site soils was caused by ants. Their small tunnels, less than 1 cm in diameter, produced a stippled effect, through contrast with the surface soil of particles carried up from lower deposits. It is perhaps possible that very small objects (e.g. shell beads) could have been moved from their original sites of deposition, but it is not likely. Tunnelling by hermit crabs would have been more significantly disturbing, but these creatures were seen only rarely, and then at the bottoms of the deeper pits that cut through damper, sandier soils. No obvious root disturbance was seen, nor any sign of disturbance, of non-human origin, that might have taken place post-depositionally in antiquity.

However, during the rains of 1982-83, 141B was often completely flooded, with water penetrating both from above and to some degree laterally, from the pits excavated at the centre. Buried human bone, in particular, may have been affected by this soaking and subsequent drying-out. Another potential chemical factor was the factory soot.

Finds were bagged separately according to material, and taken back to the project facilities at the north end of the village, a distance of 700 m. They were then washed or brushed clean, marked, given some preliminary sorting, and inventoried. A small finds system was employed for complete artefacts, fragments of rarer and finer pottery, worked shell and worked bone, metals and worked stone. This latter category excluded obsidian, as an imported exotic, and knapped lithics of other materials, which were each counted as separate categories. But, in view of the large quantities of finds produced,

and the small number of staff available. no attempt was made during the period of excavation to carry out any systematic artefact analysis.

Work continued on site throughout the year, Monday to Friday, with interruptions for bad weather, or during national holidays and important local fiestas. All records were kept up to date on site, then checked at the weekends. Excavation of OMJPLP-141B-T3 began on the 11th. of November 1983, and ended on the 7th. of October 1986.

### CHAPTER 3 POST-EXCAVATION ANALYSIS AND INTERPRETATION

The primary aims of the analysis of excavated contexts were 1) to reconstruct the sequence of buildings and occupation of the site, so that its formation at any one stage could be described; and thereby 2) provide contextual background for analysis and interpretation of the associated artefacts.

5437 contexts (numbers 1-999 and 3000-7437) were recorded for 141B-T3, roughly one fifth of them being layers. With an excavated depth of 70 cm across the area around the central structures, increasing to 90 cm or more at the outside edge of the last structure of the sequence (see Figures 139-143), a rough average depth for the site was 80 cm. With a total area of 88 m<sup>2</sup>, the volume then of excavated material was about 70 m<sup>3</sup>, giving an average of a little over 77 contexts/m<sup>3</sup>. This gives some idea of the density the stratigraphic sequence, and thus of the difficulty to be had organising the quantity of data recorded.

First, all context sheets were reviewed, and a preliminary interpretation made of the nature, function and/or formation of each context.

The soil deposits ranged from sand to clay, many being mixtures of different materials. Layers ranged in thickness from less than 5 mm to more than 35 cm. For the most part, clay layers were yellowish brown (10YR 5/6) to very pale brown (10YR 7/4), with a very low or non-existent artefactual content. Yellow clay is the subsoil of the surrounding hills, but the archaeological deposits were far smoother, and more tightly bound, as well as being localised and unconnected to any extensive natural formation. They were clearly, then, artificial deposits, intentionally laid, and these and other clay layers were interpreted as Prepared Surfaces.

At the dark end of the colour range (most soils could be measured with the 10YR page of the Munsell Charts) were dark grey brown (10YR 3/2) to very dark grey (10YR 3/1) sandy clay loams or sandy loams, with charcoal inclusions and occasional small pieces of yellow clay and other soil inclusions and patches, and with a relatively high artefactual content. The high organic content of these soils, their mixed nature, and the generally irregular disposition of the artefacts, suggested that they were Midden Layers.

Six main other interpretative layer categories were used. Occupation Layer was applied to deposits less dark than the midden layers, oscillating around 10YR 4/3, and with a high content of artefacts, regularly disposed (i.e. horizontal rather than at odd angles). Floors were layers, not of prepared clay, over which artefacts were found scattered. Wash was used for layers of dark brown sand, sandy silt or silt loam, usually with frequent charcoal flecks and sherds more abraded than usual. These deposits occurred in the south west area of the site, tending to slope down towards the central platform from the direction of the hill to the south-west. Areas of *in situ* burnt soil were called Open Hearths, while layers of ash were simply called Ash. An Interface was the product of the merging surfaces of superimposed layers.

For the negative features, ranging from only a few centimetres to over two metres in depth, eleven categories were defined: Grave; Figurine Deposition; other Ritual or Structured Deposition; Wall Trench; Post-hole; Stake-hole; Post Base; Rubbish Pit; Fire Pit; Rectangular Pit; Linear Feature.

Most of these terms are self-explanatory. Figurine Depositions were an independent category on account of their number. Ritual Depositions were any that demonstrated structure and intention

in the nature, location or disposition of their contents. Rubbish Pits had a high density of pottery, and/or larger fragments of pottery than were normally found. Wall Trenches were all those linear cuts that contained clay deposits which themselves filled and sometimes stood proud of the trenches. Linear Feature was applied to any long, shallow depression other than Wall Trenches.

Any layer or negative feature that could not easily be defined by one of these categories was designated "Function and formation unknown".

Attention thus initially focused on and radiated from contexts for which an interpretation appeared to be straightforward. It was important at this stage to have ideas about the function and formation of contexts that could be refined and extended while the sequence of site formation was being interpreted through study of the Harris matrix.

The size and complexity of the matrix diagram defied any direct, manual approach to its analysis as a single whole. I began, then, with the grid unit matrixes.

Basic depositional sequence consists of layers, whether or not, or to whatever degree, they can be interpreted. By omitting negative features, the main sequence of deposition will be made clear. That done, negative features, in particular post-holes, can be considered as layer attributes, to be used for the later definition of upright structures and activity areas based on the layers.

It was clear, however, in this particular case, that the formation sequence was based around the buildings of the central platform. Other than surfaces of clay, the main surviving material components of these buildings were perimetral walls of clay with U-shaped foundation trenches. These walls too needed to be included as

markers of construction episodes. Finally, all graves, figurine and other structured depositions, rubbish pits, fire pits and linear features were included, as elements of the specialized activity for which the site appeared to have been designed.

Outline matrixes, then, were drawn for each grid unit, incorporating the contexts just described. The matrixes were annotated, to indicate context category and (in the case of layers) soil description, with references to any other grid units in which any particular context lay. From these outline matrixes, more schematic, skeleton matrixes were prepared, in which appeared only key contexts, i.e. all those major structural components and more extensive layers which defined the principal depositional episodes in the sequence.

Now began the process of rebuilding the site sequence as a whole. First, from the skeleton matrixes of the grid units, a skeleton matrix of the site was drawn, showing the relationships of all key contexts. Plans were then drawn of each of these key contexts, at 1:20. Many key contexts, originally having been extensive deposits, had been fragmented by subsequent intrusive activity, and their separate parts were excavated and recorded individually. Each key context plan, then, included all those separate parts that could be correlated. Elevations with respect to the TBM were included.

The next stage was to produce key context matrixes that would show the sequence of formation subsequent to that of each key context. In other words, key contexts had been used to block out major episodes of construction and occupation. Now the other layers and major features had to be added to show the pattern of depositional activity (other than the erection of posted structures), associated with each of these episodes.

At no stage in its formation was the site ever covered by a

single layer. The digging of the wall trenches further complicated interpretation by creating islands of stratigraphy, although some correlating links between these islands could be made. The digging of the graves over and around the platform, and the presence of other, smaller cuts resulted in additional loss of evidence for the main sequence.

The combined result of these three factors was a recovered stratigraphic sequence with a clear backbone of major building events, but also with occasional areas of uncertainty regarding the relative positions of major events only partially represented in the record. And there were more common areas of uncertainty regarding minor events. The key context matrixes, then, described not unambiguously self-contained and wholly discrete temporal phases, but: 1) the sequence of deposition between each key context and the next key context in the overall sequence; and 2) strings of any layers and major features overlying the base key context and capped, not by the next key context, but by other key contexts higher in the sequence.

To create the key context matrixes, two resources were used. Earlier, on the basis of the outline matrixes for the grid units, a register had been prepared of all layers and major features, recording in each instance their stratigraphic ranges - i.e. their positions in the sequence relative to the key contexts. From this register, lists were made of all contexts in each stratigraphic range. All contexts relating by succession to each base key context were then located on the site matrix, and their relationships with the base and overlying key contexts translated onto the new matrixes. During this stage, further correlations became apparent.

Next, composite plans were drawn, representing the depositional sequence described by each key context matrix. The procedure here was

to work down the various strings from underneath each higher key context, drawing as much of each context outline as would have been visible beneath the later contexts in the string. (Thus the latest context in each string would be wholly represented, and those at the bottom might well not have been shown at all.) As this was being done, more information on the sequence made itself known, arising firstly from identification of stratigraphic relationships that had earlier been overlooked and not entered on any of the records; and secondly, from the recognition of smaller nodes in the sequence.

Finally, before returning to examine each episode in detail, the broad outline of the sequence was reviewed, so as to obtain a more concrete idea of its shape and progress. This was done very simply by drawing in turn, from the bottom up, each key context in plan outline and in schematic profile along a major axis. In this way it was possible to chart the alternating stages of construction and occupation as the boundaries of the one were obscured by the deposition of the other, re-established, and so on.

This process consisted, then, of a series of ordered steps in the breaking down and reassemblage of the mass of information relating to the site's depositional sequence. From the written and graphic records, evidence was drawn to flesh out, interpret and refine the essentially abstract stratigraphic record. With each stage, the whole sequence was reviewed, from a slightly different angle and at a different depth of detail, so enforcing re-examination of what had been done before. Thus the site came to be seen as an incrementally structured whole, the process of analysis replaying as far as possible the process of formation. (It is assumed, for lack of evidence to the contrary, that each of the sites's building episodes are, if not completely, then at least partially represented.)



At the same time, in place of seeing the uncertainty of floating contexts just as a problem thwarting the division of the site into successive, serially related phases, there came the recognition of some parallelism operating around the central sequence. (A similar parallelism has already been noted in the relationships between sequences excavated at Sites 140, 141A, 141B and 141C.) From this, it was evident that by attempting too rigidly to enforce a single, unilinear sequence of phase division, something of the real nature of the site would be lost. This is not to say that there was not, in absolute chronological terms, a series of successive particular events; rather that, not only might it be impossible to account exhaustively for that series, but in the attempt to do so, one might be blinded to the possibility of anything other than a strictly unilinear paradigm.

In retrospect, this seems eminently obvious. But it is not always taken into account in the definition of cultural chronology at its more detailed levels. And it must be emphasized that this evaluation of sequence, as an incrementally structured and interrelated whole, arose out of the application to a complex site of the particular method of excavation and recording adopted, one that allowed complexity fully to present itself and be allowed for.

The further methodological consequence of dealing with the Salango sequence, was that the fact of its complex stratigraphic relationships shaped later consideration of the individual contexts and their associated artefacts. Artefacts, contexts and stratigraphic relationships came to be seen as attributes of each other.

This account of the form of the analysis has pointed to one large omission, and, for clarity of exposition, made another. Only major negative features were included, leaving out the majority of

smaller features, many of them unquestionably post-holes. The reason for this omission was the need first to develop a clear picture of the sequence of horizontal deposition. Ideally, one would work again through the data, attempting to define patterns of distribution of possible post-holes, particularly in the area of mound and walls, that might represent upstanding buildings or secondary structures. Time has not permitted this, except in one instance, which brings me to the second omission.

Excavation of Trench 3 ended with the removal of all intrusive features and overlying deposits from the clay surface that begins the sequence of major structural events central to 141B. The contexts associated with this surface, and overlain by the next major structure, were the subject of a small-scale analysis, similar in its approach to that later adopted for the rest of the site and just described. In addition, however, to fifty-six layers, three hundred and three negative features were treated. Analysis of the post-hole patterns was greatly facilitated by their relatively complete preservation, due to the protection of the thick layer of the overlying structure. An unpublished report of the analysis (Lunniss and Mudd 1987) was used in conjunction with an examination of the relevant artefacts for the account made here of Phase 1.

## CHAPTER 4 OMJPLP-141B-TRENCH 3: SITE DESCRIPTION

### 4.1 INTRODUCTION

The main building sequence at 141B-T3 consists of eighteen episodes of construction (Sequence Diagrams 1 and 2). The Structures (1-18) and their components were of various forms, some better preserved than others. All were aligned on a NE-SW axis. Only the west quarters were recovered. Until, then, the data from the north-east half of 141B (Trench 4) have been analysed, full dimensions and configurations will not be known. Main entrances, however, were probably all on the NE-facing side. The evidence described with each episode generally falls into three parts: 1) an enclosed or central space; 2) a perimetral enclosing wall; 3) an area external to the enclosure, this often subdividing into NW and SW areas.

The eighteen episodes are grouped into seven Phases (I-VII), each distinguished by a particular building method and configuration. Table 2 lists the main structural components, emphasizing the broad differences between the phases. More general differences lead to a division of the sequence into two periods: Period 1 comprises Phases I-III, and Period 2 comprises Phases V-VII, with a transitional Phase IV at the centre.

Building components are described for each structural episode in turn, with a summary of associated contexts. Consideration of stratigraphic ambiguity is kept to a minimum, but some discussion is necessary if the data are to be treated fairly. Detailed accounts of the different feature types and their artefactual contents are given in subsequent sections. Phase III there breaks into two stages, early (Phase IIIE), and late (Phase IIIL), represented by Structures 3-5 and Structures 6-7 respectively.

Sequence Diagram 1. OMJPLP-141B-T3 SKELETON MATRIX: PERIOD 2

PERIOD 2

PHASE	STRUCTURE	SW AREA	WALLS	PLATFORM	NW AREA
VII	18		149 (W)		
	17		226 (W?)		
	16		274 (W)		
			-----	278 (PC)	
VI				215 (PC)	
				280 (PC)	
			-----		
	15		292 (W)		
	14		256 (W)		
	13	228 (PS) ===	353 (W)		
	12		387 (W)		
	11	342 (PS) ===	470 (W)		
		477 (PS) =====	?	=====	515 (PS)
	10	481 (PS) =?=	565 (W)		
V	9/8	488 (PS) ===	743 (W) =?=?=	879 (W)	
			777 (FL)		
			804 (O)		
IV		3039 (PS)			

KEY: FL FLOOR

O OCCUPATION LAYER

PC PLATFORM CAP

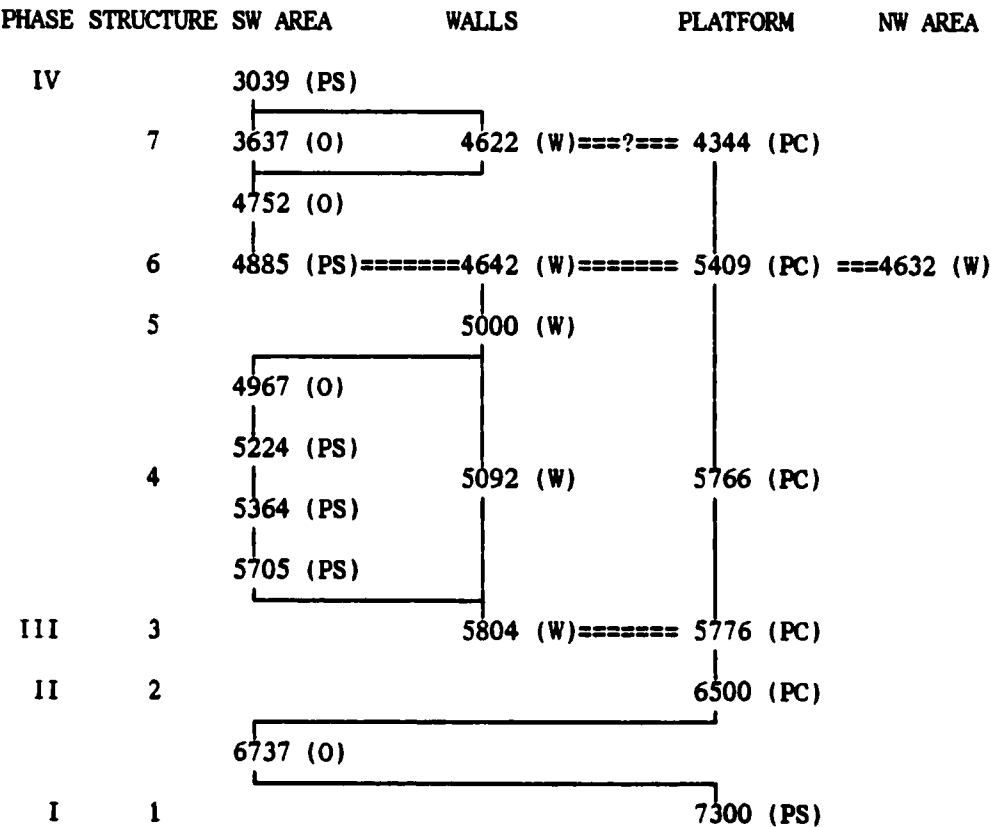
PS PREPARED CLAY SURFACE

W CLAY WALL

= THE CONTEXTS EACH FORMED PART OF A SINGLE BUILDING DESIGN

Sequence Diagram 2. OMJPLP-141B-T3 SKELETON MATRIX: PERIOD 1

PERIOD 1



KEY: O OCCUPATION LAYER  
PC PLATFORM CAP  
PS PREPARED CLAY SURFACE  
W CLAY WALL  
= THE CONTEXTS EACH FORMED PART OF A SINGLE BUILDING DESIGN

Beyond simple description of material components, attention is drawn to the various points of transformation both of the structures and individual feature types, and of the relationships between structures and features. This approach has two immediate purposes. First, it supports the three types of chronological division of the sequence, i.e. structural episode, phase and period. And secondly, it demonstrates the interrelatedness of contexts of all types within the wider processes of change.

Table 2. PERIOD AND PHASE SCHEME FOR OMJPLP-141B-T3

PERIOD	PHASE	STRUCTURE	MAIN COMPONENTS FOUND
2	VII	18	STONE PERIMETRAL WALL
	VI	17	CLAY PERIMETRAL WALL PLUS
		16	CLAY PLATFORM CAP
		15	PLUS PLATFORM POSTS
	V	14	
		13	CLAY PERIMETRAL WALL
		12	PLUS
		11	WOODEN PERIMETER POSTS
		10	PLUS
		9	CLAY EXTERIOR SURFACE
		8	
TRANSITION	IV		CLAY EXTERIOR SURFACE PLUS (?) CLAY PLATFORM CAP
1	III	7	CLAY PLATFORM CAP
		6	PLUS
		5	WOODEN SUPERSTRUCTURE
		4	PLUS
		3	CLAY PERIMETRAL WALL
	II	2	PLUS WOODEN SUPERSTRUCTURE
	I	1	CLAY FOUNDATION LAYER PLUS WOODEN SUPERSTRUCTURE

In the text, four numbered series are referred to: Context Numbers, e.g. 7300; the general Small Finds Numbers, e.g. B903; Worked Shell Numbers, e.g. CT243; and Obsidian Numbers, e.g. OBS246. For walls and their foundation trenches, only the context number of the

foundation trench is given. Similarly, for burials, figurine and other artefact depositions, rubbish pits and other features, only the context number of the cut is given. The term "incomplete" is used to mean that the relevant context extended beyond the edge of the excavation area, and could not be completely excavated.

Figures 8-25 show the evidence for each construction episode and the main features associated with them. For visual clarity, minor clay layers, midden layers, occupation layers and ash layers are not included. So many features were associated with Structures 6 and 7, that separate plans are drawn for the human burials, rubbish pits and fire pits of Phase III (Figure 16), and for the stone figurine depositions of late Phase III (Figure 17).

Most of the major structure elements are shown in cross-section on one or other of the site sections (Figures 139-143). The relevant section (and location on it) of any wall or clay layer can be deduced from the plan for each structure and reference to Figure 5. Figures 26 and 27 give reconstructed profiles of Structures 1-18 along a NE-SW axis. They show, in simplified form, the sequence of change that is presented by Section 1 (Figure 139).

## 4.2 BUILDING PHASES AND ASSOCIATED ACTIVITY

### 4.2.1 Phase I: Structure 1

The foundation layer (7300) of Structure 1 (Figure 8) was of yellow clay, up to 11 cm thick. Its west corner extended 8.20 m NW-SE and 4.20 m NE-SW. There were four sub-phases of construction and use of a rectangular wooden building set upon this surface.

70 to 90 cm inside the SW edge of the clay was an exterior wall, indicated by a 7.6 m row of post-holes, irregularly spaced but

with maximum intervals of 50 cm. The holes were 15 to 20 cm wide, and up to 45 cm deep. There was a cluster of holes at the west corner of the building. But on the NW side there was just a single small hole 1.80 m to the NE - not enough to suggest a wall in that direction. A line of eleven holes perpendicular to the SW wall and about 2.50 m in from the NW end indicated an internal division. Two shallow gulleys, 8 to 20 cm wide, 2 m and 4.50 m further to the SE and roughly parallel with the internal division of wall posts, may have supported some other form of partition.

At the end of this Sub-phase 1, all the holes were emptied of their posts, and many of them backfilled with the same yellow clay as had been used to make the floor. There was then burning across the interior floor, as indicated by patches of deep red staining of the clay, with more extensive deposits of fine grey ash. That the structure of the house itself was not burnt is suggested by the absence of fire stains close to the SW wall and the major internal post-holes.

In Sub-phase 2 (Figure 9), the NW edge of 7300 was extended by 50 cm. Roof supports were set up in rows aligned with the edge of the floor. One row was just inside the line of the earlier SW wall, and the other a further 2.30 m to the NE. The seven holes found, 40 to 70 cm deep, differed from others not only in their greater size, but also through the presence of 1) in all, yellow clay packing around the post-moulds; and 2) in five cases, intentionally deposited artefacts in the packing and under the posts. The posts of the two most southerly holes (7247, 7092) each rested over a small disc of grey shale. 7247 also contained in its packing three small pieces of copper. The two holes to the north-west (7322, 6584) had in one case, two discs of blue-green tuff at the base, and a juvenile *Spondylus*



*princeps* part-way up the packing; and in the other, a similar stone disc at the base, and a *Vasum caestus* in the packing. Of the third pair, only the interior hole (7276) was completely preserved, and again, there was a small shale disc at the base. The fourth hole (6779) of the SW row, though with an undisturbed lower section, contained no artefacts.

To the south east of the floor, a small hole (7175) contained a stone disc of the same fine, blue-green tuff as three of the discs beneath the roof supports, and a green stone bead.

Parallel with the rows of posts, and making a corner around the outside of the fourth hole of the SW row, was a 16 to 30 cm wide gully, 3 cm deep, that partly overlay the line of the Sub-phase 1 SW wall. This may have been the result of eaves-drip, although the overhang from any roof supported by the major posts would have had to be less than 50 cm.

Five human burials belong to Sub-phase 2. Four graves lay inside the area defined by the exterior gully, three (6792, 6803, 6807) being of infants, the fourth (6855) that of an adult. A child lay in a grave (6681) cut through the clay outside the gully. After some replacement of minor posts, with others going out of use completely, there was again limited burning of the floor, with more extensive deposition of ash up to 4 cm thick.

Sub-phase 3 saw extensive reflooring with yellow clay. The majority of small, internal posts were removed without replacement, although the major posts supporting the roof were maintained. There was more burning, with residual staining and ash. At the NW end, posts were set up and a small pit (6687) dug and backfilled with ash.

In Sub-phase 4, there was further floor relaying, burning and ash deposition. (47 complete scutes and 150 fragments of an armadillo

shell were found under one of the patches of floor repair.) Most holes had by then been emptied of their posts, backfilled and covered over, though the major roof supports continued in use.

Finally, the seven roof supports were removed. Into the emptied post-moulds of three holes (7247; 6779; 6584) were deposited: a *Strombus peruvianus*; the large sherd of a tripod bowl and the handle of a spouted bottle; and the foot of a tripod bowl. (Most of the rest of the latter bowl (Figure 91f) was left lying on the floor just north of the hole in which the foot was found.) The platform foundation layer (6500) of Structure 2 was then laid on top.

There was, then, marked difference between surface preparation, surface maintenance and depositional activity inside and outside the building. First, throughout the occupation of Structure 1, the interior surface was kept very clean. Outside the building, however, reaching the SW row of roof supports and encroaching inside the most northerly of those posts, there was a layer of scattered artefacts in a matrix of dark grey brown sandy clay loam (6737), up to 6 cm deep. This layer ran across the whole of the site exterior to the building.

Secondly, the interior was dominated by repeated episodes of burning and ash deposition followed, until the final such episode, by relaying of fresh yellow clay over the areas burnt. In view of the scrupulous maintenance of the interior floor, the deliberate preservation of the ash deposits suggests significant intent: although the wooden structure itself was not burnt, fire and ash appear to have been elements integral to the process of structure renewal.

#### 4.2.2 Phase II: Structure 2

Structure 2 (Figure 10) was a low platform of yellow clay (6500), up to 35 cm thick, with a shallow slope around the sides. The exposed area measured 9.25 m SE-NW by 5.35 m NE-SW, had a rounded west corner, and overlapped the edges of Structure 1 by about a metre. Across the top, there was no obvious pattern amongst the 159 post-holes, post-bases and stake-holes to suggest the form of the superstructure; but given the platform shape, and that of the Structure 1 erections, it was most likely rectangular.

On the top of the platform, a small hole (6176) contained a gold ring. On the upper slope of the SW side was an irregular oval pit (5875), that contained a number of armadillo (probably *Dasypus* sp.) scutes, a bead of red *Spondylus* and three green stone beads. Cutting 5875, a second pit (5873) contained a stone disc and a stone disc fragment, one white shell bead and six green stone beads. There was no obvious structure internal to either deposition, but the character of the artefacts and the positions of the features on the mound suggest more than the casual disposal of unwanted rubbish.

Towards the centre of the interior was a small ash pit (5694), overlying which was a small area of clay repair, itself burnt and covered with a layer of ash. Immediately to the NW, more ash lay over 6500 and the gold ring deposition. Further to the NW, was a sequence of three layers of ash. Each of these covered an area of burnt clay, the first being of the platform itself, the second and third being patches of repair. (The burning, ash scatters and ash pit, however, and the three features described in the previous paragraph, may belong to early Phase III rather than Phase II.)

The pattern of events (burning, ash scatter, floor repair) is the same as that over the floor of Structure 1. But whereas the

majority of the interior of Structure 1 was affected, the activity over the Structure 2 surface was more limited, leaving an untouched zone of 3.5 to 4 m of clay at the edge of the platform.

Use of Structure 2 saw up to 15 cm of occupational debris build up around the platform, encroaching 2 m along the NW and SW sides and 2.5 m at the west corner, and extending across the whole of the exterior. Cut into this midden, pit 5660 contained a *Chama buddiana* valve. (The feature may, however, belong to any moment up to the creation of Structure 6.) Two rectangular pits (5763, 5691) lay at the extreme SW of the exterior, one of them (5691) possibly belonging to early Phase III.

#### 4.2.3 Phase III: Structures 3-7

##### 4.2.3.1 Structure 3

Structure 3 (Figure 11) saw new elements added to the simple clay foundation layers of Structures 1 and 2. About 75 cm out from the now buried SW edge of 6500, a U-shaped trench (5804), up to 32 cm wide and 24 cm deep, was dug and then filled with dark grey brown sandy clay. This clay rose 15 cm above the top of the trench, with a steep, short slope along the NE side; but on its SW outer side, it extended as a shallow sloped surface across the trench edge, with an overall width of about 1.50 m. From the top of this sunken perimetral wall, yellow clay (5776) was laid back over the accumulated midden of Phase II to the edge of the top surface of 6500.

The general shape of the side of the rebuilt platform remained very much as in the earlier phase. But with the addition of the perimetral wall and the extension of the latter's surface to the SW, the horizontal distance of the slope, starting about 1.30 m from

the wall's inside edge, was effectively doubled to almost 3 m. The top of the platform itself was now about 25 cm higher than the wall. On the NW side, an element of Structure 6 truncated the new mound cap; and the wall, along with its west corner, lay outside the excavation area (a situation repeated with Structures 4 and 5).

There were ten possible post holes (not shown on plan), up to 35 cm deep, along and immediately inside the wall. But they, and a further ten on the platform slope, had no obvious pattern. On the platform top, many of the features cutting 6500 potentially belong to Structure 3, but there was no clear evidence of superstructure configuration.

Soon after the making of wall 5804, its SW extension was enlarged by the laying directly over it of a 2.5 m wide strip of yellow brown clay (5705), up to 8 cm thick.

About half-way along the NE edge of wall 5804, a small hole (5624) contained the incomplete but partially articulated skeleton of a tigrillo (*Felis pardalis*). 60 cm SW of that, a pit (5462) contained the articulated skeleton of a large bird, possibly a Great Blue Heron (*Ardea herodias*). In the body of the bird were thirty-five polished chert stones. Immediately SE, another articulated bird skeleton, again possibly of the heron family (Ardeidae), lay in pit 5324.

The grave of one human burial (5734) cut the platform, but may be of any time up to Structure 6. A further seven (4352, 3929, 3642, 3408, 3370, 3320, 3302) are also of Phase III (Figure 16). On the NW side, there was about 12 cm accumulation of midden before the next surface repair to the platform. Overlying wall 5804's SW extension, 18 cm depth of small patchy layers, over an area of 1.5 x 1.5 m, represent occupation of Structures 3 and 4, and include the bird burials described.

#### 4.2.3.2 Structures 4 and 5

Structures 4 and 5 (Figures 12 and 13) were two perimetral walls, 5092 and 5000 respectively. There was one minor episode of platform repair (5766). There were two clay surfaces (5364, 5224) over the SW area, both probably associated with Structure 4. Both walls were truncated vertically by later trenches which also separate them from the SW area surfaces.

The remains of a platform repair layer of yellow clay (5766), 3 to 9 cm thick, extended over an area of 3.5 x 2.8 m on the NW side, bringing the surface there to a level with the top of the main platform body (6500 and 5776). It is the only evidence for repair to the platform between Structures 3 and 6. There was, however, burning of the layer, with ash deposited on top, and some occupational debris also intervenes before Structure 6.

The Structure 4 and 5 perimetral walls had round-bottomed, perhaps U-shaped, trenches. Stratigraphically, there was no relation to indicate which came first. Wall 5092 lay immediately NE inside wall 5804 (Structure 3), its base about 10 cm higher. Wall 5000 lay over and to the SW of 5804, its base generally 5 to 10 cm higher than that of 5092. For this difference in base levels, 5092 was placed earlier than 5000. 5092 had a maximum surviving width of 40 cm, and was of homogeneous red brown, slightly sandy clay. 5000 survived to 45 cm width, was a slightly darker red brown, and contained lenses of silt and fine sand. With these walls, the top of the platform would have been 10 to 20 cm higher than the SW outer area.

Wall 5092 was cut on its inner NE side by a pit (6659) containing several carefully arranged artefacts, including an anthropomorphic figurine made from the canine tooth of a sea mammal, a block of fossil wood, a bar of malachite and two green stone beads.

Cut directly into the top of 6659, was a second pit (5113), whose fill contained seven shell beads, a worked *Conus sp.*, one green stone bead and a broken stone disc.

Cutting the outside edge of wall 5000 was a pit (4721) containing four pebbles, two cores and six flakes.

In the SW area, the prepared surface 5705 was overlain by a sequence of 168 patches of various layers, and this was capped by an extensive occupation layer (4967), itself cut by the Structure 5 wall (5000). The sequence falls into three stages.

After the accumulation of 5 to 10 cm of occupation debris, a new surface of yellow brown sandy clay (5364), surviving as a strip 3.7 m long, 1.5 m wide and up to 3 cm thick, was laid in place of 5705.

3 cm more occupational material then built up before a red brown, almost purple silt clay surface (5224), 4 cm thick, was laid on top, reaching 5 m SW from the platform wall. The purple appearance was particularly strong in contrast with the normal yellow of the local clays and those of the central area. This "purple" was probably achieved by deliberately mixing in some colouring agent.

The third stretch of occupation saw another 3 or 4 cm of patchy build-up before the whole of the SW area was covered by two extensive layers of debris, 5033 and 4967. Separated along the line of the overlap between the NE edge of 5033 and the SW edge of 4967 by a scattered deposition of patches of ash (5003), these two layers were of similar basic material, a brown sandy silt with high content of pottery sherds. Overall, they were of 3 to 4 cm depth.

There were no structured depositions between layers 5705 and 4967. At the SW end of the SW area were three rectangular pits (5631, 5186 and 5138).

Cutting layers 4967 and 5033 was another rectangular pit (4939). Just to the NW was a layer of clay, red brown or "purple" in colour and with a dense speckling of small yellow clay lumps (i.e. they had been untouched by the colouring process), covering an area of 3 x 1.7 m; and beyond that, to the north, another layer of similar material, but slightly smaller (2.5 x 1.7 m). Each of these layers had a pronounced rise (about 9 cm in each case) near their centre points.

#### 4.2.3.3 Structures 6 and 7

Structures 6 and 7 (Figures 14 and 15) were two perimetral sunken walls (4642 and 4622) along the SW side of the platform. With Structure 6, the SW area was resurfaced (4885), and the platform covered with a new clay cap (5409). Another platform cap (4344) is associated with Structure 7. There was also perimetral walling (4632) along the NW side of the platform.

It is not certain which of the SW walls was attached to 4632. 4642 and 4622 have the same top levels as each other. None of the walls had very straight edges, but on the basis of their orientations, 4632 correlates more easily with 4642 than with 4622. (4632's colour, however, is closer to that of 4622.)

Wall 4642 was truncated along the whole of its SW side by 4622. With a maximum surviving trench width of 82 cm. and a maximum depth of 30 cm, it was more substantial than any of the earlier walls. It consisted of very hard, homogeneous, grey brown clay. While in some areas it rose a little higher than the top of the trench, it was essentially flat-topped and more or less level with the ground on either side of it. There was some overspill of clay along the inner trench edge. Twenty-three variously sized possible post-holes along 4642 were in no clear pattern (and are not shown on plan).



To the NW. wall 4632 was of very hard "purple" brown clay, and was flat-topped. While its NW side was not recoverable (lying outside the excavation area), its inner, SE side, particularly at its NE end, suggests either some sort of shallow, shelf-like extension as was found on the outside of 4622; or that, at least in part, the wall material rose above the trench top by 15 cm and spilled over its inside. Maximum dimensions were a depth of 68 cm and a width (incomplete) of 70 cm.

5409 was the platform cap of yellow clay laid down at the time of 4642. Of what survived, the major exposed portion (5.5 x 1.5 m and up to 13 cm thick) lay along the NE side of Trench 3, with eight smaller patches around it. On top of 5409, four post-holes, of 12 to 15 cm diameter and up to 18 cm deep, formed a regular arc running about 3 m from NW to SE. 90 cm SW of the third, a fifth hole was of 10 cm diameter and 15 cm depth. If the arc (radius 4.2 m) was part of a completely circular structure, then it would have had its centre point very close to the inside edge of the SW wall 4642, and most of its SW half would have lain outside the wall.

With 5409, the centre of the enclosed area would have been level with or slightly higher than the perimeteral wall 4642. But, on the available evidence, there would also have been a shallow depression, up to 10 cm deep, between the inside edge of the wall on the SW and NW sides and the platform itself. Thus the overall configuration of the platform will have altered from the earlier position, which had a gradual and continuous slope from the exterior area, across the walls, up to the top of the platform.

Cut into the top of wall 4632, and perpendicular to it, was a shallow trench, up to 60 cm wide and 15 cm deep, filled with a hard dark brown clay (4140), which ran 4.2 m to the SE across the enclosed

area. There was no sign that the clay once stood higher, suggesting that it may have marked an internal division through difference in soil texture and colour. It would thus be comparable to the visible, surface boundary created by the perimetral walls. A similar, much truncated feature (4131) ran NE-SW over the NW end of 5409. 4140 and 4131, indeed, may have originally been connected parts running at right angles from each other.

In the SW area, layer 4885 was up to 15 cm thick along its truncated NE edge, and sloped slightly down to a SW edge of about 1 cm thickness. Of mid to dark "purple" brown clay, with occasional lumps of yellow clay, it was different in colour to 4642. But it is likely that the clays of 4885 and 4642 were originally parts of a single whole, only later separated by the cut for wall 4622. Thus there would have been at least 6 m of prepared clay surface outside the platform. The colour differences might represent a continuing conceptual discrimination between the two parts of this extended structure, i.e. sunken perimetral wall and prepared exterior surface.

Wall 4622 was of very hard red brown/"purple" clay, and filled a U-shaped trench 45 cm wide and 40 cm deep. The trench had a sloped extension along its SW side, reaching 70 cm away from the main component. Like 4642, 4622 was flat-topped, and it was level with the top of 4642. Much of its SW side had been removed by graves and other large features, and as with 4642 no obvious pattern emerges from the distribution of fifteen possible post-holes cut into it (not shown on plan).

4622 is distinguished from all other perimetral walls of the sequence by a series of stone figurines set upright in holes (about 20 cm wide, and 25 to 41 cm deep) cut through the base of the foundation trench. Just three such depositions (5669, 5645, 5634) were recovered

within Trench 3, but similar features continued right around the platform (Jon Johnson, pers.comm.).

Very little material had accumulated over the clay surface 4885 before the construction of wall 4622. In fact, the SW extension of wall 4622 met and made an even sloping surface with 4885. 4885 would seem, then, to have served the same purpose for 4622 as it did for wall 4642.

4344, the platform cap associated with Structure 7, was of yellow clay, up to 7 cm thick. and survived as a 4 m (NW-SE) x 1.5 m (NE-SW) patch. Although truncated along all exposed edges, its original extent was probably not much greater than what survives. If this was the case, it implies that, again, only the central part of the enclosed area would have been higher than the perimetral walls and surrounding approach, and that there would still have been a shallow depression between the central area and the walls. There was no sign with 4344 (or 5409) of any large rectangular building such as was associated with Structures 1-3.

Over 4344, and extending 1.5 m further to the NW, and 70 cm to the SW, was a 1 to 2 cm thick layer of grey ash (4031). Although comparable, in terms of thickness, extent and location, with the ash scatters associated with the earlier yellow clays of 7300 and 6500, there were two obvious differences. First, there was no sign of any *in situ* burning. Second, the ash itself was quite unusual, being very soft and powdery, and was possibly of volcanic origin.

In the NW area and west inside corner, there were no structured depositions, but a 10 cm depth of horizontal deposits built up. While this included the usual rubbish, nine pits (4224, 4124, 4040, 4035, 4030, 4011, 3259, 3224, 3185 - Figure 16) were used for the specific disposal of pottery sherds. There were also eight fire

pits (4509, 4476, 4216, 4195, 4089, 4033, 3995, 3913 - Figure 16), a type of feature not previously encountered.

The graves of eight human burials (4133, 4130, 4049, 3942, 3937, 3804, 3495, 3315) cut deposits over or inside the inner edge of the SW perimetral wall 4642. Two more graves (3292 and 719) cut the SW side of the platform cap 4344 and the ash overlying it. Two rubbish pits (3300, 758) cut one of the graves (3315). Two other graves (4130, 4049) were directly or closely associated with four of the other rubbish pits just mentioned (4224, 4040, 4035, 3224) and three of the fire pits (4476, 4216, 4195).

Amongst the human burials to the NE of wall 4642 (and intrusive upon burial 3959). was a pit (3322) containing the remains of a young creature of the Canidae family.

There were two artefact depositions over wall 4642. One (4098) contained a piled group of stones: a hammer stone; a possible, but broken, hammer stone; two lumps of chert; and, on top, a broken net weight. On the bottom of the other (4645) were 472 chert flakes, with a worked gastropod (*Muricanthus sp.*) on top.

Cut into the inside of wall 4642, 4327 was a pit notable for a perforated malachite disc at its base. A similar object, incompletely perforated, was found in pit 4425, 2 m inside wall 4632.

In the SW area. cut into the clay surface 4885, were a rubbish pit (4883), a fire pit (4832), and four depositions of stone figurines (3825, 3815, 3802, 3438). Overlying 4885, but not the features just mentioned. was a patchy layer (4752) of occupation debris in a matrix of ash, mostly 1 to 2 cm thick, which reached from the SW corner up to the perimetral walls, where it was cut by the foundation trench for 4622.

Directly cutting layer 4752, about 2 m SW of wall 4622, there

was a circular pit (4336). There were no other circular features of its size (124 x 115 x 11 cm), and its clay fills make it best considered with the rectangular pits created further to the south in earlier parts of this phase. Cut directly into the body or edge of this feature were four stone figurine depositions (3798, 3784, 3655, 3654 - Figure 17). A fifth (4388) cut 4752. A further twenty-six similar depositions (4866, 4842, 4835, 4795, 4790, 4733, 4717, 4395, 4046, 3973, 3971, 3869, 3863, 3843, 3810, 3759, 3742, 3697, 3650, 3629, 3623, 3620, 3616, 3610, 3608, 3605) were distributed at different stages up to the end of occupation associated with Structure 7.

Immediately to the west of one of the figurine depositions (3798) cutting the circular pit, was a hole (3806) containing an arrangement of two *Pinctada mazatlanica* valves, an olla neck and a worked *Muricanthus* sp.

Five human burials in long graves are associated with Structure 7. Four (4471, 4228, 3899, 3765) cut or lay within 50 cm of either side of wall 4622. The fifth (4784), of an infant, lay about 2 m SW of 4622, cutting layer 4752.

Variously distributed over and to either side of wall 4622 were eight pottery-rich rubbish pits (4466, 4203, 3812, 3800, 3785, 3766, 3723, 3565) and eleven fire pits (4493, 3881, 3670, 3490, 3471, 3455, 3158, 3153, 3144, 3116, 3108). They occur at different points in the sequence below, between and above the figurine depositions and human burials. Two of the rubbish pits (3766, 3785) and three of the fire pits (4493, 3471, 3108) were directly or closely associated with two of the graves (4471, 3899).

This proliferation of features, and the intermixing of structured depositions with fire pits and rubbish pits, is the most

notable characteristic of the SW area at this time. And it represents an intensity of activity for which no other stage can give comparable evidence.

10 to 15 cm of horizontal deposits built up over the prepared surface 4885. Other than layer 4752, there was a less extensive occupation layer (3637) over the further SW area. One context (3484) was particularly unusual, consisting of small, rounded black pebbles or gravel. Covering about 1.5 m<sup>2</sup>, this was of clearly imported material, reportedly found in local river deposits. Also close to the enclosure, there were many small scattered patches of burnt soil and ash, and various patches of different coloured clay surfaces.

The SW end was dominated by layers with high percentages of eroded and very small sherds. Layer 3149, for example, a dark brown clay sand mix, with charcoal flecks, produced 887 sherds, of which 831 were small or eroded. Layer 3184, of very dark brown to black sand, also with charcoal flecks, and typical of the interpretative category "wash", had 87 small and eroded sherds out of its total of 106.

In addition, there were two linear features at the SW end, both running NW-SE. The first (3171) was not so much a gulley as an irregular edge, 1.9 m long, with a 20 cm wide slope towards the SW, dropping 2 to 3 cm. The layer filling this was of light brown sandy clay with dark brown sand. Of 272 sherds, 224 were eroded or very small. The second feature (3141), 3.42 m long, 44 cm wide and 5 cm deep, lay just to the NE of the first. Its fill, a brown clay sand with flecks of charcoal, contained 244 sherds, 169 of them small or eroded.

#### 4.2.4 Phase IV

Phase IV (Figure 18) was brief and intermediary to the

separate sequences of perimetral walls of Phase III and Phase V. Its main component was an extensive yellow clay layer (3039), up to 7 cm thick, which ran around and over both the NW and SW sides of the earlier enclosed area, capping the Structure 6 and 7 perimetral walls. In the NW area, 3039 reached about 3.5 m inside wall 4632, with a drop of 10 cm from NW to SE. On the SW, it was at 3 m wide, and sloped down 10 cm from the line of wall 4622 to a point about 2 m to the SW. Its high point on the SW side was level with the top of the platform cap layer 4344.

It could, indeed, be argued that 3039 and 4344 were contemporary deposits. The stratigraphy allows it, and the levels might suggest it. This interpretation would see yellow clay surfaces applied equally to platform top and to its surrounds, with a depressed and untreated interval between. A third possibility is that 4344 was initially associated with Structure 7, and continued in use after the laying of 3039.

There were two burials in long graves. One (4400), severely truncated, lay in the NW area. The other (840) lay over what had been the centre of the SW side of the enclosure, and cut directly into an ash pit (3808), which in turn cut into the top of a rubbish pit (3946).

Thin yellow clay layers built up over 3039 to a depth of about 5 cm, immediately to the west of grave 4400. They in turn were covered by a layer of ash (883) up to 3 cm thick and 3 x 2.5 m in area. Two small patches of burning, three fire pits (3040, 990, 920), and one rubbish pit (936), also covered by 883, complete this group of contexts.

In the SW, 804 (5.9 x 3.75 m and up to 2 cm thick) was an occupation layer of very dark brown to black sand. It covered a small

group of contexts overlying 3039. Of these, one layer (999), also of dark sand and up to 3 cm deep, had a high proportion (74%) of small and eroded sherds. 2 m to the NE, an open hearth (3002) was cut by a rubbish pit (820). Close over 804, 777 was a floor of brown sandy clay loam that extended over the whole of the SW area.

#### 4.2.5 Phase V: Structures 8-14

##### 4.2.5.1 Structures 8 and 9

Structures 8 and 9 (Figure 19) are two sections of badly preserved walling (879 and 743). They may represent a single structure, but differences in their clays and alignments argue against it.

In the NW area, wall 879 extended 2.4 m NE-SW, with a right-angled corner turning to the SE. Its hard yellow grey sand clay filled, but did not overfill, the U-shaped foundation trench (26 cm deep, 40 cm wide on the NW arm, 70 cm wide on the SW arm). Its top was level with that of the platform cap 4344.

Wall 743 lay immediately to the SW of cap 4344, but in a trench cutting from a level 10 cm higher. The trench itself was 18 cm deep, with a surviving width of 55 cm and a surviving length of 90 cm. The wall, of brown/yellow brown clay loam, with flecks of ash and charcoal, stood 7 cm proud of the trench top, and extended across the outer trench edge as a 2 to 3 cm thick layer (Figure 28a). Further evidence of this wall may be represented by two much smaller fragments of similar clay to either side.

With Phase V, a new type of standing structure was added (though earlier examples may have lain outside 141B-T3). The evidence for this consists of two huge post-holes in the NW area. The first



(6534) had an oval top 1.2 m long (E-W) and 72 cm wide, and was 1.58 m deep (Figure 35). At the bottom was a grooved stone anchor (40 x30 x 15 cm), its long axis aligned NE-SW - i.e. parallel with the NW side of the enclosure. The anchor was partially covered by the lowermost of eighteen layers of backfill, used to support the post once it was in position. These layers were generally of two types - hard clay, and a softer, mixed matrix - that were laid alternately down the sloping west side of the post-hole. The post itself was removed immediately before the construction of Structure 10, leaving a 25 to 30 m wide post-mould to be filled with the clay of the Structure 10 wall.

2.5 m to the NE, the second hole (4084) was also oval in outline, 1.26 m long (NW-SE), an incomplete 41 cm wide, and 1.68 m deep. It too had a stone anchor at its base, similarly aligned to the enclosure. Most of the fill had been thrown in after removal of the post, and only the two lowermost packing layers were preserved. Like 6534, 4084 went out of use before the construction of Structure 10.

From its orientation and position, 6534 clearly marked the west corner of an arrangement of posts erected in association with the newly redefined Phase V enclosure, while 4084 supported one of the posts along the NW side. The absence of any similar features to the SE of 6534 indicates that the arrangement did not extend along the back, SW side of the enclosure. Further, the distance between the holes, and the absence of associated post-holes within the enclosure, suggests that the posts were free-standing, rather than elements of an articulated wooden structure.

That these post-holes were not directly and immediately associated with the Phase IV layer 3039, is indicated by the position of burial 4400, which cut 3039 and was itself almost completely destroyed by the hole 6534. Looking forward, they may belong to any

point up to the creation of Structure 10. If associated with wall 879, the holes would have straddled its SW arm, with 4084 and others to the NE set inside its NW arm. Further permutations are possible, associating the post-holes with wall 743, or with both walls 879 and 743 as correlated components of the same structure; or by making the post arrangement an independent structure, predating, intermediary to, or post-dating walls 879 and 743. Without data from other parts of 141B, the interpretation must be tentative.

In the NW area, 841 was a prepared surface of yellow to yellow brown clay, up to 3 cm thick. It was covered by another prepared surface of similar material, 711, also up to 3 cm thick, which extended a further 3 m to the south, where it was directly overlain by a third clay layer (488). Extending from close to wall 743 for 9 m to the bottom SW corner of the site, the prepared surface 488 may originally have joined wall 743 as its SW extension. 488 itself was of yellow to yellow brown clay, and up to 5 cm thick. These three layers can probably be taken as separate stages in the creation of a single surface.

A little to the SW of wall 743, the earliest of the Period II circular pit graves (3624), overlain by Structure 10, possibly also predated 488. Two possibly structured depositions were set inside 743. Pit 872 contained various large ground stone objects and whole shells, but may have belonged to any moment up to the end of Period 2. Pit 3282 had a stone anchor at the bottom, with a metate above, and was of any stage up to the making of Structure 14.

Various other pits around and over platform layer 4344, and inside wall 743, though of substantial proportions, offer no obvious interpretation. But the build-up of 20 cm of thin layers between the ash over 4344 and the digging of the Structure 10 foundation trench,

indicate that after 4344, maintenance of a clean yellow clay surface within the perimetral walls was abandoned.

Over layer 488, about 8 cm of material accumulated SW of the enclosure. Two rubbish pits (651, 638) were within 3 m of the SW edge of wall 743. Continuing the pattern of sand-and-silt-filled linear features in the SW corner, there was a 4 cm deep gulley (660), 80 cm wide, that ran NW-SE. Its fill, spreading well beyond the gulley itself, was a brown silt loam, 86% of whose 1207 sherds were very small or eroded. The NW area was largely covered by another dark brown sand layer (535) with over 80% of its sherds highly abraded.

The areas outside the enclosure, then, were no longer a focus for activity involving the structured depositions so common during the later stages of Phase III.

#### 4.2.5.2 Structure 10

With Structure 10, the sequence becomes stratigraphically simpler. This is largely due to the effects of earlier excavations, which had already removed 1) most of the 40 cm of horizontal deposits relevant to Structures 10-18 in the NW area, as well as the NW edges of Structures 10-14 and 18; 2) 50 cm of stratigraphy from the east corner of Trench 3 - i.e. much of the material towards the centre of the enclosed area; and 3) most of the material post-dating Structure 11 in the SW area, although the SW arms of Structures 10-14 themselves were not affected. But from what we have seen happening in Phase IV and the early part of Phase V, the pattern of deposition had itself become less complex.

Structure 10 consisted, first, of wall 565 (Figure 20). Its NW side lay 1 m inside wall 879, while on the SW, it was 70 cm outside wall 743. On the NW side, the trench seems to have been a simple

U-shape, 60 cm wide and 30 cm deep, the wall level with the slightly higher inside edge, flat-topped, and with a short slope down to the lower outside edge.

The SW side (Figure 28b) was of composite form, consisting of 1) a principle U-shaped trench, up to 70 cm wide and 70 cm deep; and 2) projecting from this, a 70 cm wide and 20 cm deep extension to the SW. The projection, however, was not continuous: a 2 m interval, from which it was absent, lay between four and six metres SE of the NW corner. This interval probably lay at the centre of the side. The wall, of light grey to yellow brown clay, rose 30 cm above the back of the main trench, then sloped down steeply to a level surface over the lateral extensions.

Two further points may be inferred: 1) the overall length of the SW arm was 10 m, with two 4 m sections lying either side of the central 2 m section; 2) the central section was the rear entrance to the enclosure.

3 m to the SW, a prepared surface (481) of red brown ("purple") clay with mottles of unaltered yellow clay, up to 6 cm thick and extending 5 m further SW, belongs stratigraphically with 565, and was perhaps part of the same building plan. Whether it originally reached 565 is not certain.

Inside its SW arm, there was little to indicate whether the wall was designed to retain fill that would in turn create a raised platform; or that its function was to demarcate an enclosure more or less level with the ground outside it. Comparison with Structure 12 would suggest the latter.

3.5 m SW from the west corner of the wall, and cutting its inside edge, an oval pit (462) of 90 x 80 x 127 cm had a stone anchor at its base, and may have supported a large post marking the NW side

of the rear entrance. Cutting 462, and presumably replacing it, another large post-hole (454), measuring 144 x 75 x 154 cm, contained a post-pipe 32 x 26 cm across, but had no anchor. Both holes were overlain by horizontal fills deposited inside Structure 11, but use of the post set in 454 possibly continued through the early stages of that filling process.

At its west corner, wall 565 was overlain by a yellow brown clay prepared surface (515), up to 8 cm thick, which may correlate with another surface of the same material (477) in the SW area. 477 was separated from the earlier "purple" layer 481 by up to 5 cm of occupation debris, and extended to about 5.5 m SW of 565. Cut into 515, just south of the west corner of 565, feature 490 may have been a small fire pit.

#### 4.2.5.3 Structure 11

The main component of Structure 11 (Figure 21) was wall 470. With this, there was a 2 m shift to the south of the west corner of the enclosure - a tendency already suggested by the relation of wall 565 to wall 879, and one to be continued by Structures 12-14. This was the most massive of all perimetral walls, and provides the clearest indication of the changes in platform configuration and function that occurred between Phases III and V.

On the SW side, the trench was a simple U-shape, 75 cm wide and 50 cm deep. The wall was of "purple" clay, and rose 35 cm above the trench, with a vertical inside edge. From the high point at the back, the top sloped gently for 45 cm, dropped steeply 10 to 15 cm, was flat or shallow for 20 to 25 cm, then dropped very steeply 20 cm, before running away to the SW as a 2 cm thick layer that covered the whole of the SW area.

Wall 470 thus presented a double step up onto its top, and was approached from the SW by a surface of identical material at least 7 m wide. With 565, the entrance on this side had been defined by lateral flanking extensions of the clay filled trench (and perhaps also by large posts). This device was absent from wall 470, and the area where the entrance might have been situated was too affected by later intrusive pits to offer any information on how, if at all, the entrance was designed.

The fluid contours of the boundaries between the successive layers identified in the body of the wall, indicate that construction was with clay in a semi-liquid state. The vertical drop of the inside edge and stepped outer face suggest that some form of shuttering was used to contain the clay when laid.

On the NW side, what survives indicates a trench 45 cm wide at its base, and perhaps with a very shallow extension off the top of the trench to the NW.

We must now look at the evidence for what happened inside the wall. The vertical upper inside edge of the SW arm was abutted, and the steep lower edge overlain, by almost 40 cm of soil fill that eventually brought the enclosed area up to the level of the top of the wall. The stratigraphy would allow this deposition to have taken place at any stage and over any length of time up to the building of the wall of Structure 15, by the foundation trench of whose NW arm the fill was cut. Although there may have been several episodes of deposition, the character of the material was the same throughout: a heterogeneous mix of dark brown loam, with large sherds disposed at odd angles, these indicating episodic dumping rather than gradual accumulation of discard over a rising surface.

Parallel with the SW side of 470, 3.5 m inside, and set into

the top of the fill, were two fragments of what appeared to be a smaller sunken wall or internal division (430) that was put in place after the filling process just described had begun. Of light brown clay, up to 70 cm wide and 20 cm deep, with an overall length of 2.3 m, these fragments straddled the edge of Trench 3.

Seven circular pit graves (771, 765, 662, 532, 467, 205, 203) cut into the fill deposits, though none came within a metre of the inside edge of 470. Two of the seven (771, 765) probably post-dated the internal dividing wall 430. The backfills of the graves were of very mixed soil, in the upper levels almost indistinguishable from the horizontal fill deposits. As the soil removed in digging a pit could have been only partly accommodated in the grave after the individual had been set inside, it is likely that much of the horizontal deposition resulted from redistribution of left-over spoil.

What emerges, then, is that wall 470 enclosed an area of about 10 x 10 m (assuming sides roughly equal to those of Structure 10), that was initially level with the ground outside the wall, but sunken with respect to the wall itself, and dedicated primarily to the reception of human burials.

There were several pits other than the graves just mentioned. One (680), situated at the centre of the cluster of graves, contained the very partial remains of a human skeleton and fragments of ceramic vessels similar to those found entire with the undisturbed graves. Another (518) also contained fragments of a vessel, but no bones.

That 470 was built in the first instance as a funerary enclosure one can only infer from lack of evidence to the contrary. The space may have been used for some other activity prior to the interments. But, that a funerary enclosure it came to be, is certain. And in this are fused two earlier ideas: that of separating, raising

and enclosing a space to be dedicated to ceremonial or ritual events, and that of locating human burials, on account of the significance of that space, adjacent to it.

Outside the enclosure, there is little evidence of activity or deposition demonstrably prior to Structure 12. 2 to 3 cm of mixed soil and ash (340) built up over the SW area. 2.5 m outside the SW arm of the wall, and cutting its exterior horizontal extension, 343 was a small pit (23 x 22 x 10 cm), trefoil in plan outline, with two smaller lobes opposite one larger. Its edges were reddened, and the bottom darkened and hardened, by fire; but no ash, charcoal or slag were found.

#### 4.2.5.4 Structures 12 and 13

Structure 12 (Figure 22) was a wall (387) of similar "purple" brown clay to that of Structure 11. Smaller and simpler in design, its west corner made a further southward shift, this time of one metre. On the SW side, much truncated, its U-shaped trench was 70 cm wide and 40 cm deep, the wall rising 10 cm higher than the inside edge. Along the NW side (also much truncated), the trench was 70 cm wide, and at least 30 cm deep.

Between the inside edge of wall 387 and the bottom outer step of the earlier wall 470, there was a space 15 cm wide and 10 to 15 cm deep. At some stage, this space was filled with yellow brown clay (395), thus creating a shallow, continuous slope from the top of 387 to the top of 470.

Structure 13 (Figure 22) was wall 353, set in a U-shaped trench (45 cm wide and 32 cm deep) which cut directly into and wholly within the SW arm of 387, though not reaching to its base. It was of the same material as wall 387, and at its NW end could not be



distinguished from it. The wall and trench top were level. There was no new walling on the NW side.

Later, more yellow brown clay (347) was laid from in front of wall 353, back across the top of wall 387, to the top of wall 470. A small, truncated patch of similar material (228) suggests that this clay extended right out over the SW area.

On the NW side, 4 m NE of the west corner, wall 387's outer edge was cut by a huge post-hole (351) similar to, but even larger (at 2.17 m long, 85 cm wide and 2.09 m deep) than those (6534, 4084) that went out of use immediately before the construction of Structure 10. Like 4084, 351's long axis was oriented NW-SE. and there was a stone anchor (40 x 24 x 6 cm) at the base, aligned with the side of the enclosure. There was no preservation of the post-mould.

#### 4.2.5.5 Structure 14

2 to 3 cm of occupation debris (211) accumulated outside 353 before the making of wall 256 (Structure 14 - Figure 23). This was the last of the perimetral walls set in U-shaped trenches, and made at its west corner a final 1 m shift south from that of Structure 13. Of yellow brown clay, along the better preserved SW side it rose a little more than 5 cm above its trench (60 to 70 cm wide, and about 40 cm deep), its high point close to the outer edge, with a shallow slope down to the inside edge. Along the SW side, two successive clay resurfacings (318, 297) linked the inside edge of the wall, across the top of Structure 13, with the the top of wall 470.

#### 4.2.6 Phase VI: Structures 15-17

Evidence for this phase is highly fragmented, though the basic shape of the structures is clear enough. Burial and other

depositional activity had by this stage halted, and the former funerary enclosure now served as the foundation for a new platform. The use of U-shaped trenches for accommodation of the surrounding clay wall was abandoned. Redefinition of the perimeter was instead achieved by adding a body of brownish clay to the platform edge, either directly or into a one-sided trench cut into the side of the platform.

From evidence on the SW side, there appear to have been three such building episodes (Structures 15-17, walls 292, 274 and 226), though only two of these (Structures 15 and 16) are represented on the NW side. Structure 15 (Figure 24) suggests that the result was a steep-sided platform edge, 30 to 40 cm high, with the new clay lapping back over the top of the platform and extending at least a short distance out from its base. In addition, layers of prepared clay, 5 to 12 cm thick, were spread over the top of the platform. Patches of three such deposits (280, 215, 278) were recorded, all laid after Structure 15 and before Structure 16. None of these layers, however, was of yellow clay, the first two being brown, and the third "purple".

Cut into the clay layer 280, and overlain by layer 215, was a small constellation of large features. Pit 282 was probably a post-hole, 1.2 m long and 1.23 m deep, into the post-mould of which, after removal of the post, a grinding stone was thrown. Cutting 282, features 284 and 219 were possibly the digging pit and post-mould respectively for an even larger post (219 was 1.66 m deep, and 25 cm wide at its base) that replaced the other. Together, these features suggest that the west corner of the Structure 15 platform was marked by a free-standing post, and one might infer that such posts also stood at the other corners.

#### 4.2.7 Phase VII: Structure 18

This final phase of construction saw the first use of stone as a building material. That is perhaps an overstatement of the case, as wall 149 (Structure 18 - Figure 25) appears to have been little more than a single course of roughly squared rubble (of stone available from the hill overlooking the site) set with clay in a shallow trench cut into the outer edge of the top of the Phase VI platform. Whether the trench was one-sided or U-shaped is not clear, evidence for its outer edge having been lost to earlier excavation.

Most of the remains were of a single row of stones, of average length 30 to 40 cm. the long axis aligned with that of the trench. But there were also smaller stones, and one whale vertebra. A maximum surviving trench width of 65 cm. and the presence at one spot of stones in both inner and outer halves of the trench, suggest that there were originally two rows. only the inner row generally surviving. Most of the SW arm of the wall was missing, but there was enough to show its position and that of the west corner, and to indicate that the overall arrangement was about 13 m square.

As with most of the clay walls. the stone wall was not so much a physical obstacle as a boundary marker.

This was the end of the sequence begun by, set over and thus arising from the clay floor and rectangular wooden building that was Structure 1. The Trench 3 excavations identified a number of later (Manteño) features intruding into the top of the sequence, but recovered no horizontal strata immediately post-dating Structure 18. From earlier excavations we know that there was a period, preceding the Manteño occupation. when the site was abandoned. It is likely that this period followed shortly after Structure 18.

#### 4.3 MAIN FEATURES THROUGH THE SEQUENCE

##### 4.3.1 Summary of Building Evolution

In Period 1, Phase I saw just one major depositional episode, that of the foundation layer of yellow clay upon which a rectangular wooden superstructure was erected and rebuilt in perhaps four separate sub-phases. No daub was found at this or any other level of the site, indicating that it was not used on any of the structures.

In Phase II, a low platform replaced the Structure 1 floor, again supporting a rectangular superstructure.

In Phase III, the body of the Phase II platform served as a core to an extended platform created by the addition around the exterior slope of more yellow clay. The wooden superstructure was maintained. But a new device, the sunken clay perimetral wall, was used to define the edge of the platform; and a surface of clay was laid out from that, to extend the area of controlled ground across the flat space surrounding the platform. Variations on this idea follow through the remaining structural episodes of Phase III and Phase V.

With Structure 6, the central area was roughly level with the perimeter wall and the ground beyond, but a shallow depression separated the central area from the perimetral wall. While the layer of clay added to the centre of the interior was only 10 cm thick, the maximum depth of clay added to the exterior was over 20 cm. Indeed, the exterior floor was of primary importance, the setting, after the making of Structure 7, of intense activity generally excluded from the central space. Further, the large rectangular wooden superstructure was abandoned.

Structure 7 itself is especially interesting for the series of stone figurines set in holes cut through the trench bottom. What I

would emphasize at this point is the idea of subterranean space. The figurines linked the visible structure with the invisible ground beneath it; and this link was an extension of the relations between the two domains suggested by the penetration of the ground by the trench itself.

The gradual diminution of the height of the platform through Phase III, and the increased importance of the exterior, were followed by the temporary abandonment of the perimetral clay wall in Phase IV. It is possible that there was no addition to the central area, attention being focused on the exterior surface.

In Period 2, Phase V a saw the reintroduction of the clay perimetral wall, and continued deliberate surfacing of the exterior. There were, however, several differences from Phase III, generally related to the new function of the enclosed area as a dedicated burial ground.

With Structure 9, the wall top stood slightly proud of the exterior surface, not too obviously different from Phase III examples. With Structure 10, however, the wall presented a shallow but definite step up from the exterior, and enclosed a space, though higher than the exterior, a few centimetres lower than its own top. Structure 11 took this further, presenting two steps and reaching a height of 40 cm above that of the interior. Through the rest of Phase V, the level of the sunken interior gradually rose as burials within the enclosure displaced more soil upwards. At the same time, the enclosed area was left uncapped.

With Phase V, up to Structure 13, large wooden posts were set in deep holes around the perimeter of the central area. The number and positioning of the posts varied, but they appear to have been free-standing, rather than part of a single building. Commonly, each post

was set on top of a stone anchor.

With Phase VI, the sunken wall was replaced by a less intrusive device. This was a step set around the existing exterior edge of the platform, made by adding clay to that edge rather than to a trench dug into or around the base of the platform. (There was, in fact, some digging away from the earlier edge, but not so much as to penetrate the ground below the level of the surrounding area.)

In addition, with Structure 15 at least, the top of the platform was covered with prepared clay, so creating a homogeneous and level surface. It is possible that there was a shallow depression extending a meter or so from the inside of the perimeter's top edge to the outer edge of the inner prepared surface. There were also, at one stage, large posts inside the corners of the platform.

The single Structure 18 of Phase VII saw the introduction of stone in place of clay to define the platform perimeter. Rough blocks were set in a trench cut around the platform's top edge. The trench was possibly one-sided. The low wall was thus not a direct variation on the sunken walls and penetrative trenches of Phases III and V. Rather, in the manner of the Phase VI additions, the trench simply provided a setting for the stones, they in turn acting as a ground level boundary made more obvious by the material difference between the boundary itself and the surfaces to either side. Whether there was any addition to the surfaces of the interior is not known.

In Period 1, the difference between interior and exterior space, structurally defined by the elevation of the centre and presence of the perimetral walls, was no less importantly stated through colour (Table 3). During the whole period, the clay used for the central floor or platform was of the natural yellow found close to the site. But the walls and exterior area (the latter being an

extension of the former in the three cases of preservation sufficient for certainty) became increasingly contrastive against that yellow. Their "purple" colour is not one found locally, and it is likely that it was produced artificially. It may or may not be significant that most of the purple layers had small lumps of unaltered yellow in them, while the walls were more homogeneous. It is also not clear whether the intermediate colours - grey brown and red brown - are natural or artificial.

Table 3. CLAY COLOURS USED IN MAIN STRUCTURES

PERIOD	PHASE	STRUCTURE	CENTRAL AREA	PERIMETRAL WALL	EXTERIOR AREA
2	VII	18	?	Stone	?
	VI	17	?	Brown	?
		16	?	Brown	?
		15	Purple	Brown	?
	V	14		Yellow	?
		13		Purple	?
		12		Purple	Yellow brown
		11		Purple	Purple
		10		Grey brown	Purple
		9		Yellow brown	Yellow brown
		8		Yellow grey	Yellow brown
	IV		Yellow		Yellow
	III	7	Yellow	Purple	Purple
		6	Yellow	Purple	Purple
		5	Yellow	Red brown	?
		4	Yellow	Red brown	?
		3	Yellow	Grey brown	Grey brown
1	II	2	Yellow		
	I	1	Yellow		

Phase IV seems to present a temporary equality between interior and exterior surfaces, both being yellow (even if the interior is only as left over from Phase III).

Period 2 is less clear. The exterior surfaces associated with Structures 13 onwards, and the platform surfaces associated with Structures 16 onwards, were not present for our excavation. However, in Phase V, Structures 10 and 12 had walls that contrast with their respective exterior areas, whereas Structure 11 had the same colour for wall and outer area. Unaltered yellow clay was for the first time used for a wall with Structure 14. In Phase VI, it is at least certain that no yellow clay was used for the walls, and the one extensive platform cap was artificially coloured.

#### 4.3.2 Human Burials

38 human burials are associated with Building Phases I, III, IV and V. Those of Phases III-V fall into two groups, one dominantly associated with late Phase III, the other with Phase V. Most of the skeletons were in a poor state when found.

Data on the sex and age of Phase III and V skeletons were very kindly provided by Dr. Douglas Ubelaker, of the Smithsonian Institution. The skeletons of Phase I, however, and two Phase III burials (5734, 3370), have not yet been available to him for proper analysis: estimates of age in these cases are my own, based on field notes and drawings.

##### 4.3.2.1 Phase I burials

There were five separate, but closely spaced burials, all primary and articulated, in graves cut into the clay floor of the second wooden building (Figure 9). An adult and three infants lay



within the interior, a young child outside the building. One of the infant graves (6792) cut another (6803). Graves were of irregular oval or suboval outline, and generally only just large enough to contain the buried individuals. Grave depths were 75 cm for the adult, 44 cm for the child, and 27 cm, 38 cm and 50 cm for the infants.

In grave 6855 (Figure 29), the adult was flexed and crouched on the left side, knees drawn up tight to the chest, head to the SE, face to the west. A 230 mm long necklace of 71 partially decayed white shell beads (Figure 73a) lay about the cervical vertebrae. A tripod serving bowl (Figure 90f), one small part of the rim missing, the interior very worn, lay over the right hip and foot.

Various artefacts of shell were recovered from the fill of the grave, though as the grave cut through Machalilla levels rich in such material, these were possibly all residual. They included five worked *Pinctada mazatlanica* blanks or fragments (Figure 74b-f), two fragments of fish-hooks (Figure 75a,b) and two shell beads (Figure 73b,c), one unfinished. Also in the fill was a polished second incisor (Figure 81f) of a sea lion (family Otariidae).

In 6807, the infant was supine, head to the SE, face to the NE, arms at the sides, each leg bent outwards, feet drawn up tight to the pelvis. It was accompanied by a 150 mm long string of 68 white shell beads (Figure 73d), well preserved and with a high polish, but separate from the body. Over the sternum, aligned with it, and set on edge, was a cut and roughly oval-shaped piece of *Pinctada mazatlanica* (Figure 74a). A red *Spondylus* bead (Figure 73e) lay in the fill.

In 6803 and 6792, the two other infants were also supine, with feet drawn up and knees to either side; but one had its head to the north, face to the east, and the other had its head to the SE, face to the SW. In 6681, the young child was supine, but with the legs

more extended. The head was to the SE, face to the NE. A red *Spondylus* bead (Figure 73f) lay in the fill.

The group is small, and possible generalisation limited. Four burials were headed to the SE, the fifth to the north. The adult was crouched, the child and infants supine. Both of the graves with strings of beads had upper fills of brownish yellow clay, similar to that of the floor.

Table 4. PHASE I HUMAN BURIALS

GRAVE	POTTERY GOODS	OTHER GOODS	AGE	SEX	BURIAL TYPE	HEAD TO
6855	Serving bowl	Shell bead necklace CT476 (?) Sea-lion tooth B1286 (?) Shell blanks CT465-7/ 474/475 (?) Shell beads CT470/473 (?) Shell hook CT471 (?) Broken shell hook CT464	A	?	F	SE(W)
6807		Shell bead necklace CT455 Shell object CT439 (?) Shell bead CT456	I		SE	SE(NE)
6803			I		SE	N(E)
6792			I		SE	SE(SW)
6681		(?) Shell bead CT433	C		E	SE(NE)

OTHER GOODS - (?): Direct association with the burial is not certain.

AGE - A: Adult; C: Child; I: Infant.

BURIAL TYPE - E: Extended; F: Flexed; SE: Semi-extended.

HEAD TO - Direction of the face is given in brackets.

#### 4.3.2.2 Phase III/IV burials

Twenty-five burials, including one double interment, all primary and articulated, were placed in long graves, with the individual usually supine. Present were three infants, one sub-adult and twenty-two adults. One of the infants was buried with an adult.

Sixteen of the twenty adults analysed could be identified to sex, giving eight males and eight females.

One grave (5734 - Figure 11) lay stratigraphically between Structures 3 and 6. Two (4400 and 840) belonged to Phase IV (Figure 18). Of the twenty-two others (Figure 16), some are well-defined stratigraphically, others less so, but they may all be taken as of Phase III or Phase IV.

For the most part, graves lay over or near the edge of the Phase III central enclosure.

Seven graves were directly associated with fire pits and rubbish pits. Of two adjacent graves, one (4130) cut a fire pit that in turn cut into the top of a rubbish pit; while the second (4049) cut into a rubbish pit that cut a fire pit on its NE side, had two other immediately contemporary rubbish pits on the NE side, cut a second fire pit on its SW side, and at the SW end cut the fire pit also cut by the first grave. One grave (3315) was cut by two rubbish pits, one of which either cut or was cut by a second grave (3804). Two other adjacent graves (4471, 3899), were both cut by rubbish pits that were in turn cut by fire pits; and one of them (4471) also cut a fire pit. In Phase IV, grave 840 followed the first pattern, cutting a fire pit that itself cut a rubbish pit.

Not all graves, then, were associated with either rubbish pits or fire pits. Nevertheless, the pattern and manner of association just described is too regular to be random, even though there is variation in order and number of events suggested by the features.

Five burials were complete and undisturbed, though the graves of four were cut by other features. Three burials, lying partly outside Trench 3, were not fully excavated. The remaining seventeen burials had all lost bones to intrusion by later features, though in

two cases disturbed skeletal material was carefully redeposited.

Graves were subrectangular in outline. All were aligned on a NW-SE axis. For adult graves, depths varied between 36 and 72 cm. The one infant grave with a complete vertical section was only 15 cm deep. Grave lengths varied according to burial posture, with the longest measuring 209 cm. Widths varied between 46 and 72 cm for the adults, with 38 cm for the sub-adult, and 16 cm for one infant. Fills were generally interpretable as mixtures of the soils through which the graves cut. In many cases, however, the tops of the graves were missing.

1) Grave 5734 was the only one definitely earlier than Structure 6, though it post-dated Structure 3. Incompletely excavated to the SE, it contained an adult, extended and supine. The head lay to the SE, and only the legs, from just above the knees, were exposed. No grave goods were found.

2) Grave 4784 was truncated with loss of the lower body, legs, left hand and lower right arm. It contained an infant, lying supine. The head was to the SE, facing upwards, with arms by the sides. The fill was of hard, light grey clay, and in it was a red *Spondylus* bead (Figure 73t).

3) Grave 4471 (Figure 30) was complete, and contained a 25-30 year old male, lying extended and supine. The head was to the SE, facing upwards. The arms and hands were by the sides, left palm down, right palm facing inwards, with torso straight, legs straight, and feet together.

Between the head and the end of the grave stood a bottle (Figure 118). In the left ear was a green stone bead (Figure 72u). Over the centre of the pelvis, on a WNW-ESE axis, lay a well polished baton (Figure 77e) formed out of the columella of a *Fasciolaria*

*princeps*. Over the distal end of the left femur was a *Spondylus calcifer*, and next to it, slightly to the north, between the knees, a *Lyropectens subnudosus*. Each shell, unworked and sea-worn, stood inclined to the north, with its exterior face also to the north. A used obsidian flake (Figure 85j) was in the fill, as was a part-worked piece of tuff (Figure 84g).

4) Grave 4352 was heavily truncated, and contained an infant. Only parts of the torso, skull, upper left arm and right arm and hand survived. The body had been packed in tightly on its back, with the head, at the NW end, bent forwards. The left arm was by the side. The right arm appeared to have been dislocated, as it was bent back under the body, so that the elbow was beneath the neck and the hand below the right ribs. There were no grave goods found.

5) Grave 4228 was truncated from above all round. Much loss of bone from the face and chest resulted from intrusion by a post-hole. The sub-adult lay extended and supine, with head to the NW, arms by the side, left hand palm upwards by the hip, right hand palm down over the right pelvis, and the left foot over the right. No grave goods were found.

6) Grave 4133 was severely intruded upon, in particular by graves 3942 and 3765. The adult (20-40 years old) originally lay extended and supine, the head to the SE, legs together and left foot over the right. However, of the upper body and arms, only a few left ribs and part of the right chest and shoulder survived, with total loss of the skull. Of the pelvis and legs, the right femur and part of the right innominate were removed during the cutting of grave 3942, but then replaced over the left femur.

A pair of beads (Figure 72r,s), of pale blue green stone, lay to the right of the original position of the neck.

Several other artefacts in the fill of grave 3942 were probably the goods originally for grave 4133. They include: a fragment of cut and polished green stone (Figure 71a); a complete drinking bowl (Figure 111j), found inverted; two large fragments of a finger-painted cooking jar (Figure 129b); and a net weight (Figure 84b).

7) Grave 4130 was partially intruded upon, with loss of the knees. The 16-20 year old male lay semi-flexed on his back, head to the SE, looking to the NE. Arms were by the sides, with palms down. The legs were bent and raised, leaning to the right, with the right foot crossed over the left. The left ulna was absent, but with no disturbance to the rest of the arm.

A small green stone pendant (Figure 71b) lay on the chest. A perforated pearl (Figure 73aa) lay beneath the body. Of two used obsidian flakes, one (Figure 85c) was by the feet, the other (Figure 85d) behind the head. Two pieces of burnt sandstone were found on the right humerus, and two other small stones lay at the base of the grave to the right of the feet. The fragment (Figure 80d) of a white tuff disc was also in the fill.

8) Grave 4049 was partially affected by intrusion, but without damage to the interment. The 35-45 year old female lay extended and supine, head to the SE, facing upwards. The body was very tightly squeezed in, with the head forced to tilt forwards. Arms were by the sides, with both hands under the hips. The legs were straight, with feet together. An obsidian flake (Figure 85h) and an unfinished white shell bead (Figure 73s) were in the fill.

9) Grave 3942 was truncated from above round most of its outline, but without impact on the interment. Its adult occupant (40-45 years) lay extended, supine, head to the SE, facing upwards. The arms were straight along the sides, the hands open, with palms

facing inwards. The legs were straight, with feet together. The head and neck rested on a shelf slightly higher than the rest of the bottom of the grave.

Grave goods included an upright tripod bowl (Figure 99a) next to the right side of the head, and a small stack of *Pinctada mazatlanica* shells, interiors upwards, to the right of and just beneath the proximal end of the right humerus. Also in the fill were a thin white shell bead (Figure 73u), and a part-worked blank of *Pinctada mazatlanica* (Figure 74j). Various other artefacts were probably redeposited goods originally belonging to grave 4133 (q.v.). A used obsidian flake (Figure 85i) may have belonged to 3942, else to 4133.

10) Grave 3937 was truncated and intruded upon, with loss of most of the head, much of the neck and chest, and the lower left arm. The 25-30 year old female lay extended and supine, head to the SE. The arms were by the sides, the right hand over the right hip. The legs were straight, but crossed at the knees, the right over the left, with the feet together.

To the right of the knees was a small iridescent-painted jar (Figure 124g). At the proximal end of the left humerus was a green stone bead (Figure 72p). There was also a pair of worked points of deer antler (Cervidae, perhaps *Odocoileus virginianus*), one (Figure 82c) under the left innominate, the other (Figure 82d) below the fifth lumbar vertebra. Also in the fill was a *Pinctada mazatlanica* blank (Figure 74h).

11) Grave 3929 was truncated with loss of bone particularly in the region of the knees and from the lower left arm. The individual was a 35-40 year old female on her back, head to the NW, face turned to the NE/left. The knees were bent and raised, legs and feet

together. The arms lay by the sides. There were no grave goods found.

12) Grave 3899 was only lightly touched by intrusive features, with no damage to the interment. This was of a 30-35 year old male, extended and supine. The head was to the SE, but on its right side, facing NE. The arms were by the sides, right hand by the right hip, left hand on the left hip. The legs were straight, knees together, the left foot over the right.

Under the jaw was a red *Spondylus* bead (Figure 73z). In the fill were two used obsidian flakes (Figure 85e,f), a broken fish-hook of *Pinctada mazatlanica* (Figure 75f), a fragment of worked *Conus* sp. (Figure 77b), and a white shell bead (Figure 73v).

13) Grave 3804 was truncated from above all round, but without damage to the interment. This was of a 35-45 year old female, extended and supine, head to the SE and bent forwards. Arms were at the sides, with the left hand over the pelvis, the right hand against the right hip. The legs were straight, with knees and feet together. The first three lumbar vertebrae were fused together.

Four long bones lay over the torso, these belonging to the adult female of grave 3320, into which 3804 cut. In the fill were a red *Spondylus* bead (Figure 73w) and a *Pinctada mazatlanica* blank (Figure 74i).

14) Grave 3765 was truncated along the whole of its SW side, and there was loss of both femurs as well as much of the pelvic region. The individual was a 40-45 year old male, extended and with the head to the NW. Uniquely, the skeleton, facing NE, lay with the torso twisted onto its left side, the left arm under that. The right arm was bent double along the right side, with the hand against the right shoulder. The lower legs lay side by side, but with the feet turned to the left, as would be expected if the torso was on the left



side. Several complete shells and an obsidian flake, found in the fill, were lost before they could be properly recorded.

15) Grave 3642 was truncated with loss of most of the legs and left hand. The 30-35 year old male lay supine and extended, head to the NW, face upwards. The arms were by the sides, the legs straight. Under the head was a bottle (Figure 119). In the right hand was an ornament of brown stone (Figure 71d). In the fill were a red *Spondylus* bead (Figure 73x), and a *Pinctada mazatlanica* blank (Figure 74l).

16) Grave 3495 was incompletely excavated to the SE. It contained a 38-44 year old male, supine, head to the NW, face upwards, probably extended, with upper arms to the sides. Two artefacts of *Pinctada mazatlanica* were found in the fill: a hook fragment (Figure 75g), and a blank (Figure 74k).

17) Grave 3408 was severely truncated, with loss of all bone save head, upper torso and upper arms. The 40-45 year old female lay supine, head to the NW and bent slightly forwards, with the upper arms by the sides. A small cowrie (*Trivia sp.*), lay next to the left side of the mandible.

18) Grave 3370 was truncated with loss of most bones, only part of the skull, neck, right chest and arm surviving. The adult lay supine, head to the NW, right arm by the side. There were a few small stones at the right of the head. In the fill were a small disc (Figure 77d) of purple *Spondylus*, and the worked valves of a *Pitar sp.* (Figure 77c).

19) Grave 3320 was truncated from above with resulting damage to the double interment of an adult female (40-50 years) and an infant. The adult was supine and semi-flexed, head to the SE, facing upwards. knees bent and raised. The arms were by the sides, almost

reaching the feet, which were drawn up close to the buttocks. The legs were missing, but can be accounted for by an appropriate set of bones laid over the torso of the skeleton of grave 3804, which cut down into 3320.

The infant, represented mainly by remains of the torso, plus a few fragments of skull and the proximal ends of the femurs, lay supine across the abdomen of the adult, head to the south. There were no grave goods found.

20) Grave 3315 was truncated with loss of the left foot and part of the right. The 40-50 year old female lay supine and extended, head to the NW, facing upwards. The arms lay by the sides, palms inwards; and the legs were straight. knees and feet (probably) together. There was a ceramic jar stopper (Figure 86i) in the fill.

21) Grave 3302 (Figure 31) was truncated with loss of the feet. The 35-45 year old male lay flexed on his back, head to the NW, facing NE, with the legs bent. drawn close to the chest, and leaning to the left. The back, then, was almost flat, but slightly twisted. The arms lay to the sides.

Below the lower right back and right arm was a dog-shaped bottle (Figure 120), which lay on its left side, head to the SW. Below the left femur was was a baton (Figure 82e) made from a bone of the dorsal fin of a large fish, probably of the swordfish family (Xiphidae). A green stone bead (Figure 72q) lay under the left mandible. A small gastropod (*Neoprana muricata*) lay next to the top of the head.

At the left shoulder was a unique container (Figure 83). Its body was formed out of the anterior portion of the skull of a deer (*Odocoileus virginianus*), with the maxillary teeth filed down and the two ends cut flat. The nose end was packed with pitch. The rear end

was perforated with five regularly spaced holes. for tying to the five-sided lid of *Pinctada mazatlanica*. also perforated, that was found with it.

22) Grave 3292 was truncated with loss of the feet, upper left leg, left hand, much of the pelvis. and the face. The 40-50 year old male lay supine and extended, head to the SE. face upwards. The arms were by the sides. with the left hand under the left buttock. The legs were straight.

To the right of the head was a small undecorated jar (Figure 135s). The upper halves of two stone figurines lay next to the top of the head, one (Figure 59a) on the right side. the other (Figure 59b) on the left. Between the figurines lay an unidentified gastropod.

23) Grave 719 was truncated at one end, with loss of the head. Many small bones. especially those of the hands. were completely decayed. The 18-40 year old female lay supine and extended. head to the NW. The arms lay by the sides. The legs were stretched out. with the right knee bent slightly outwards. and the right heel under the left.

Next to the right side of the chest was a small jar decorated with iridescent paint (Figure 124k). In the fill were the whistle of a bottle. and a sandstone cobble that had been used as a hammer (Figure 84a).

24) Grave 4400. mostly truncated. is of Phase IV. Of the 18-20 year old individual. only the poorly preserved skull remained. to the NW. face upwards. with fragments of the shoulders. Bone disposition and assessment of probable original extent for the grave suggest that the body was placed on its back but with knees raised. A green stone bead (Figure 72t) was in the fill.

25) Grave 840 is also of Phase IV. It was incompletely

excavated to the SE. The adolescent or young adult lay supine, arms by the sides, head to the NW, face upwards.

The mouth was open, the jaw horizontal. A premolar and a second incisor, both from the maxillae, lay flat, over and aligned with the molars of the right and left mandibles respectively, their roots to the fore. This seems likely to have been a deliberate arrangement.

Over the forehead was a cut and polished gastropod (*Latirus* sp.?, Figure 77f), its apical point towards the nose. A small hole through the centre of the shell would have allowed it to be tied to the head. Under the back of the head was a fragment of *Spondylus*. In the fill were a white shell bead (Figure 73y), and a green stone bead (Figure 72w).

An unusual gap of 33 cm between head and grave end could have accommodated a head-dress.

#### 4.3.2.3 Summary of Phase III/IV burials

All burials were aligned on an NW-SE axis, with thirteen skeletons headed to the NW, and twelve to the SE. Only the infant of the double interment lay off this axis. In all five cases where the head did not face upwards, it faced the NE. There is no correlation between orientation and sex, four each of the identified males and females lying with heads to the NW, and four each to the SE. NW-headed burials tend to be later, but not always. NW-headed burials also tend to lie SE of the SE-headed burials, and *vice versa*.

All burials had the torso, at least, horizontal, and all torsos were on their backs, save one, which was on its left side, facing NE. An extended posture was favoured, with fifteen skeletons certainly, and a further six probably so arranged. Three were

certainly semi-flexed, and one more probably semi-flexed. Only one was fully-flexed.

There is variation in grave goods with respect to material, form and location within the grave. Goods were sited around, over and below many parts of the body, but the region of the head was the area more commonly chosen.

Pottery vessels (n=9) were the most numerous of artefacts with secure association. They also provide the only two instances of exclusive correlation between sex and any other aspect of the burial: all three bottles belonged with adult males, and the two iridescent jars belonged with adult females. Five burials had six green stone ornaments directly associated, and there were two more in the fills of two other graves.

Nine obsidian flakes, including two pairs, six having clear sign of use, were found in seven graves. In only one instance were they seen in close association with the body. But, given the scarcity of artefacts of this stone at the site during Period 1 (n=30), it is likely that this relative concentration is significant in each case of intentional inclusion.

Shell artefacts were commonly found (n=22), but relatively few (n=4) showed any clear association with the burials. Just one grave held stone anthropomorphic figurines.

Also, there were complete specimens or fragments of unworked shells. In two graves, they were included in the structured arrangement of the burial: single valves of *Lyropectens subnudosus* and *Spondylus calcifer* over the knees in one, a pile of *Pinctada mazatlanica* by the shoulder of another. In three other graves there was shell close to the head.

Table 5. PHASE III/IV HUMAN BURIALS

GRAVE	POTTERY GOODS	OTHER GOODS	AGE	SEX	BURIAL TYPE	HEAD TO
5734			A	?	E	SE
4784		(?) Shell bead CT619	I		E	SE
4471	Bottle	Green stone bead B651 Shell baton CT243 <i>Spondylus calcifer</i> <i>Lyropectens subnudosus</i> Obsidian flake OBS271 (?) Worked tuff B652	25-30	M	E	SE
4352			I		E	NW
4228			SA		E	NW
4133	Serving bowl Cooking jar	Green stone bead B618/619 Green stone object B630 Net weight B620	20-40	?	E	SE
4130		Green stone pendant B623 Pearl CT242 Obsidian flakes OBS267/268 (?) Burnt stone fragments (?) Small stones (?) Broken stone disc B670	16-20	M	SF	SE(NE)
4049		Obsidian flake OBS269 (?) Shell bead CT726	35-45	F	E	SE
3942	Serving bowl	<i>P. mazatlanica</i> valves Obsidian flake OBS265 (?) Shell bead CT249 (?) Shell blank CT230	40-45	?	E	SE
3937	Serving jar	Green stone bead B629 Two antler points B627/628 Obsidian flake OBS262 (?) Shell blank CT228	25-30	F	E	SE
3929			35-40	F	SF	NW(NE)
3899		Shell bead CT227 Obsidian flakes OBS263/264 (?) Shell hook CT225 (?) <i>Conus</i> sp. CT229 (?) Shell bead CT641	30-35	M	E	SE(NE)
3804		(?) Shell bead CT222 (?) Shell blank CT223	35-45	F	E	SE
3765		Obsidian flake (?) Whole shells	40-45	M	E	NW(NE)

Table 5. PHASE III/IV HUMAN BURIALS (cont.)

GRAVE	POTTERY GOODS	OTHER GOODS	AGE	SEX	BURIAL TYPE	HEAD TO
3642	Bottle	Brown stone ornament B547 (?) Shell bead CT189 (?) Shell blank CT190	30-35	M	E	NW
3495		(?) Shell hook CT199 (?) Shell blank CT 194	38-44	M	E	NW
3408		<i>Trivia sp.</i>	40-45	F	?	NW
3370		(?) Shell disc CT187 (?) <i>Pitar sp.</i> CT188 (?) Small stones	A	?	?	NW
3320			40-50 I	F	E E	SE S
3315		(?) Jar stopper B1140	40-50	F	E	NW
3302	Dog bottle	Fish bone baton B543 Deer skull B544 + Shell lid CT146 Green stone bead B541 <i>Neoprana muricata</i>	35-45	M	F	NW(NE)
3292	Jar	Stone figurines B538/539 Gastropod	40-50	M	E	SE
719	Serving jar	(?) Whistle (?) Stone hammer B476	18-40	F	E	NW
(Phase IV)						
4400		(?) Green stone bead B903	18-20	?	SF	NW
840		<i>Latirus sp.</i> ornament CT170 <i>Spondylus</i> fragment (?) Shell bead CT168 (?) Green stone bead B501	AD/YA		E	NW

OTHER GOODS - (?): Direct association with the burial is not certain.

AGE - A: Adult; AD/YA: Adolescent/Young adult; I: Infant;

SA: Sub-adult.

BURIAL TYPE - E: Extended; F: Flexed; SF: Semi-flexed;

HEAD TO - Direction of the face is given in brackets.

In total, ten adult graves had goods that were clearly deposited as part of the burial structure. A further two had obsidian flakes in the fill; two more each had a small shell object at the jaw;

and one, very truncated, had a green stone bead near the head.

Of the two single infant burials, both were truncated, and one had only a shell bead in the fill. The sub-adult was without surviving grave goods, as was the double interment of adult and infant.

Of the remaining six adult burials without obvious goods, two were incompletely excavated (head and shoulders only), two were severely truncated, one lacked the feet, and only one was so complete as to suggest that no artefacts had survived with the skeleton.

The evidence, then, is that at least one artefact was normally placed with each adult burial; and that the artefact or artefacts chosen came from a wide range of material or formal types, with a focus on pottery vessels, green stone ornaments, and obsidian blades.

#### 4.3.2.4 Phase V burials

There were eight burials, all of single adults, five of them female, two male and one of undetermined sex. Two were recovered prior to single-context excavation of Trench 3, but are included to complete the inventory for the area. There has been no study yet of artefacts from Salango 2 contexts. Consequently, none of the grave goods are illustrated, descriptions are brief, and objects only loosely associated in the fills are generally not mentioned.

Seven of the graves lay within the area enclosed by the Structure 11 funerary enclosure (Figure 21), and post-date that structure. The eighth, however, though lying in the same area, predated Structure 10, and may even have been earlier than Structure 8 (Figure 19).

The graves were all circular or subcircular pits, up to about



100 cm wide. All were truncated from above by earlier excavation, so the maximum recorded depth of 83 cm should probably be taken as a minimum for original depths. Fills were of very mixed soils, often difficult to distinguish from the material cut by the graves.

1) Grave 3624, the earliest, was slightly SW of the main group, though indistinguishable in terms of configuration from later examples. Only the NW/left half was excavated, the remainder lying outside Trench 3. It contained a primary interment. The 35-40 year old female, facing NE, was seated, legs bent and crossed (right over left) in front of the upright torso, arms crossed (right over left) over the lap. The head was probably lost to a later intrusion.

Three pottery vessels were associated. Resting on the knees was a double compotera (i.e. two pedestalled bowls linked at base and rim). In the right bowl of the compotera sat one jar, while a second lay against the left hip. There were two flakes of copper in the fill.

2) Grave 771 contained a secondary urn burial. Though extending over the east corner of Trench 3, it was fully excavated. The grave had a wider upper section, with a flat bottom, down from which was cut a second, narrower and lower section. It was in this lower section that the urn sat, badly damaged, its relatively unsupported upper section having collapsed outwards. The vessel exterior was stained with a textile pattern.

The individual was of 20-35 years and undetermined sex. The bones were more badly preserved than most. Pelvis and ribs lay on the bottom, to the south. Partially articulated foot bones lay to the north. Long bones lay higher up and to the west, roughly along a NW-SE axis. Skull fragments lay to the NE, apparently on top. An overall NE orientation is thus suggested.

On top of the bones, at the centre of the urn, was an annular-based plate. Also on top of the bones were two bone points, and an ear spool made from a fish vertebra.

3) Grave 765 cut the SW edge of 771. It too extended over the SW edge of Trench 3, but was fully excavated. The 20-30 year old female, facing NE, was seated cross-legged (right over left), arms by the sides, bent at the elbows, hands meeting in the lap. (The skull was destroyed before it could be recorded.)

Four pottery vessels lay to either side and in front of the body. At the left hip was one jar, while another sat in front of the legs. At the right hip was a carinated bowl. On top of the bowl was a double pedestalled bowl.

4) Grave 662 (Figure 32) contained a primary burial. The 23-28 year old male sat fully flexed, oriented to the NE, with the arms either side of the right leg, the hands joined.

Three pottery vessels lay to the right (SE) of the body. Next to the right hip was a jar, and to the right of that was a carinated bowl. Resting over these was a double pedestalled bowl.

5) Grave 532 (Figure 33) contained a primary burial, and extended over the SE edge of Trench 3, but was fully excavated. The late adolescent or young adult female, facing NE, sat cross-legged (right over left), with arms at the sides, bent at the elbows, hands meeting in the lap. Though the torso leaned steeply forwards, the head was bent backwards, suggesting the displacement of an originally upright posture.

Two pottery vessels were found: one half of a double pedestalled bowl sat next to the left hip; and a jar sat next to the right hip.

6) Grave 467 (Figure 34), which cut grave 662, contained a

secondary bundle burial with overall orientation to the NE. The individual was a 38-43 year old female. Sacrum and scapulae were to the rear (SW), with the long bones in front, lying roughly NW-SE, and the skull to the right (SE) of the long bones. The remainder of the bones rested over and among the long bones, with no clear pattern discerned.

Overlain to varying degrees by the bones, were three pottery vessels, suggesting that the bones were first wrapped up together and then placed on top of and behind the pots. A pedestalled bowl lay under the left (NW) side of the bundle. In front was a jar, and to the right (SE) of that, an uncarinated bowl.

7) Grave 205 (excavated before Trench 3 proper) contained a primary burial. The 30-40 year old female sat upright, fully flexed, facing north. To the NE of the body were five ceramic vessels. This grave cut 203, and it is possible that some of the pots belonged to the earlier burial.

8) Grave 203 (also excavated before Trench 3 proper) contained a primary burial. facing north-west or west. The 40-45 year old male sat upright, fully flexed, knees to the chest. No grave goods were recorded.

#### 4.2.3.5 Summary of Phase V burials

Primary burials were seated, and either fully flexed or cross-legged. In cross-legged burials (n=3, all of which were female), there were repeated patterns of positioning: 1) of legs and arms, with the left limbs under the right; 2) of goods, which were placed to either side and in front of the body. Further, they all faced NE.

Table 6. PHASE V HUMAN BURIALS

GRAVE	POTTERY GOODS	OTHER GOODS	AGE	SEX	BURIAL TYPE	FACING
3624	Double pedestalled bowl Two jars	Two copper flakes	35-40	F	CL	NE
771	Plate	Two bone points Bone ear spool	20-35	?	2U	NE
765	Double pedestalled bowl Bowl Two jars		20-30	F	CL	NE
662	Double pedestalled bowl Bowl Jar		23-28	M	F	NE
532	Half double pedestalled bowl Jar		AD/YA	F	CL	NE
467	Pedestalled bowl Bowl Jar		38-43	F	2B	NE
205	Five vessels		30-40	F	F	N
203			40-45	M	F	NW/W

AGE - AD/YA: Adolescent/Young Adult.

BURIAL TYPE - F: Seated and flexed; CL: Seated and cross-legged;  
2B: Secondary bundle burial; 2U: Secondary urn burial.

Of the three flexed burials, two were of males and one of a female. In one case, skeletal orientation was to the NE, but in the other two it was not. Though one burial entirely lacked pottery vessels (perhaps through relocation to the grave which cut through it), with the other two cases, the pottery was to just one side of, rather than around, the body.

The two secondary burials are distinct from each other in terms of general configuration and grave goods, but share a general NW-SE alignment for the long bones, and were both oriented to the NE. The bundle burial was accompanied by a set of goods comparable with

those of the primary burials.

Though grave goods vary, the main vessel set consists of pedestalled bowls (single or double), unsupported bowls and jars. Only the urn burial was accompanied by smaller, non-ceramic artefacts, in this case all of bone, though fragments of copper were found in the earliest grave.

#### 4.3.3 Stone Figurine Depositions

##### 4.3.3.1 Nature of the depositions

During the latter stage of Phase III, the SW area of the site was used for the deposition of a number of stone figurines and related objects in thirty-four holes dug for that specific purpose.

This assemblage was predated and prefigured first by the multiple artefact deposition (6659) just inside the SW wall of Structure 4 (Figure 12). The pit was subcircular, 58 cm wide and 33 cm deep, with vertical sides and a flat base. At the centre of the bottom was an irregularly cut and polished bar of malachite (Figure 70b). 20 cm to the SE was an upright block of fossil wood (Figure 41a) leaning back slightly and facing NE. In front of the block was an anthropomorphic figurine pendant (Figure 41b) made out of the cut and polished canine of a marine mammal (perhaps a sea lion), set upright and also facing NE. 2 cm above the figurine, lying flat and side by side with each other, were two disc-shaped green stone beads (Figure 72k,l).

Table 7. EARLY PHASE III FIGURINE DEPOSITION

CONTEXT #	FIGURINE TYPE	FINDS #	FACE TO	ASSOCIATED ARTEFACTS	OBSERVATIONS
6659	Tusk Large	B933 B919	NE NE	Malachite bar B893 Green stone bead B899 Green stone bead B900	Tooth pendant Fossil wood

The malachite lay in a shallow bottom fill. The other objects were all contained within the main fill, and were clearly each set in place in turn, the figurine being covered over before the beads were added. The ensemble, set in the south corner of the pit, faced NE, and was completely buried.

Next was the series of three stone figurines (Figures 42-44) set upright in holes cut into the base of the foundation trench for wall 4622 (Structure 7 - Figure 15). The figurines faced SW, NNE and west. The fill around the second included a purple spondylus bead (Figure 73q); and the third, painted green, stood over a stone disc (Figure 79f) also painted green. Together with wall 4622, they mark a NE limit to dedicated figurine depositions in the SW area.

Table 8. LATE PHASE III FIGURINE DEPOSITIONS BENEATH WALL OF STRUCTURE 7

CONTEXT #	FIGURINE TYPE	FINDS #	FACE TO	ASSOCIATED ARTEFACTS	OBSERVATIONS
5669	Large	B803	W	Green-painted Disc B807	Green paint
5645	Large	B802	NNE	Purple <i>Spondylus</i> Bead CT375	
5634	Large	B801	SW		

The main group of thirty-four depositions (Figure 17) followed immediately afterwards, the last deposition occurring before the laying of the prepared clay surface 3039 (Phase IV). A three stage stratigraphic sequence, involving nineteen depositions in the more south-westerly area, suggests that depositions tended to move further away from the enclosure as time went by.

The holes were circular or subcircular, with steep to vertical sides and flat bottoms, and mostly between 10 and 20 cm wide, though multiple depositions and larger figurines required greater dimensions. Holes varied in depth, again according to the height of

the figurines. Fills were mostly soft to slightly hard sandy clay loams, mid to dark brown.

There were twenty-one depositions of single stones; five depositions of two stones; four of three stones; two of four stones; and one each of five and thirteen figures. Of the group of thirteen, one was of star coral. Three multiple depositions were not of anthropomorphic figures, but of: two stone fish; one stone fish and three flat river stones; and three flat river stones. One stone anthropomorph was not of tuff but marble. One piece was an incised stone disc.

Four figurines were painted green. Given the poor preservation of many of the stones, it is possible that more had once been so treated.

Five depositions, all single, were associated with artefacts of different type. Of those with anthropomorphic figurines: 3438 had two obsidian flakes (Figure 85a,b), a cut blank of *Spondylus* shell (Figure 73r), a pendant of green stone (lost without further record), and, under the figurine, a *Pinctada mazatlanica* valve; 3605 had a green stone pendant (Figure 71c); 3608 had a green stone bead (Figure 72x); in 4790 the figurine was set against a large portion of whale bone (possibly a cranial fragment). The disc of 3610 had a green stone bead (Figure 72v).

The anthropomorphic figurines were set upright (Figure 36a), save in one case (3654), where the figurine lay supine, on the bottom of the hole. Whether this is an instance of disturbance to an originally upright setting is not clear. In 3610, the disc lay on the inclined base of the hole (Figure 36b).

Figurines variously stood away from or leaned against the sides of their holes. They were set directly on the base of their

holes, save in 3759, where the figurines were 12 cm above the base.

There were only five recorded instances where the stones did not protrude from their holes. Thus the figurines were intended to be at least partly visible after deposition. Exactly how much was left visible is not clear. It may simply have been what protruded, mostly up to 5 cm of the figure, after completely backfilling the holes. But it may also have been that the holes were not immediately backfilled, although support would in some cases have been necessary to keep the stones upright. The carved disc could have initially been completely exposed. Even those which did not protrude may well have been left exposed to view from above.

There was variation in internal arrangement of multiple depositions and in orientation of all types of deposition. The figurines thus present a dispersed pattern of orientation, though there is some suggestion of a favouring of the NE-SW axis, and the E-SE sector is mostly avoided.

Single upright figurines faced north (n=2), NE (n=8), east (n=1), south (n=1), SW (n=1), west (n=2), and NW (n=3). The disc faced NE. The supine figure of 3654 was aligned N-S (the direction of the head unrecorded).

Of the multiple anthropomorphic figurine depositions, collective orientation and individual orientations alike were to the SW in two cases: 4866, a single row of four; and 4733, where the larger figurine stood behind the smaller. In 4795, the three rows faced SW, while the thirteen individual figurines each faced south. In 3798, the two rows of figurines collectively and individually faced NE. In 3623, there was a collective orientation of the single row to the SW, while individuals faced N, NE, SW and SW.

In three cases there was no shared or clear collective



orientation: in 4395, one figurine looked south, the other, standing to its east, SW; in 4388, two faced west, one to the north of the other, while the third, to their east, faced north; and in 3697, two faced north, one standing north of the other, while the third, to the east, faced NE.

In the paired depositions with only figurine bases preserved, the pieces were east or west of the other. In 3843 there was no evidence as to their orientation, while in 3759 the carved design suggested a N-S axis, but without favouring either direction.

The fish and river stone depositions were as follows: in 3655 the two fish, set on their tails side by side, leaned to the north; in 3802 the single fish was on its back edge, head to the NE, and the three river stones were set in a row parallel to it, side by side to the NW; and in 3784 the three river stones were also side by side, aligned NE-SW.

In six instances (4866, 4842, 4835, 4795, 4790, 4733) the features straddled the edge of the excavation area proper. These include the largest multiple deposition and that of the marble figure and whale bone. Full dimensions, then, and complete contents are not quite certain. In particular, the arrangement of the whale bone is unclear. It is possible that the bone belonged to a separate feature, and that the marble figurine was set in a hole cut into the bone.

In addition to the dedicated depositions, two stone anthropomorphic figurines, lacking their lower halves, were found at the head of one of the human burials of a Period I grave (3292).

A further six figurines, in varying degrees of preservation, were found lying in five pits whose greater size, in conjunction with the disposition of the figurines, suggest that the depositions were not primary, or of the same order as the others. While two pits (4717,

3507) lay within the area of primary depositions, the others (3935, 3769, 3232) all lay NE from that area.

Table 9. LATE PHASE III FIGURINE DEPOSITIONS POST-DATING STRUCTURE 7

A) MULTIPLE ANTHROPOMORPHIC

CONTEXT #	FIGURINE TYPE	FINDS #	INDIVIDUAL ORIENTATION	COLLECTIVE ORIENTATION	OBSERVATIONS
4795	Tusk	B686	S	SW	
	Tusk	B687	S		
	Tusk	B688	S		
	Tusk	B689	S		
	Tusk	B690	S		
	Tusk	B691	S		
	Tusk	B692	S		
	Tusk	B693	S		
	Tusk	B697	S		
	Tusk	B698	S		Coral
	Tusk	B699	S		
	Tusk	B700	S		
	Tusk	B701	S		Green paint
3798	Tusk	B595	NE	NE	
	Tusk	B596	NE		
	Tusk	B597	NE		
	Tusk	B598	NE		
	Tusk	B599	NE		
3623	Tusk	B579	SW	SW	
	Tusk	B580	N		
	Tusk	B581	SW		
	Tusk	B584	NE		
4866	Tusk	B709	SW	SW	
	Tusk	B710	SW		
	Tusk	B711	SW		
4388	Tusk	B644	W		
	Large Tusk	B645	W		
	Tusk	B646	N		Green paint
3697	Tusk	B588	N		
	Tusk	B589	NE		
	Tusk	B590	N		
4733	Large Tusk	B666	SW	SW	
	Large Tusk	B667	SW		
4395	Tusk	B648	S		
	Tusk	B649	SW		
3843	Tusk	B609A	?		Bottom only
	Tusk	B609B	?		Bottom only
3759	Tusk	B641	N/S?		Bottom only
	Tusk	B642	N/S?		Bottom only

N.B. Collective orientations are given only in those cases where the figurines were set in obvious rows.

Table 9. LATE PHASE III FIGURINE DEPOSITIONS POST-DATING STRUCTURE 7  
(cont.)

B) SINGLE ANTHROPOMORPHIC WITHOUT ASSOCIATED ARTEFACTS

CONTEXT #	FIGURINE TYPE	FINDS #	FACE TO	OBSERVATIONS
4842	Tusk	B702	N	
4835	Large Tusk	B703	W	
4046	Tusk	B613	NE	
3973	Large Tusk	B635	NW	
3971	Large	B634	NW	
3869	Tusk	B640	NE	Bottom only
3863	Tusk	B608	?	Bottom only
3825	Tusk	B605	NE	Green paint
3815	Tusk	B606	W	
3810	Odd	B601	NE	Green paint
3742	Tusk	B617	E	
3654	Tusk	B585	N/S	Supine
3650	Odd	B576	S	
3629	Tusk	B578	N	
3620	Tusk	B575	NE	
3616	Tusk	B586	NW	

C) SINGLE ANTHROPOMORPHIC WITH ASSOCIATED ARTEFACTS

CONTEXT #	FIGURINE TYPE	FINDS #	FACE TO	ASSOCIATED ARTEFACTS	OBSERVATIONS
4790	Tusk	B708	SW	? Whale bone	Marble pendant
3608	Odd	B591	NE	Green stone bead B570	
3605	Tusk	B592	NE	Green stone pendant B572	
3438	Tusk	B552	NE	<i>Pinctada mazatlanica</i> valve Obsidian Flake OBS256 Obsidian Flake OBS257 Green stone pendant B550 Red <i>Spondylus</i> blank CT727	

D) SINGLE NON-ANTHROPOMORPHIC

CONTEXT #	FORM	FINDS #	FACE TO	ASSOCIATED ARTEFACT
3610	Disc	B569	NE	Green stone bead B571

**Table 9. LATE PHASE III FIGURINE DEPOSITIONS POST-DATING STRUCTURE 7**  
(cont.)

**E) MULTIPLE NON-ANTHROPOMORPHIC**

CONTEXT #	FORM	FINDS #	ORIENTATION	OBSERVATIONS
3802	Fish	B600	NE	On dorsal edge
	River Stone		NE/SW	Upright
	River Stone		NE/SW	Upright
	River Stone		NE/SW	Upright
3784	River Stone		NE/SW	Upright
	River Stone		NE/SW	Upright
	River Stone		NE/SW	Upright
3655	Fish	B577	S/N	On tail
	Fish	B583	S/N	On tail

**F) PRIMARY NON-DEDICATED/GRAVE DEPOSITION**

CONTEXT #	FIGURINE TYPE	FINDS #	OBSERVATIONS
3292	Tusk	B538	Mutilated
	Tusk	B539	Mutilated

**G) SECONDARY OR DISTURBED DEPOSITIONS**

CONTEXT #	FIGURINE TYPE	FINDS #	ASSOCIATED ARTEFACTS	OBSERVATIONS
4717	Large	B665	Green stone bead B745	Supine, head to E
3935	Odd	B625		On side, head to NW with face to NE
3769	Tusk	B632		
3507	Tusk	B707		Lying flat
3232	Tusk	B560		Bottom only
		B639		Bottom only.
3179	?	B647		Fragment only; Green paint

4717 was an irregular feature (144 x 55 x 28 cm) with a NNW-SSE axis. At the centre of the NE side there was a circular depression of 36 cm diameter. The figurine lay between the depression and the south end of the feature. There was a green stone bead (Figure

720) in the fill, which was itself mainly of hard clay. In fact, the shape of the feature and its mixed coloured clay fill are very similar to those of the later rectangular pits of the SW area. In 3507 (23 x 22 x 21 cm) the figure was laid flat, 5 cm below the top of the hole. In 3935 (severely truncated, 31 cm wide and 10 cm deep), the figurine lay on its side, head to the NW, facing NE. There was no record of the disposition of the figurine in 3769 or the two bottom halves in 3232.

A broken fragment of worked tuff, its surface painted green and lightly polished, was found in a hole (3179) within the main area of deposition. The relatively great depth (34 cm) of the hole, and the broken state of the fragment indicate secondary deposition.

There were also eleven fragments of the raw material, mostly from late Phase III contexts. They were of various sizes, none of them larger than the sculpted or shaped figures. Two (Figure 84g,h), from a grave (4471) and a rubbish pit (3300), showed signs of rough working, but neither seem to be related to the figurines.

#### 4.3.3.2 The artefacts

There are eighty-two stone figurines or equivalents. Other than a demonstrably early position for larger figurines such as those beneath the wall, there is no correlation between variation in design and chronological order.

Within multiple depositions, figurines may or may not be of the same general style. Where they are of the same style, each figurine is different from the others in at least one element of design. Many of the figurines had deteriorated before I was able to record them: in particular, details of the face may have disappeared. But it seems that no two figurines in the assemblage were the same.

The material used was generally a soft, easily worked, light,

near-white or blue-grey tuff, probably obtained from sources in the Callo-Machalilla area (Sheppard 1937, 63). In some cases the stone was harder, or coarser, or there might be tiny black inclusions. Within multiple depositions, figurines with a common style were of identical material.

Broadly, the seventy-one anthropomorphic figurines can be divided in three ways, as large or small, as detailed in relief or by incision, and as flat-based or tusked. Large figurines tend to be carved in relief and have flat bases. Small figurines tend to be tusk-shaped, but may have detail incised, in relief or through a combination of these two methods.

Large figurines (Figures 42-46) generally range in height from 195 mm to 250 mm, and in weight from 1473 g to 3000 g. One of these (Figure 44) was painted green, as was the tuff disc over which it stood.

The largest, however, of all the pieces (Figure 49), is 320 mm high and weighs 5050 g. It is, then, four times taller and over forty times heavier than the tooth pendant (Figure 41b), which is 81 mm high and weighs 113 g. It is also of unique form, more like a stele than a figurine.

Tusk-shaped figurines (Figures 47, 48, 50-64, 65a) mostly range in height between 100 and 200 mm, and in weight between 140 and 500 g. Three of these were painted green (Figures 50c, 53c, 54b).

There are two tusk forms not of tuff. One (Figure 53d) is of star coral and weighs 58 g. The other (Figure 65a), is of a pale brown polished marble, weighs 358 g, and is of very different style to all the others. It is also the only stone pendant.

Apart from the large and tusk-shaped figurines, there are four others each of anthropomorphic but unique design (Figures 65b,

66a, 66b, 67). The first of these was painted green.

On anthropomorphic figurines, particular emphasis is placed on representation of the head and face. In addition to eyes, mouth and nose, thirteen tusked forms carry head-bands (e.g. Figure 59). On one piece (Figure 55c) a more elaborate crown is suggested. Five tusked figurines may also have a fringe and then hair falling down to the neck on either side of the face (e.g. Figure 57c).

Nineteen figurines (including both pendants) have arms depicted, with or without hands explicitly detailed. Two of the large figurines (Figures 42, 43) have a left, but no right arm. Eleven figures have waist bands (e.g. Figure 55b). But legs are rare (n=5), and feet are never given. The navel is represented on the tooth pendant (Figure 41b) and only one stone tusked form (Figure 61b), which uniquely also has a square incised around it. Two figurines (Figures 43, 67), neither of them tusk-shaped, are explicitly female through representation of the breasts. One figurine (Figure 55a) carries a baton over the stomach or pelvis. One large figurine (Figure 44) has a circular hole cut into the top of its head.

The three fish (Figure 68) are roughly of the size and weight of the smaller tusk forms. They are each slightly different to each other, but have stylistic devices not found amongst the anthropomorphic figurines. While two of the fish have either side treated differently, one (Figure 68b) has the same design on both sides.

Coincidentally or otherwise, the depiction of the eyes on the fish is very similar to that of the dot and circle motif applied to the disc (Figure 69a). The disc, 203 mm across and 37 mm thick, has the same design on both sides.

One fragment (Figure 69b), with green paint over its original

surfaces. does not match any other piece.

The six river stones are subrectangular in outline, have smooth, flat surfaces and rounded edges. Those of 3801 are slightly larger (200 x 160 mm, 150 x 120 mm, 140 x 130 mm) than those of 3783 (140 x 100 mm, 120 x 130 mm, 90 x 90 mm). Thicknesses range from 25 to 30 mm.

#### 4.3.3.3 Observations

The Structure 4 deposition of fossil wood and tooth pendant was the most elaborate of all features, other than human burials, found at any stage of the excavation. The placing of the stone beads over the figurine's head shows great attention to detail. It also points to the importance of the beads themselves as elements of ritual or structured deposition.

With Structure 7, the series of three stone figures was consigned to the invisible underground (as was the tooth figurine), and was directly associated with the making of the platform perimeter wall. The placing of the green painted stone disc under one of the figures provides a link between two homologous arrangements that I shall describe in discussion of post-hole depositions.

The main group of figurines came at the end of Phase III. As noted, all dedicated figurine and related stone depositions of this stage lay outside the line of the Structure 7 perimetral wall.

The one clear instance of structured figurine deposition that crossed this boundary involved two anthropomorphic pieces, perhaps deliberately mutilated, set at the head of a human burial. Closeness of association between the contemporary activities of figurine deposition and human interment is primarily suggested by the overlapping of the fields of these activities; and the presence of the



broken figurines in the burial provides another link.

Further, most of the main group of figurines stood proud of their holes, and potentially all of them were left at least partly exposed after deposition. They are then, an explicit link between the visible world above ground and the invisible world beneath.

On the other hand, most stone figurines ignore the axis of orientation of contemporary human burials; the fields, though overlapping, are distinguishable; and the figurines are partially exposed. All this suggests a more complex relationship between the two sets of feature than simple equivalence: i.e. that the figurines are not simple substitutes for human individuals.

Turning back, the tooth pendant is the clear morphological precursor to the stone figurines of tusk shape. The marble pendant figurine reinforces the link between the stone tusk-shaped figures and the earlier tusk pendant.

At the same time, the fossil wood (Figure 41a) set behind the tooth pendant can be seen as a precursor or equivalent of the large figurines carved in relief: its posture and position, with respect to the pendant, is that of the "stele" with respect to its associated figure; and in height, width, weight, and general form (including cross-section), it compares extremely closely with one of the figurines (Figure 42) set beneath wall 4622.

The relatively small incised stone figurines of the Valdivia period (Meggers, Evans and Estrada 1965, 96, Plate 118) show some stylistic similarity to the marble pendant figurine (Figure 65a), and many Valdivia ceramic figurines (e.g. *op. cit.*, Plate 120a,f,k) have the furrow cut through the hair across the top of the head that is found on the tooth pendant (Figure 41b). The tooth and fossil wood though, seem to be immediate origins for the later Engoroy stone

anthropomorphs. They also seem to represent a pair of opposed concepts lying behind the range of figurine variation: the portable and the fixed. The lighter, tusk-shaped figurines and pendants, unable to stand unsupported, are easily carried objects, the pendants obviously designed to be worn. The large figurines, on the other hand, are heavy, far from easily carried, and three of them were clearly designed to stand on their own.

While broad similarities of style are apparent, there are clear differences. Figurines within multiple depositions are more likely to form a stylistic subset than figurines from different depositions, whether multiple or single: those of 3623 (Figure 55) are the most obvious case in point. At the same time, a multiple deposition may present more than one micro-style. Where there are several micro-styles present, their differences may be reflected in differential distribution: thus in 3798, two figurines (Figure 56d,e) stood together and behind the very different other three (Figure 56a-c); and in 4388, two (Figure 50a,b) both faced west, while the quite different third (Figure 50c) faced north. On the other hand, 4795 (Figures 51-53) presents a variety of styles without any obvious reference to such differences in the organisation of the figures: the only two (Figures 51a,b) that are comparable, were not adjacent, or even in the same row.

The stratigraphy shows that the depositions occurred over a period of time marked by many other small events. That micro-style is generally context-specific adds the further detail that figurines were probably made specifically for each deposition.

#### 4.3.4 Artefact Depositions Associated with Post-holes

There are two sets of post-holes in which artefacts were intentionally placed in the holes before the posts were set in place, and they belong to Phases I and V.

Seven Phase I holes (20 to 40 cm across and 44 to 70 cm deep) were members of two NW-SE aligned rows of roof supports (Figure 9). All had yellow clay packing around the post-moulds. Only five contained artefacts beneath the post-moulds or in the surrounding packing. The sixth hole was severely truncated, and may then have lost any artefacts originally included. The seventh, however, was undisturbed in the area in which artefacts might have been expected.

The holes with artefacts all contained small stone discs at the base: in four cases a single disc, in the fifth two discs. Discs of complementary pairs of holes (i.e. those NE and SW of each other) were of the same material and design. Two types of disc were involved. The irregular, subcircular discs of the holes of the first pair (7094, 7247) and third (7276), are 16.5 to 20.5 mm across, and 4.5 to 7 mm thick (Figure 78a,c,b). They are all of grey shale, with flat polished tops and bottoms. The top surfaces have circular edges, the lower surfaces have edges cut but without further shaping, and the bevelled edges from each of the surfaces meet vertical sides more or less smoothed to flatness. Three very small fragments of copper were also found in hole 7247.

The discs of the second pair of holes (7322, 6584), however, are of very fine, blue-green tuff, and are larger, with diameters of 32 to 41 mm and thicknesses of 3 to 5 mm (Figure 78e-g). With one face very smooth, the other less so, the sides are sharp edged and flat. These two holes also had complete, unworked shells in the packing: in one case a juvenile *Spondylus princeps*, and in the other a *Vasum*

*caestus*. Given the highly organised context of their deposition it seems very likely that the copper fragments and the shells were intentionally included in the packing clay.

Table 10. ARTEFACTS DEPOSITED IN PHASE I POST-HOLES

POST-HOLE	ARTEFACT
7094	Grey Shale Disc B898
7247	Grey Shale Disc B911 Three Copper Flakes
7322	Blue-green Tuff Disc B914 Blue-green Tuff Disc B915 <i>Spondylus princeps</i>
6584	Blue-green Tuff Disc B888 <i>Vasum Caestus</i>
7276	Grey Shale Disc B922

The four relevant Phase V holes each held a stone anchor (measuring up to 40 x 30 x 15 cm) at the base, and were larger, at up to 2.17 m long and 2.09 m deep, than those of Phase I. The earliest two (6534, 4084) represent the end of a row that extended along the NW side of the enclosure in early Phase V (Figure 19). The latest (351) was part of a similar row of middle Phase V (Figure 22). The fourth (462) may have marked the inside of the rear entrance to Structure 10 (Figure 20).

One of the earlier pair (Figure 35) had well preserved layers of post-packing: imported clay alternating with mixed redeposited material. In the other cases, the original packing fill was absent or disturbed.

Although there are differences in design and size, the two sets have in common that: 1) the holes supported posts; 2) clay was used as packing around the posts; 3) stone objects were set underneath

the posts; 4) the posts were elements of larger structures, associated with highly organised depositional activity. (A fifth point in common between the Phase I post-holes and 6534 is interesting, but less important with respect to active function: at the end of service, they were emptied of their posts and immediately filled with the yellow clay of the next structure.)

The two sets of holes are perhaps linked via the stone figurines beneath the Structure 7 wall trench. One of these figurines was set on a stone disc, larger and differently shaped than the Phase I stone discs, and much smaller than the Phase V anchors, i.e. intermediary in size. The structural relationship of the disc and figurine is identical to that both of the discs and Phase I posts, and of the anchors and Phase V posts. And like the Phase V posts, the figures beneath Structure 7 were used to define a central, enclosed space. It is possible, then, to suggest that these three sets of feature each embodied, but expressed differently, an identical structural concept.

It is also reasonable to suggest that the posts supported by the Phase V holes were sculpted representations of humans or mythic characters. We have seen that there was a partial emergence in Phase III of the stone figurines (in particular, the larger "fixed" figures) from an earlier completely buried position. The siting of carved wooden figures above the surface of the ground, but with their bases set deep in the soil, would be an easily conceived extension of the process.

Although my interpretation is speculative, it has some support. First, it would be consistent with the likely free-standing nature of the posts. More substantially, the dimensions of the holes, and the relatively great height that they indicate for the posts, are

consistent with the dimensions of the carved Manteño post, 8.5 m tall, found by Zevallos (1995, 335-355) at Juntas, in the Cordillera Chongón Colonche.

Regarding the Phase V holes, excavation of the NE half of 141B (i.e. Trench 4) showed that while anchors were set beneath the posts on the seaward, NW side, it was grinding stones that were used on the landward, SE side (A. Mudd, pers. comm.). This suggests a fundamental and conscious opposition of land and sea. (And that said, bipartite structure may also be inherent in the Phase I post-hole depositions of two different types of stone disc). The total structure, then, that is represented by the upright posts, would seem to be a complicated statement of organisational principles, in which abstract spatial dimensions were linked to physical elements of the world.

#### 4.3.5 Other Structured Depositions

##### 4.3.5.1 Mammal and bird burials

Two mammal burials and two bird burials were excavated. One mammal was a tigrillo (*Felis pardalis*), the other a puppy of the Canidae family. The two birds were both probably of the Ardeidae family, one of them perhaps a Great Blue Heron. All four burials are of Phase III: the birds and tigrillo (Figure 11) belong to occupation between Structures 3 and 5, with the second bird post-dating both the first and the tigrillo; and the dog (Figure 14) post-dates Structure 6. The tigrillo and birds lay over or outside the SW perimeter of the Phase III structures, while the dog lay inside.

Both birds were fully articulated and undisturbed. The first lay in the east half of the bottom of an oval hole (5462). It rested on its back, head to the SW, tail to the NE. Within the body were

thirty-five smoothly round-edged and polished stone flakes. ranging in size from 11 x 6 x 2 mm to 25 x 18 x 8 mm. Three flakes were of grey sedimentary rock. Seventeen were of fine chert: no other chert flakes were found anywhere in the site to compare with these for polish and roundness of edge. (The remaining fifteen stones were not available for my inspection.) A broken green stone bead (Figure 72m) was recovered from the fill.

The second bird lay across the bottom of a subcircular hole (5324). Packed in tight. it rested on its left side, with its back curved. its neck bent so that its head lay with the beak pointing close to the pelvis. and its legs bent so that its ankles almost touched the head. The overall orientation was NW-SE (lower end - neck end). In the fill were a green stone bead (lost after excavation) and a shell bead (Figure 73i).

Table 11. ANIMAL AND BIRD BURIALS

CONTEXT	DIMENSIONS (in cm)	IDENTIFICATION	OBSERVATIONS
5462	68x38x27	<i>Ardea cf herodias</i>	Complete; head to SW; 35 polished flakes in bird; Green stone bead B811 in fill.
5324	34x28x28	<i>Ardea cf herodias?</i>	Complete; head to SE; White shell bead CT743 in fill. Green stone bead in fill.
5624	11x11x14	<i>Felis pardalis</i>	Articulated but incomplete.
3353	?x41x11	Canidae cf <i>Canis</i> cf <i>Dusicyon</i>	Buried complete. head to SE.

The tigrillo was packed down a small circular hole (5624). Although there was some articulation. many bones were missing. This then. was either a reburial or very disturbed (Jon Kent. pers. comm.).

The skeleton of the dog lay on its left side. with head to

the SE. face to the SW. in a truncated hole (3353). Part of the lower back of the skeleton had been removed by the later intrusion.

The tigrillo and bird burials perhaps predated all the human burials of Phase III. and certainly lay apart from any that might have been contemporary. But the dog burial lay within the main field of human burials, actually intruding on one grave (3942), and occurred towards the end of the Phase III/IV episode of human interment. It is notable, then, that the only zoomorphic bottle (Figure 120) amongst the grave goods represents a dog.

#### 4.3.5.2 Artefact depositions

For Period 1. there are four more obviously deliberate depositions, and eight less organised features.

In Phase I. on the bottom of a small hole (7175 - see Table 18 for dimensions) in the floor of Structure 1 (Figure 9). was a stone disc (Figure 78k) of blue-green tuff. In the fill, there was a cylindrical green stone bead (Figure 72a).

In Phase II (or perhaps Phase III, but predating Structure 6). a small hole (6176). cut into the top of the platform layer 6500 (Figure 10), contained a gold ring (Figure 70a) of round wire, 2 mm thick, bent into a circle (exterior diameter 16.5 mm). the ends slightly overlapping.

In Phase III, pit 4645 cut into the top of the Structure 6 perimetral wall (Figure 14). In the bottom 7 cm were four hundred and seventy-two grey to pale brown chert flakes. of 142 g combined weight, possibly all of the same original stone. The largest was 45 mm long, and the smallest 3 mm. Some had areas of cortex. Some had the appearance of being deliberately struck flakes. but the majority were shatter flakes. Standing above them, apical end upwards, was a



*Muricanthus* sp. conch (Figure 76c), with much of the exterior removed, exposing the columella.

In the area outside and SW of Structure 7 (Figure 15), a shallow subcircular hole (3806, Figure 36c) contained four artefacts. A serving jar neck and rim (Figure 122a) lay upside down. Lying flat to either side (east and west), interiors upwards, were two left valves of *Pinctada mazatlanica*, one unworked, but the other (Figure 76a) with its trailing edge cut along the back side and abraded along the ventral side. On top of the jar neck was another *Muricanthus* sp. (Figure 76b), also with much of the exterior removed, but not so regularly. The objects did not fill the hole, but lay in its north half.

5660 was a subcircular hole cut into the midden layer outside the west corner of the Phase II platform (Figure 10), and may have been of Phase II or early Phase III. Set upright in it was one valve of a *Chama buddiana*, exterior face to the NW. Also in the fill was a fragment of *Strombus peruvianus*.

Pit 5875 had an oval top, and cut the SW side of the Phase II platform. It may have been of Phase II or early Phase III, predating Structure 6 at the latest. It contained, loosely grouped: scutes of an armadillo (probably *Dasypus* sp.): three green stone beads (Figure 72b-d), two of which were a matching pair of unusual globular form and large size; and one small red *Spondylus* bead (Figure 73g).

Pit 5873 cut 5875 and shared its stratigraphic range. Its contents were: a disc (Figure 78d) of grey shale similar to those set beneath the Structure 1 roof supports; a fragment of a flat white tuff disc (Figure 78j), also similar to examples beneath the Structure 1 roof supports; one white shell bead (Figure 73h); six green stone beads (Figure 72e-j), two of which make a pair and are larger and of

different material to the other four: and a small worked piece of green stone (Figure 71a).

5113 was a larger hole which cut the inside edge of the Structure 4 wall (Figure 12), and overlay the deposition (6659) of the tooth pendant. It contained a broken disc (Figure 79c) of white tuff, and several beads: one of green stone (Figure 72n), three of white shell (Figure 73l,m,o), and two of red *Spondylus* (Figure 73j,k). There were also two unfinished coloured *Spondylus* beads (Figure 73n,p), and a fragment of worked *Conus* sp. (Figure 77a).

4721 was a very neatly dug hole, with oval top, near-vertical to vertical sides and a rounded bottom, cut into the outside edge of the Structure 5 wall (Figure 13). It contained twelve stones: two rounded pebble hammers (Figure 84d,e), one of them with a broken end; two irregularly shaped pebbles; a scraper (Figure 84c); five flakes; and two lumps from which flakes had been removed. The two irregular pebbles, the two lumps and the five flakes were of coarse quartz. There was also a fragment of white tuff disc (Figure 79d), and a *Pinctada mazatlanica* blank (Figure 74g). Neither the scraper nor the flakes showed any sign of retouch. However crude though, all were recognisably elements of flake tool manufacturing and use.

Pit 4098 cut into the inside edge of the Structure 6 wall (Figure 14). It contained eleven pottery sherds and a broken net weight (Figure 84f) at the top; and, piled underneath, two lumps of chert and two pebbles (one broken) that may have been hammer stones. The lumps of chert blocked the hole.

4425 and 4327 were larger pits, each heavily truncated. One cut into the clay platform layer of Structure 6: the other cut into the inside edge of the Structure 6 perimetral wall. Each contained a roughly shaped disc of malachite, the one (Figure 70c) incompletely,

the other (Figure 70d) completely perforated. In 4425, the disc was at an unrecorded level within the lower 25 cm of fill; and in 4327, the disc lay on the bottom of the pit.

For Period 2 there are just two features of relevance. Pit 3282 cut from above the late Phase III/Phase IV platform (Figure 19), and probably dates to Phase V. 10 cm above its base were a stone anchor and, on top of that, a stone metate. The slightly bell-shaped profile of the pit suggests that it was not a post-hole, but the stones immediately echo those laid beneath the very large posts around the Phase IV/V enclosures.

Of uncertain date was pit 872, a metre away, subcircular and vertically-sided. In its bottom 15 cm, there were various shells and stones (including grinding stones). Over the fill containing this material, there were patches of *in situ* burning. While the bottom and top fills were of mixed soils that probably derived from the site of the hole itself, there was a middle fill, over the burning, of pure beach sand.

#### 4.3.5.3 Small artefact distribution in general

Before discussing these features, I must first summarize the distribution of small artefacts through all Period 1 contexts.

Metal is very rare. The Phase II/III gold ring (Figure 70a) was the only finished object manufactured from smelted metal. Otherwise, there were four small flakes of copper recovered from Phase I contexts, three of them from post-hole packing, the fourth from the floor of the building.

There were also three objects of malachite (Figure 70b-d): the cut and polished bar from the Phase III deposition of the tooth pendant figurine, and the two rough discs from the late Phase III pits

described above. They were all poorly finished and far from regularly shaped.

Of other green stone (see Figures 71, 72), however, there were a hundred and fifteen beads and small pendants, and the fragment of a larger object. All were finished. Of similar shape and size to the small green stone ornaments, were four of blue stone and one of brown, and these are included in the following figures.

Table 12. DISTRIBUTION OF STONE BEADS AND ORNAMENTS

PHASE	LAYERS	NEGATIVE FEATURES	TOTAL
I	1	7	8
II	16	25	41
III (early)	18	18	36
III (late)	7	28	35
TOTAL	42	78	120

Sixteen of those of late Phase III features came from graves and figurine depositions. Only two came from the late Phase III rubbish pits, and there were none in the fire pits. Forty-one beads came from post-holes and features of unknown function from each of the phases: of these, twenty-five were found singly, and the rest in twos, threes and, in one instance, as a group of four.

Shell was the most common surviving material used for the making of ornaments. Of five hundred and thirteen separate finished artefacts, preforms and offcuts, three hundred and forty-two were finished beads (see Figure 73), mostly of *Spondylus*, though a few were of *Pinctada mazatlanica*. There were several unfinished beads, including pieces of shell waiting to be perforated and given final shape. There were also four beads of black coral, and eight pearls, two of these perforated. Six of the pearls came from layers of Phase I, the other two from a grave and a rubbish pit of late Phase III.

Table 13. DISTRIBUTION OF SHELL BEADS

PHASE	LAYERS	NEGATIVE FEATURES	TOTAL
I	15	149	164
II	6	9	15
III (early)	109	17	126
III (late)	11	26	37
TOTAL	141	201	342

The second most common shell objects (n=64) were cut blanks of *Pinctada mazatlanica*. (see Figure 74). preforms for fish-hooks and nose-rings. Five more or less complete examples of hooks (see Figure 75) were recovered, with a further twenty-five fragments. There were a few other more elaborate or unusual shell artefacts (Figures 76, 77), mostly limited to the grave goods associated with Phase III burials.

The great majority of shell beads lie in two context subgroups: the negative features of Phase I and the layers of early Phase III. All but ten of the one hundred and forty-nine from Phase I features came from the two strings found with human burials. Of those from early Phase III layers, sixty-six came from the occupation debris of layers 5033 and 4967 (immediately predating Structure 5) and may themselves be scatter from one or more strings. Thirty-two ceramic beads also came from these layers and layers immediately overlying 4967.

Only two shell beads were found in late Phase III rubbish pits, and only two in late Phase III fire pits. Just one shell bead was found in the context of a Phase III stone figurine deposition, although there was also a small block of *Spondylus* (Figure 73r), perhaps a preform for a bead. The number of shell beads, thirty-four, found in post-holes and features of unknown function, is slightly less than that for stone beads.

Stone discs are rare: fourteen complete or near-complete examples, and nine fragments. They are generally associated with structured deposition, and are mostly of material similar to that of the Phase III stone figurines.

First, there were four small discs of grey shale (Figure 78a-d), three in post-packing of the Structure 1 roof supports, and the fourth in feature 5873.

Table 14. DISTRIBUTION OF COMPLETE STONE DISCS

PHASE	LAYERS	NEGATIVE FEATURES	TOTAL
I	1	7	8
II	3	1	4
III (early)	0	1	1
III (late)	0	1	1
TOTAL	4	10	14

Second, three small flat discs of pale blue-green tuff (Figure 78e-g) also came from Structure 1 post-holes. Fragments of three others (two of them of white tuff), came from two Phase II midden layers and feature 5783 (Figure 78h-j). Each was finished with a polish on one side, but only a smooth lustre on the other.

Also from Phase I contexts were two discs each with a hole cut into the centre of the polished side, with the obverse smooth: one (Figure 78k) from the hole cut into the Structure 1 floor, the other (Figure 78l) from occupation debris outside the building.

A third group comprises white or pale blue-green tuff discs with flat undersides, vertical edges and convex tops (Figure 79a-c). Surfaces are smooth. Two came from Phase II contexts, one of these having a top still angular and unsmoothed; while the third was from feature 5113 of Phase III.

Fourth, there are polished biconvex tuff discs. Of those of

round or oval outline (Figure 79e,f), one half came from a Phase III layer, and a large disc, painted green, came from beneath the stone figure under the wall trench for the late Phase III Structure 7. Two fragments of biconvex, subrectangular plaques (Figure 80a,b) came from late Phase III contexts. These all had the flat edges of the other tuff discs mentioned so far. There were also two fragments of larger discs with rounded edges: one of these (Figure 80c) perhaps with red paint, came from a Phase III layer, the other (Figure 80d) from a Phase III grave.

Finally, there was a single complete perforated disc or ring (Figure 80e), of a fine-grained, dark greenish grey stone, again with one side more polished than the other, found on the central platform of early Phase III.

There were thirteen complete or near-complete objects of bone. In Phase I, there were two points (Figure 81a,b), one with a suspension hole, probably made from dorsal fin-bones of large fish (Xiphidae), from occupation debris outside Structure 1. A simple polished tooth (Figure 81f), perhaps the second incisor of a pinniped, came from the grave fill of a human burial; and three broken points, two of fin-bones of large fish (Figure 81d,e), one of a mammalian rib (Figure 81c), came from separate small features.

Table 15. DISTRIBUTION OF BONE ARTEFACTS

PHASE	LAYERS	NEGATIVE FEATURES	TOTAL
I	2	4	6
II	0	0	0
III (early)	0	1	1
III (late)	1	5	6
TOTAL	3	10	13

In early Phase III, there was the pendant figurine made from a sea-mammal tusk (Figure 41b) in its dedicated deposition. In later Phase III, two small broken points (Figure 82a,b), probably of fish bone, came from a layer and a small hole; two points (Figure 82c,d) made from deer antlers (*Odocoileus virginianus*) came from one grave; and the container (Figure 83) made from a deer skull (*Odocoileus virginianus*), with a baton or large point (Figure 82e) from a dorsal fin-bone of a large fish (Xiphidae) came from a second grave. Also in Phase III, but not included in the count, was the portion of whale bone, possibly cranial, against which was set the marble pendant figurine.

While Mudd (1987) has analysed the material from Structure 1, the majority of knapped lithic material, mostly chert, has not been studied, save with reference to the three features (4721, 4645, 4098) described above (see Figure 84c-f).

Thirty flakes of obsidian were recovered. Most showed signs of use. Whether the obsidian was brought in the form of rough cores, or ready-knapped, is unclear. Most pieces were from late Phase III contexts: of these, two were from a figurine deposition (Figure 85a,b) and nine were from graves (Figure 85c-j).

Table 16. DISTRIBUTION OF OBSIDIAN FLAKES

PHASE	LAYERS	NEGATIVE FEATURES	TOTAL
I	0	0	0
II	0	2	2
III (early)	3	1	4
III (late)	5	19	24
TOTAL	8	22	30

Eighteen worked sherds were recovered. There were ten complete pieces of circular form (Figure 86), and one fragment, which



may have been jar-stoppers (cf. Meggers, Evans and Estrada 1965, 145, Plate 159). Diameters range from 14 to 49 mm. and thicknesses from 3 to 7 mm. Edges are smooth or just roughly shaped.

There was just one example of a ceramic spindle whorl (Figure 87a). This, from a late Phase III post-hole, has a diameter of 49 mm, is 5.5 mm thick, and weighs 17.6 g. The circumference is well smoothed. The perforation is from both sides, measuring 6 to 7 mm across.

Table 17. DISTRIBUTION OF UNPERFORATED CERAMIC DISCS

PHASE	LAYERS	NEGATIVE FEATURES	TOTAL
I	2	1	3
II	0	1	1
III (early)	1	0	1
III (late)	1	5	6
TOTAL	4	7	11

There were three fragments of rectangular or subrectangular forms. Two (Figure 87b,c) had roughly centred perforations, and came from Phase I occupation layers. The third (Figure 87d) was from a Phase III post-hole.

Three shaping tools (cf. Lathrap, Collier and Chandra 1975, Figures 131-135; Parducci and Parducci 1975, 237-239, Figure 51) each have a shorter, deliberately curved side, 30 to 45 mm across (Figure 87e-g). The first came from a Phase II midden layer, and was worn along all edges; the second came from a late Phase III layer; the third, from a late Phase III rubbish pit, differed from the others in that the worked side had sharp edges.

Table 18. STRUCTURED ARTEFACT DEPOSITIONS

A) PERIOD 1

PHASE	CONTEXT	DIMENSIONS (in cm)	ARTEFACTS
I	7175	11x11x6	Stone disc B920 Green stone bead B913
II/ III	6176	8x8x10	Gold ring B851
	5875	34x28x42	Armadillo scutes Pair of green stone beads B825/826 Green stone bead B827 Red shell bead CT383
	5873	33x30x26	Stone disc B845 Fragment of stone disc B844 Pair of green stone beads B838/839 Four green stone beads B840-843 White shell bead CT392 Green stone artefact B846
	5660	18x16x8	<i>Chama buddiana</i> Fragments of <i>Strombus peruvianus</i>
III	5113	88x64x18	Stone disc B781 Green stone bead B768 Worked <i>Conus</i> sp. CT343 Two red shell beads CT482/484 Three white shell beads CT336/483/486 Two unfinished coloured beads CT342/485
	4721	38x30x45	Two pebble hammers Two chert pebbles Scraper (of jasper?) Two quartz lumps Six chert flakes Fragment of stone disc B809 <i>Pinctada mazatlanica</i> blank CT324
	4645	16x12x16	Shell ( <i>Muricanthus</i> sp.) hammer CT841 Four hundred and seventy-two chert flakes
	4425	82x52x44	Malachite disc B658
	4327	84x56x30	Malachite disc B654
	4098	17x17x28	Broken net weight B719 Eleven pottery sherds Two chert lumps Two pebble hammers
	3806	41x38x11	Jar neck 3805/1 Two <i>Pinctada mazatlanica</i> valves CT842/843 Worked <i>Muricanthus</i> sp. CT844

Table 18. STRUCTURED ARTEFACT DEPOSITIONS (cont.)

B) PERIOD 2

PHASE	CONTEXT	DIMENSIONS (in cm)	ARTEFACTS
V	3282	37x??x77	Stone metate Stone anchor
	872	74x65x97	Various worked stones and complete shells

4.3.5.4 Summary observations

Individual artefact types or materials were often concentrated in a narrow range of context types; and features themselves were often restricted to specific areas within the site. Any deposition, then, of controlled or rare artefacts, especially close to the central platform, must in the first instance be presumed to have been deliberate and significant.

The stone disc and gold ring of Phases I and II/III, were relatively simple depositions of rare items set in the highly controlled space of the central structure. The depositions of shell with chert flakes, and of olla neck with shells, both of late Phase III, involved artefacts of perhaps less intrinsic value, but with clear, if simple, internal organisation; and they were located within the field of stone figurine depositions.

The eight other artefact depositions of Period 1 are unusual either for their arrangement, materials, or internal coherence. It is argument by extension and association that links these features to the more obviously structured depositions.

5113, for example, included a nearly complete stone disc, and we have seen that stone discs are usually very controlled items. There were seven shell beads, a relatively high number within the context of early Phase III features. And the feature, directly over the

deposition of tusk pendant and fossil wood, was sited just inside a perimetral wall.

Stone figurine depositions and human burials are the more numerous structured features of Phase III. But the miscellaneous other depositions of that stage are set among those more dominant types, and thereby extend the range of inter-association between them.

In Period 2, by contrast, rare artefacts and materials appear to have been buried only in direct association with human interments. Further, the two artefact depositions described are contained in much larger features than those of Period 1, and contain larger, non-ornamental objects.

#### 4.3.6 Rubbish Pits

Most of the material discarded on the ground or buried in holes was pottery, though there was usually also other material, such as bone, shell and stone. During excavation, however, a number of features were noted that contained an unusually high volume of pottery sherds. Later, some of these rubbish pits were also seen to contain unusually large sherds, including the remains of partially reconstructable vessels, suggesting relatively swift disposal after breakage. The contents of the rubbish pits, then, of which there were twenty-five, appeared to represent a distinct type of discard.

Twenty of the rubbish pits were of Phase III (Figure 16), three of Phase IV (Figure 18), and two of Phase V (Figure 19). The Phase III pits probably all post-date either Structure 6 or Structure 7. Tops were circular or oval, with steep or vertical sides, and flat or rounded bottoms (Figure 37). They were generally 40 to 70 cm long, 30 to 70 cm wide, and 11 to 61 cm deep.

The sequence compares interestingly with that of horizontal

rubbish disposal over open areas. In Phase I, rubbish was scattered evenly about the exterior of the Structure 1 floor. In Phase II, rubbish accumulated more densely around the edge of the platform, in highly organic sandy soil. In neither of these phases was there any digging of pits for rubbish disposal.

With Structure 3, there was continued midden formation around the platform, but at a much reduced scale. During the remainder of Phase III, while initially there was less organic material in the layers, there was nevertheless substantial discard of sherds and other material over the areas external to the perimetral walls.

Following Structures 6 and 7, there was again midden formation over the outer zones of the enclosed area. But at the same time, pits began to be dug for the disposal of rubbish, in particular pottery. These pits were dug across the site, both on and off the central area, though they tended to lie to the west and south of the area of human interment. They did, however, overlap with the human burials, and also with the stone figurine depositions.

Phase IV saw rubbish accumulating for the first time over the centre of the space earlier enclosed: but it was very light in comparison with the outer areas. In Phase V, rubbish scatters were exclusively outside the enclosure walls, continuing the pattern of Phase III. With these phases, there was a diminution of rubbish pit digging as rapid as its escalation in late Phase III. All three Phase IV rubbish pits, however, were in the same general area as those of Phase III: while the two Phase V rubbish pits were outside the enclosure.

Since, then, horizontal scatter continued through the Phase III/IV period of pit disposal, there appears not to be a direct inverse relation with rubbish disposal in pits. And the pottery itself

suggests the need for some alternative explanation, as vessels represented by the sherds in the late Phase III pits were qualitatively distinct to those discarded in layers (see Chapter 5).

A specific relation is indicated with burial rites. In Phase III, eight rubbish pits (4224, 4040, 4035, 3785, 3766, 3300, 3224, 758) were in direct or very close association with graves, either cutting them, being cut by them or lying next to them. One of the two graves of Phase IV also cut a rubbish pit (3946).

Table 19. RUBBISH PITS

	PHASE	CONTEXT	DIMENSIONS (in cm)	SHAPE	SHERDS CONTAINED	ASSOCIATED WITH GRAVE
III	4883	48x27x10	Oval	109		
	4466	38x36x22	Oval	16		
	4224	60x34x34	Oval	136		4049
	4203	50x42x11	Subcircular	90		
	4124	54x42x30	Subrectangular?	169		4130
	4040	68x60x25	Subcircular	135		4049
	4035	83x56x61	Oval	346		4049
	4030	120x68x21	Irregular oval	50		
	4011	48x44x22	Circular	118		
	3812	56x38x59	Oval	104		
	3800	52x37x25	Oval	307		
	3785	60x40x54	Oval	78		3899
	3766	68x60x35	Subcircular	170		4471
	3723	64x48x21	Oval	45		
	3565	40x34x21	Oval	70		
	3300	46x42x16	Subcircular	127		3315
	3259	70x58x39	Subcircular	386		
	3224	55x40x33	Subcircular	301		
	3185	62x54x39	Circular	338		
	758	44x44x20	Subrectangular	23		3315 & 3804
IV	3946	50x42x18	Circular	33		840
	936	56x46x38	Circular	89		
	820	62x54x42	Circular	256		
V	651	54x32x33	Subcircular?	173		
	638	40x26x23	Subcircular?	52		

With two exceptions, the rubbish pits and graves were also directly associated with fire pits, either cutting them, being cut by them, or lying close to them. And where rubbish pits were not

associated with graves, they generally lay very close to or had direct relations with fire pits.

By contrast, there is no observed direct relation between the rubbish pits and the figurine and other structured artefact depositions.

The introduction, then, of rubbish pits in late Phase III was linked to a new form of funerary ritual and to a parallel appearance of fire pits (discussed in more detail in the next section), rather than to any general necessity for the disposal of pottery and other rubbish. This relationship continued into Phase IV, but ended with Phase V.

#### 4.3.7 Fire Pits, Ash Pits, Open Hearths and Ash Layers

Four types of context cover the range of activities involving the making of fires and the disposal of ash residues. Fire pits include all holes with reddening of the base or sides to indicate *in situ* burning. Ash pits had no evidence of *in situ* burning, but their fills suggest that the holes were dug for the disposal of ash. Open hearths were areas of ground reddened by *in situ* burning. And ash layers were any scatters of ash over the surface. While open hearths were always found with overlying ash, ash layers were not necessarily found in direct association with either open hearths or fire pits.

In Phase I, the central floor of Structure 1 was the scene of four episodes of burning directly on the surface, with ash scattered over and beyond the burnt soil. Each of the first three episodes was followed by the laying, over the affected areas, of yellow clay; after which the elements of a new or reconstructed wooden building were put in place. The upright structures themselves, however, were not burnt. Rather, burning over the floor seems to have been part of structure

renewal.

One ash pit (6687) was located in the NW corner of the interior floor. Outside the building, however, there was no evidence of *in situ* fires, nor of ash deposition.

Phase II, or early Phase III, saw further open hearth burning over the platform. Three episodes were identified, though it is not clear how the building and burning sequences correlate. As in Phase I, there was ash over each area of burning, with later repair of the clay surface. One ash pit (5694) cut directly into the top of the Phase II platform (Figure 10).

Off the platform, there was no evidence of burning or ash deposition during Phase II. With Structures 3, 4 and 5, patchy burning of the surface and thin scatters of ash extended 3 to 3.5 m SW from the enclosure walls, but was not connected to any burning over the interior of the enclosure.

With Structures 6 and 7, there were two major changes in fire-related activity. First, in the central area of the enclosure there was none of the burning and ash scatter seen earlier. There was some light ash towards the SW of the enclosure interior, but this seems to have been linked to other scatters that lie over the enclosure walls and in the SW area.

Secondly, suddenly and without precedent, fire pits began to be used. There were twenty relevant features, varying in shape, size, content (Figures 16, 38a-c). Four pits had high contents of ash and burnt soil, but were not themselves burnt around the sides or pit bottom. The remaining fifteen pits all had fire-stained walls.

Two well preserved and closely contemporary pits (3881 and 3455 - Figure 38a,b), with subrectangular outlines and similar dimensions, were clearly oriented NE-SW and NW-SE, i.e. parallel with



the NW and SW sides respectively of the enclosure.

The fire pits were collectively contemporary with the late Phase III stone figurine depositions, human burials and rubbish pits, and overlapped their areas of distribution. Six fire pits (4493, 4476, 4216, 4195, 3471, 3116), however, were directly associated with graves. In each case, the feature cluster also included at least one rubbish pit. In three cases, the fire pits cut into or were cut by a rubbish pit. Of those fire pits not directly associated with graves, two (3987, 3940), one on top of the other, lay very close to a similarly arranged pair of directly contemporary rubbish pits.

As in the case of rubbish pits, in spite of the general overlap of distribution, there was no direct association with the stone figurine depositions. One fire pit (4509), however, lay close to and was contemporary with a pit (4425) containing a malachite disc.

While, then, Phase III fire pits are not all directly associated with graves or rubbish pits, overall distribution, and the specific location of eight of the pits, points to a function within funerary ritual and in association with the burial of pottery.

In Phase IV, the pattern of association of fire pits with rubbish pits and graves continued (Figure 18). There was one ash pit (3808), which overlay a rubbish pit and was itself cut by a grave. An open hearth (3002) in the SW area was cut by a rubbish pit. In the NW area, three features (3040, 990, 920), somewhat uncertainly excavated, had neither obvious signs of *in situ* burning nor specifically ash fills. They did contain, however, enough charcoal flecks, in soil itself mostly blackened by charcoal, to suggest that fire residue was being deliberately disposed of. And close to them was another rubbish pit. Over these four features was a relatively extensive (3.5 x 2.5 m) layer of ash (883), grey over red-black, indicating *in situ*

burning.

Table 20. ASH AND FIRE PITS

PHASE/ STRUCTURE	CONTEXT	DIMENSIONS (in cm)	SHAPE	PIT TYPE	ASSOCIATED WITH GRAVE
I	6687	48x ?x20	Subcircular	Ash	
II	5694	26x20x24	Circular	Ash	
III/6-7	4832	40x33x 6	Subcircular	Fire	
6-7	4509	55x19x23	Subcircular?	Fire pit?	
7	4493	44x38x15	Subcircular	Fire pit?	4471
6-7	4476	55x30x22	Irregular	Fire pit	4049
6-7	4216	70x28x34	Subrectangular?	Fire pit	4049
6-7	4195	50x38x29	Oval?	Fire pit?	4130
6-7	4089	58x38x29	Irregular	Fire pit	4049
6-7	4033	26x18x12	?	Fire pit?	
6-7	3995	32x20x11	Irregular oval?	Fire pit	
6-7	3987	34x28x 1	Irregular	Fire pit	
6-7	3913	48x30x28	Irregular	Fire pit	
6-7	3881	80x20x18	Subrectangular	Fire pit	
6-7	3670	82x20x 4	Irregular	Fire pit	
7	3490	48x30x 4	Irregular	Fire pit	
6-7	3471	36x30x 7	Circular?	Fire pit	3899
7	3455	90x27x25	Subrectangular	Fire pit	
7	3158	21x15x 5	Oval	Fire pit	
7	3153	34x20x 9	Oval	Fire pit	
7	3144	55x50x 8	Irregular	Fire pit	
7	3116	58x38x19	Irregular	Fire pit	4471
IV	3808	41x16x 1	Oval?	Ash pit	840
	3040	70x40x28	Irregular	?	
	990	55x50x 7	Irregular	?	
	920	78x63x60	Subcircular?	?	
V	490	26x20x 9	Circular	Fire pit	
	343	23x22x10	Trefoil	Melting furnace?	

In Phase V there was even less fire-related activity. Over the area of the ash layer 883. was a smaller (2 x 1.2 m) ash scatter (610), dating to Structure 8. Post-dating Structure 10 (Figure 20), and sited outside its west corner. 490 was a small fire pit, with an upper ash fill and a fire-reddened base.

Post-dating Structure 11 (Figure 21) was one small trefoil-shaped pit (343 - Figure 38d). Shimada, Epstein and Craig

(1983, 42) offer a reconstruction of the use of a Middle Sicán (c AD 900) copper-smelting furnace at Batán Grande, and comparison might immediately suggest a similar function for the feature at Salango, the two lobes providing access for blowing tubes. Several differences, however, argue against direct equivalence, including the absence from the Salango pit of the special lining and chimney-like end of the Batán Grande examples (*ibid.*, 41). Furthermore, the great distance of Salango from the nearest copper ore deposits, which lie in the southern highlands, makes it likely that, if metal-working was its function, then the pit was used to melt down ingots produced near those sources, rather than that it was for the smelting of the ore itself (Dorothy Hosler, pers. comm.).

To summarise briefly. Changes in fire-making practices and the disposal of ash correlate with changes in the broader context of site use. The principal distinction lies between 1) the burning of the central yellow clay floors, with associated ash scatters, during Phases I and II, and perhaps during early Phase III; and 2) the making of fires in pits around the outside of the central yellow floor during late Phase III. In the first case, floor burning and ash scatters were associated with rebuilding. In the second, the pits were associated with human interment and other ritual involving the burial of pottery.

#### 4.3.8 Rectangular Pits

In the SW exterior of Period 1, there were six flat-bottomed rectangular pits. One (5763) was of Phase II (Figure 10), and another (5691) was either also of Phase II or of early Phase III. Three (5631, 5186 and 5138) were of early Phase III (Figure 12). The sixth (4939), separated from the earlier five by the occupation layer 4967, was

probably associated with Structure 5 (Figure 13).

The pits were aligned NE-SW, save one, and were thus perpendicular to the SW side of the central platform, two to three metres away. The exception (5691) was slightly skewed to NNE-SSW, and was set back about two metres from the others. Only one (5186 - Figure 39) was excavated completely. Lengths ranged from 112 cm to 284 cm (incomplete), and widths from 88 cm to 142 cm (also incomplete). Depths ranged from 22 to 55 cm.

Fills were variable, but fall into two groups: those of clay and those of sand. Two pits (5763, 5631) had sandy fills throughout, mixed and mostly dark, one of them (5763) including patches of burnt sand. One (5138) had a thin layer (2 to 5 cm) of beach sand at its bottom, but was otherwise filled with clay. The other three (5691, 5186 and 4939) had sand, silt or sandy loam upper fills, but their principal soil content was hard clay, with very irregular, fluid-like upper surfaces.

Common to three pits (5186, 5138, 4939), was a main fill of the "purple" clay seen in the prepared surfaces and perimetral walls of Structures 6 and 7. That of one (5186) overspilled the pit itself as a layer of several square metres. Plant impressions within the clay of another pit (5691) were similar to those in the clay of some of the perimetral walls.

One pit (5138) had a shallow, narrow gulley that ran W-E into the NW side of the pit and its purple clay fill. The same pit had four holes, 12 to 13 cm wide, about 16 cm deep, that cut the "purple" clay fill, and contained a soil identical to the upper clay fill of the pit.

What, though, was the function of the pits? One possibility is that those with main fills of clay were mixing pits, and the clays

had been prepared for making clay floors and walls. Two pits with main "purple" clay fills had bottom linings. The base of 5138 was lined with beach sand. The base of 5186 was partially covered with a similar thickness (2 to 5 cm) of clay. The top of that clay was marked by very regular runnels suggesting a covering of maize leaves. The sand and leaf-covered clay linings, then, could have been designed to prevent the clay mixes from being contaminated with the underlying soil.

Table 21. RECTANGULAR AND CIRCULAR PITS

CONTEXT	DIMENSIONS (in cm)	FILL	FILL DESCRIPTION	FILL DEPTH (in cm)
5763	262x142x24	5762	Sand	16
		5779	Mixed sand	8
5691	90x120x25	5690	Mixed sand	9
		5722	Hard sandy clay + grass impressions in body)	16
5631	130x140x55	5621	Soft mixed sand	55
5186	112x88x29	5132	Soft sand silt	19
		5139	Hard light purple clay	≥29
		5168	Hard clay +1-2 mm wide runnels oriented NE-SW along surface	2-5
5138	284x120x28	5137	Mixed light sandy clay	11
		5172	Purple sandy clay	≥22
		5154	Beach sand	≥10
4939	156x50x26	4917	Sand silt	5
		4922	Very hard brown silt clay	7
		4929	Very hard purple clay	14
4336 (Circular)	124x115x11	4246	Hard grey brown clay	9
		4260	Red brown clay	4
		4321	Brown purple clay	5

The pits with main fills of sand are not so readily explained. However, as they share the form, general dimensions and location of the others, they too may have had some purpose related to construction.

A seventh but circular pit (4336 - Figure 40), of late Phase

III (Figure 15), is comparable with the rectangular pits for content, and was located immediately to their NE. With a slightly concave bottom, it contained two linings, the lower being of purple clay, and the upper of red brown clay. Its main fill was a grey brown clay.

## CHAPTER 5 THE POTTERY

### 5.1 AIMS AND METHODS OF THE POTTERY ANALYSIS

The primary aims of the pottery analysis were: 1) to reconstruct the set of vessels and vessel forms; 2) to identify stylistic traditions; 3) to identify the context and history of particular forms and traditions. The subsequent aim was to compare the assemblage with others of the region, and so establish its relation to them.

Much similar material had already been described, but most of the studies had been of assemblages excavated on the Santa Elena Peninsula (Bushnell 1951; Estrada 1958; Simmons 1970; Paulsen and McDougale 1974, 1981; Marcos 1982). Estrada, however, had taken investigation up the west coast of Guayas and Manabí (Estrada 1957, 1958, 1962), Zevallos (1965, 1995) and Bischof (1982) had excavated in northern coastal Guayas, and Stirling and Stirling (1963) had worked at Manta.

As I began, Beckwith came to work on the material from Salango 141C as part of her comparative analysis (Beckwith 1996) of Late Formative ceramics from Salango, Loma Alta and the Achallán albarrada at La Libertad. But at that time, there was no work of synthesis that brought together the different results of the previous studies. Further, a preliminary review of the material from Salango 141B identified many elements either previously unreported or too widely variant to fit comfortably in any one of the existing schemes.

Recent ceramic studies in the region had generally been based on one or other of two systems: type-variety or taxonomic classification (Smith, Willey and Gifford 1960), as applied by Simmons (1970) to the Carolina sequence; and modal analysis (Lathrap 1962), as

applied by Zedeño (1985) to Late Formative material from Peñon del Rio.

Type-variety classification had once been more common on the Ecuadorian coast. Under the influence of Meggers and Evans, Estrada (1957, 1958, 1962) was the first to use a version of it. The starting point is not the original vessel as a particular entity with function and context, but the sherd as an example of a general technique of decoration and finish, though characteristics of fabric and firing can also be used as defining criteria (Masucci 1992, 129). Much of the potential of the sherd as a source of information is thereby ruled out or made conceptually remote. Its attraction is that very large numbers of sherds can be grouped according to readily identifiable surface characteristics.

Modal analysis seemed immediately more useful because it is based on discrimination between individual attributes and techniques, and recognises variability in their application and combination. Beckwith (1996, 103) points out its greater suitability to the study of variation and change than the type-variety method. Further, types themselves are complexes of modes, and therefore a modal analysis is required first, to identify the significant modes, before a taxonomic classification can be undertaken (Rouse 1960, 112).

Beckwith herself was applying a form of modal analysis to the material from site 141C at Salango (Beckwith 1996). She shared with me an interest in resolving problems left unanswered by type-variety analysis, such as the question of the chronology of iridescent paint (Simmons 1970, 279f.). We were also working alongside each other on assemblages from immediately adjacent sites. It was logical, then, that I attempt to follow Beckwith's approach as far as possible, both for the intrinsic merits of the method, and for easier comparability



of results.

My own method, then, grew out of modal or structural analysis (Raymond 1995, 224-242) as used by Beckwith (1996, 99-105), though there are some differences in my conception and presentation of the data. The classification is simple, and aims at the identification of functional categories on the basis of combined form, decoration and finish. This is the biggest difference from Beckwith, who uses the system of morphological classification defined by Shepard (1980, 225-236) as her primary organising tool. I generally avoid Shepard's system, as the criteria and terms used often make false discrimination between closely related vessels, while on other occasions they mask significant differences.

First, I divide vessels into bowls and jars (which include bottles). Bowls are then divided into serving bowls, widebowls, wide-walled bowls and miniature bowls. Serving bowls are first subdivided into Form Sets based on variable rim treatment; and then the different decorative techniques associated with them are discussed.

A different order of analysis was necessary for the jars. The more elaborate, but less common decorative techniques tend to be associated exclusively with specific fabrics and forms, and thus fall into easily separated groups. The majority of jar forms, however, cannot be sorted without making arbitrary distinction. Jars, then, save for the few bottles, were most sensibly divided first according to decoration, and only second according to form.

My aspiration had been to tackle the entire ceramic sequence from 141B-T3. The site, however, had produced around 80,000 sherds. So, to create a manageable sample, I limited myself 1) to the first part of the sequence, i.e. Period 1; 2) to contexts of primary

deposition; and 3) to complete vessels and sherds diagnostic of shape and/or decorative design.

With Structure 1 as the starting point, the study was taken up to Context 3000, just into the transitional phase that followed Period 1. But the Period 1 component alone included nearly 40,000 sherds, and a detailed study on such a scale would still have been too great.

So I decided to concentrate on material from contexts of primary deposition. The frequency of resurfacing of the site, and the consequent reduction of the likelihood of vertical mixing, pointed to the need to start with layers. These were already well understood in terms of stratigraphic sequence, and offered a sample approaching 45%. Grave goods offered a small but secure sample. As a third, complementary context group, rubbish pits were included. Sherds from these pits were often larger than those from layers, as well as including forms not found in other contexts. A small number of sherds from other features were also included on account of their intrinsic interest.

The third step of selection, to set aside the undiagnostic sherds, was motivated by my overall primary concern with detail that the undiagnostic sherds did not carry. This step especially, however, meant that the changes in relative proportions of the broader constituents of the assemblage could not be fully documented, and resulted in the loss of the statistical balance of a larger and more complete sample. This is the most serious drawback to my method and sample.

However, it was a necessary sacrifice, given that a choice had to be made that would best use the particular material available. My aims were not, in the first place, concerned with creating a

general typology and chronology. Rather, they focused on the description of the elements of an unusually well structured assemblage, and looked precisely at those aspects of detail which had themselves previously been sacrificed for the sake of generality.

The final sample size (Table 25) amounted to 1320 rims, including 14 complete or nearly complete vessels, plus 108 necks and 913 body sherds. The classification and description draws on all diagnostic sherds, includes all morphological and decorative modes, demonstrates the range of their variability, and ties that variability to context. Over 25% of vessel rims and necks are illustrated, as well as 10% of the body sherds.

Vessels and sherds were registered in Salango, following Beckwith's version of the ESPOL ceramic data form (Beckwith 1996, 106), with drawings on the reverse (see Figure 88).

A x10 hands lens was used to discriminate paste textures (though no precise inclusion counts were made) as follows:

VERY FINE	No inclusions visible under hand lens.
FINE	Only very fine inclusions visible under lens.
MEDIUM FINE	A few inclusions (<1 mm) visible under lens.
FINE MEDIUM	Inclusions visible without aid of lens.
MEDIUM	Many inclusions visible without lens.
COARSE MEDIUM	Many inclusions present, easily visible.

Surface finishes were defined as:

SCRAPED	Surface overall even, but pitted and with tiny lumps.
FINE SCRAPED	Surface overall even, with tiny parallel corrugations.
WIPED	Surface even, no pits or lumps, but no lustre.
SMOOTH	Lustre, but matte - no lines.
LOW POLISH	Between smooth and polish - lines obvious.
POLISH	Lustre and continuous gloss - lines visible.

GOOD POLISH      Gloss with silky feel - polish lines just visible.

HIGH POLISH      Glassy - no sign of polish lines.

Colour was gauged using the Munsell Soil Color Charts.

However, in my descriptions, "red" implies something between 10R and 5R. When a 2.5YR Red occurs, it is noted specifically. The distinction is semi-arbitrary, but necessary in order to give some definition to the concept of a red slip.

Complete vessels, including all the ceramic grave goods, were recorded first. Sherds from layers were recorded next, and then those from rubbish pits. Contexts were taken from the earliest to the latest, so as to follow the sequence of change. Sherds were laid out in a queue around a large table, and moved forward as contexts were done with. This allowed me to familiarize myself with the material in advance, and to watch for changes as they approached. Written data were later transferred to computer using the *AbilityPlus* (Mingent, Inc.) DATABASE application.

Ideally, chronological calibration would have matched the seven building and occupation episodes of Period 1. But division of the stratigraphic sequence down to that level was only possible with Structures 1 and 2. Contexts, however, relating to Structures 3, 4 and 5 were clearly separated from those associated with Structures 6 and 7. The sequence, then, was divided into 4 stages (Table 22): Phase I (Structure 1), Phase II (Structure 2), Phase IIIE (Structures 3-5) and Phase IIIL (Structures 6 & 7). The few contexts from early Phase IV were included in Phase IIIL.

The number of sherds used in defining the categories, including occasional complete vessels, are given at the start of the category descriptions; and the distribution of rims through the four phases (I-IIIL) are then given in brackets. Tables 25-40 give details

of absolute and percentage frequencies.

Table 22. SEQUENCE DIVISIONS FOR PERIOD 1 AND TRANSITION TO PERIOD 2

PERIOD	BUILDING PHASE	STRUCTURE	PHASE FOR PURPOSE OF CERAMIC ANALYSIS
<hr/>			
TRANSITION	IV		
<hr/>			
			IIIL
		7	
		6	
	III	5	
		4	
		3	IIIE
<hr/>			
PERIOD 1	II	2	II
<hr/>			
	I	1	I
<hr/>			

## 5.2 SERVING BOWLS

### 5.2.1 Serving Bowl Form Sets (Table 28)

#### 5.2.1.1 Serving bowl Form Set 1

Complete Vessels: 1; Rims: 166 (56.48.48,15)

**FABRIC** Fine fabrics predominate. While surfaces are various shades of brown, red brown, grey or black, cores are mostly black, dark grey or grey.

**FORM** Vessels are unrestricted and carinated, with direct, generally rounded lips and unmodified rims. The long upper sections mostly flare outwards (Figure 90a) or have straight axes (Figure 90b),

though a few have a very slight inward curve (Figure 90c). The sides of the upper section are parallel (Figure 90d), or convex along the interior surface (Figure 90e). Junctures between upper and lower sections are marked, but the angle may be sharp or curved. With very slightly rounded bottoms, the bowls sometimes stood on three hollow legs (Figure 90f) or on ring bases (Figure 105c), but such external supports are infrequent.

Lip profiles are also sometimes flattened (n=8; Figure 90g) or squared (n=8; Figure 90h). Phase I has one example of exterior bevelling (Figure 90i).

Lip contours are mostly flat, but: one from Phase I has very fine nicks across the top of the lip (Figure 90j); one from late Phase II is nicked along the interior (Figure 90k); six from Phases I-III E are notched (Figure 90l); and fourteen, from Phases II-III L are wavy (Figure 90m).

Two variations appear at the end of Phase III E. Six vessels have the upper section shifted slightly inwards (Figure 91a). Five others have the overall form of the main set, but their lips (Figure 91b) have the interior bevel and exterior indentation of Form Set 5a. Of vessels with the shifted upper section, one (Figure 91c) also has the lip interior bevelled and the exterior indented, while another (Figure 91d) has exterior indentation, but without interior bevelling.

**DIMENSIONS** Most vessels have rim and maximum thicknesses of 4 to 6 mm, but a few are more slender and more erect (Figure 91e). Diameters range from 130 to 360 mm, but are mostly (n=147, 88%) between 180 and 280 mm. The maximum height from carination to lip is 65 mm (Figure 91f), and the minimum is 40 mm (Figure 91g).

**DECORATION** Surfaces are either red-slipped or smudged (brown, dark brown or black), with the exterior lower body at most

self-slipped. On the exterior, slips are applied down to the angle point, and are mostly red (n=121, 72.5%). On the interior, red slips are less common (n=21, 12.6%). With one exception, an interior red slip is always accompanied by an exterior red slip. When there is no interior red slip, the exterior red may run over the top of the lip and reach a couple of millimetres down the interior: but this practice, having been relatively common (n=17, 30.4%) in Phase I, disappears by the end of the sequence.

The primary medium (on 47 rims, 28.1%) for decorative design is iridescent paint. One variant of early Phase IIIL (Figure 91h) has round appliqué pellets set beneath its undulating lip.

**FINISH** The interior commonly (n=96, 57.5%) has a good polish, and is never unpolished. On the exterior, the upper body finish is usually an ordinary polish, though there is an increasing tendency to a lower degree of finish as the sequence progresses. The lower body is just wiped.

**OBSERVATIONS** Maximum frequency as a percentage of all serving bowls occurs in Phase I (56.0%), and thereafter declines, particularly between Phases IIIE (19.5%) and IIIL (4.9%). From occupation layer 5033 onwards the few members of the set are mostly of the variant types. Before the end, then, of Phase IIIE, the tall, relatively simple, unrestricted but carinated fine ware bowl can be said to have lost its central role.

While there are progressive changes in decoration and finish, the set is remarkably coherent, and it is not easy to identify many potential imports. One of Phase I (Figure 91i) has a very fine fabric, a high polish over its interior black, and a very dark red exterior slip; another of the same phase (Figure 91j) has a more stated flare than normal. In Phase IIIL, a variant vessel (Figure 91k) is odd for

the interior inflection of the rim and the undulating contour of the exterior upper body profile. But such differences are few and slight.

#### 5.2.1.2 Serving bowl Form Set 2

Rims: 53 (8,11,26,8)

**FABRIC** All fabrics are fine, with the exception of one that is very fine and four that are medium fine. While core colour is predominantly black or dark grey, surface colours are mostly red brown, red or brown.

**GENERAL DESCRIPTIONS** The set comprises unrestricted vessels with rims set slightly inside the line of the upper wall, often with a marked angle at the juncture with the vessel body proper. Most fall into one of three more closely defined subsets.

1) Form Set 2A is the largest (n=33). Vessels have everted upper walls joined to a shallow, probably rounded base via a marked carination. Lips are normally rounded and with a flat contour, though seven are wavy or notched. They thus resemble the Form Set 1 bowls in general form (and dimension), and they are also of the same time span.

Diameters are mostly 170 to 300 mm. Rims are mostly 10 to 20 mm long (Figure 92a-d), and up to 5.5 mm thick. But three rims (Figure 92e) are longer (35 to 40 mm) and thicker (7.5 to 8.5 mm), one (Figure 92f) is long but of normal thickness; and two, of a single Phase IIIL rubbish pit, have rims of intermediate length and thickness, and unusually sub-squared lips (Figure 92g).

Exterior upper body red slips under a standard polish are the norm. Interiors are smudged and carry iridescent paint, under a good polish.

One notched rim (Figure 92h) of Phase IIIE is exceptional for a good polish outside, and a high polish inside - its fabric is fired



hard, with an unusual blue grey core between red interior and exterior.

2) Form Set 2B is a group of seven rims, of Phases II and IIIIE, from shallow uncarinated bowls (Figure 93a). Three have nicked or wavy lips. Diameters range from 190 to 270 mm. Surface colours, decoration and finish are as for Form Set 2A.

3) Form Set 2C includes six rims, of Phases IIIIE and IIIL, from vessels with upright walls. Diameters are from 140 to 260 mm. Forms range from the slender (Figure 93b) to the thick (Figure 93c). Three have squared lips (Figure 93d).

4) While there are five rims, of different phases, too short to be assigned with certainty to any one of these three preceding subsets, a final four are distinct.

The first two are clearly residual. One, of medium fine fabric (Figure 93e), is similar to Form 7 of Meggers, Evans and Estrada's (1965, 133, Figure 84) Machalilla Polished Red, although in this case the rim is everted rather than inverted. The upper section leads directly to the base, with no point of transition marked either by carination or difference in surface colour or finish. Its surfaces are of 2.5YR 4/6 Red, i.e. not quite the red slip of most Period 1 bowls, and only incompletely polished. Its iridescent design is a curvilinear reticulation.

Another rim (Figure 93f) compares with Meggers, Evans and Estrada's (1965, 118, Figure 73) Ayangue Incised, Form 5, and Beckwith (1996, 155, Figure 5.25) has a similar form at 141C. Its interior is an unusual 10YR 6/4 Light Yellow Brown, with faint traces of iridescent paint under a good polish; the exterior is a 7.5R Red under a standard polish.

From Phase IIIIE layers, two (Figure 93g,h) have slender lower

bodies with thicker rims/upper bodies, exterior red slips, and interiors decorated with iridescent paint. Unusually, the juncture of rim and body in the latter example is inverted.

#### 5.2.1.3 Serving bowl Form Set 3

Rims: 43 (1,4,23,15)

**FABRIC** All fabrics are fine or thereabouts. Cores are mostly black or dark grey, and surfaces are brown or red brown, with occasional yellowish reds, reds and greys.

**GENERAL DESCRIPTIONS** Vessels are unrestricted, and have internally thickened rims. The rim interior surface may be either convex or concave. More (n=24) have exterior red slip than do not. Some (n=7) have an interior red slip. An exterior polish is often low, although it is mostly standard. Half have iridescent paint on the interior. They fall into several subsets.

1) In Form Set 3A, there are eight bowls with high, everted upper bodies, and carinated transitions to a shallow curving lower section. Lip contours are flat, notched or wavy. Two rim sherds have hollow feet attached: in one case there is also a flange at the carination point (Figure 94a); the other has an oddly pinched but rounded angle point at the internal base of the rim (Figure 94b).

However, there are several other possibilities for the rim, including a simple convexity (Figure 94c), a slight internal carination (Figure 94d), and a more sharply undercut transition from rim to main wall (Figure 94e).

Save for the rim, these vessels are the same as those of Form Set 1, and share their chronological distribution.

2) Form Set 3B includes just four carinated vessels from Phases IIIE and IIIL layers with short upper sections (30 to 40 mm

long), thickened from the lip to an interior step just above the interior angle point (Figure 94f).

3) Form Set 3C includes twenty-one bowls with curved bodies, whose carination, if any, is limited to a relatively unpronounced quickening of the curve just beneath the rim. They may have upright upper walls (Figure 94g), but tend to be shallow (Figure 94h).

Decoration is with iridescent paint, save for one from Phase IIIE that has simple red paint.

Eleven of this subset are from Phase IIIL. One (Figure 95a) is very wide (380 mm diameter), and has an unpolished exterior. Another (Figure 95b) has an exterior with incomplete polish limited to the rim section. One (Figure 95c) has a rim 9 mm thick, with an inverted lip. Three rims have double steps (Figure 95d-f).

All of these Phase IIIL vessels have black interiors with iridescent paint. None have red slip on the exterior. Exterior finish is limited in extent, degree or both. And diameters are generally greater than normal - four exceed 320 mm.

4) There are four unusual forms from Phases IIIE and IIIL. Two (Figure 95g,h) have thickened rims with parallel, straight sides. One (Figure 95i) has a vertical upper section very rare among bowls. The fourth (Figure 95j) has a squared lip and the exterior lip indentation of late Phase IIIE/early Phase IIIL (cf. Form Set 5).

OBSERVATIONS Internal thickening or stepping of the rim is itself performed in different ways, and is a device applied to a variety of general bowl forms. But there is a strong association in Form Set 3C with the shallow, uncarinated bowl of late Phase IIIE and Phase IIIL (see Form Set 11), and double-stepping can be taken as a chronological marker for Phase IIIL.

#### 5.2.1.4 Serving bowl Form Set 4

Rims: 29 (0,0,13,16)

**FABRIC** All fabrics are fine, save one medium fine in Phase IIIL. Cores are mostly light grey or grey, while surfaces are predominantly light in colour (light brown, light red, pink and grey).

**FORM** These vessels have a short, thickened upper section, clearly distinguished from the lower body, and a simple rim. The upper section is usually biconvex (Figure 96a), though the interior surface may be almost flat (Figure 96b), and is usually slightly inverted or upright, though seven are everted (Figure 96c). The lip is usually rounded, though three are flattened (Figure 96d).

In Phase IIIE, the juncture with the lower section may be sharper, while in Phase IIIL the transition is likely to be more of an open curve. Three, all of Phase IIIE, have wavy rims, and one of these (Figure 96e) also has both an angled exterior carination and an interior step. There is perhaps a tendency in Phase IIIL for the weight of the rim to move more towards the lip (Figure 96f).

**DIMENSIONS** Rims/upper sections are mostly between 5.5 and 7.5 mm thick. Diameters are mostly between 180 and 300 mm. Upper sections are between 18 and 34 mm tall overall; but Phase IIIL vessels can be shorter than those of Phase IIIE.

**DECORATION AND FINISH** An exterior red slip is found on ten of the Phase IIIE bowls, and five from Phase IIIL. Four vessels, all of Phase IIIL, had interiors with red slip, the rest being mostly smudged browns or black.

Iridescent paint occurs on six Phase IIIE bowls, and nine of Phase IIIL. One vessel had a simple red paint design on a light brown interior background (Figure 110d).

Interiors are given a standard or good polish, while the exterior upper bodies/rims are given a standard or low polish. Exterior lower sections are left unslipped (or only self-slipped) and unpolished.

**OBSERVATIONS** These bowls first appear in middle to late Phase IIIE, and continue through Phase IIIL. Though a relatively common serving bowl in Phase IIIE and IIIL layers (at 5.3% and 7.9%), there is only one in Phase IIIL rubbish pits.

#### 5.2.1.5 Serving bowl Form Set 5

Rims: 67 (0,0,22,45)

**FABRIC** All fabrics are fine, with cores dominantly grey or black, and surfaces red, brown, grey, pink or black.

**FORM** The set comprises two closely related subsets. Form Set 5A vessels (n=48) have lips indented along the exterior and either bevelled towards the interior (Figure 97a), or flattened (Figure 97b). Upper bodies are generally short and slightly inverted or everted. Occasionally there is pinching of the rim exterior (Figure 97c,d), as found in Form Set 6. The transition from upper to lower body may be sharp or rounded, but it is always clear.

Vessels of Form Set 5B (n=19) are of the same general forms, but their lips, while flattened or bevelled, lack exterior indentation (Figure 97e).

**DIMENSIONS** Rims/upper bodies are between 4.0 and 7.5 mm thick, and lower bodies between 2 and 8 mm. Upper bodies range between 16 and 37 mm tall, most being between 20 and 30 mm. Rim diameters range from 140 to 310 mm.

**DECORATION** Iridescent paint is the principal medium of decoration, and is found on half (n=34) of vessels. The three Form Set

5A vessels with simple red paint designs (Figure 110e,f,h) all belong to late Phase IIIIE contexts.

Background colours are not constant. On the interior, the main possibilities are a red slip (on Form Set 5A vessels only) or a smudged brown, dark brown or black. In Phase IIIIE, interior red slip occurs on half (n=11) of vessels, while in Phase IIIL it is less common (n=4, 8.9%). All interior red slips are accompanied by exterior red slips.

Exterior red slips occur on most (n=19) Phase IIIIE vessels, but on less than half (n=19) of Phase IIIL vessels. Exterior red slip is also more common on Form Set 5A vessels (n=35) than Form Set 5B vessels (n=3).

**FINISH** Interior finish is either a standard or good polish. In Phase IIIIE, most vessels (n=16) have good polish; but in Phase IIIL the figure is reduced to less than half (n=19).

On the exterior, the lower body is always simply wiped. The upper body in Phase IIIIE is always polished, even if it is a low or incomplete polish. In Phase IIIL, however, only just over half (n=26) have polish, with a difference suggested between layers (88%, n=22) and rubbish pits (20%, n=4).

Where there is no polish, the exterior surface is given an even wipe. Three IIIL vessels have red-slipped exteriors without polish.

**EXCEPTIONS AND EXTREMES** In Phase IIIIE, two Form Set 5A vessels (Figure 97f,g), are both red-slipped inside and out, with interior iridescent paint, and have upper sections that flare outwards to rims that are thicker than their stems. The first also has a wavy lip contour, rather than one indented. These are probably both intrusive, and from the same source. The only other example (Figure

97h) of an outward flare is also of late Phase IIIE. It has a polished black interior, a lip uniquely beaded along the interior, and two narrow unpolished bands around the interior rim. Again a foreign source might be looked for.

Two Form Set 5A vessels have moderate upper body heights (30 and 35 mm) but are very open (Figure 97i).

Three other Form Set 5A vessels (Figure 97 j-l) are upright, and have markedly everted lips.

From Form Sets 5A and 5B, two vessels (Figure 97m,n) with short, straight upper sections and slightly everted lips, are similar to those of Form Set 8A.

**OBSERVATIONS** Vessels with indented lip exteriors represent a specific and intense application of a temporally broader but generally less common practice - i.e. manipulation of the contour of the lip. The Form Set 5B vessels lack this indentation, but otherwise share general morphological traits with Form Set 5A that are peculiar to the set as a whole.

In Phases IIIE and IIIL layers, Form Set 5A vessels are more common (at 7.7% and 11.6%) than most other serving bowls, but those of Form Set 5B are more common (at 11.0%) in Phase IIIL rubbish pits.

#### 5.2.1.6 Serving bowl Form Set 6

Rims: 12 (0,0,3,9)

**FABRIC** All fabrics are fine. Cores are mostly grey or brown, and surfaces brown or light brown.

**FORM** Vessels all have pinched rims - that is, the exterior is drawn inwards, creating a concave profile up to the lip, which is normally rounded (Figure 96g), but may be flattened (Figure 96h). The upper sections are vertical or inverted, with an angle at the change

to the lower section. The exterior wall may be straight (Figure 96i). There may be a pronounced step at the base of the upper section interior (Figure 96j).

**DIMENSIONS** Diameters range from 180 to 270 mm. Upper body thicknesses range from 4.5 to 8.0 mm. The lower section, as it comes to meet the upper, may be much thinner - 2.5 to 4.0 mm. Upper bodies are from 21 mm to over 45 mm tall (Figure 96k).

**DECORATION AND FINISH** One vessel interior has a red slip. The rest have smudged dark browns or black, all but two carrying iridescent paint. Interiors have a standard or good polish.

On the exterior, the earliest member of the set (Figure 96l) has iridescent paint on a smudged dark brown background. Otherwise, there are four vessels with red slip and low polish, two with polish and no slip, and five with neither slip nor polish. In these latter five cases, the main portion of the upper section is given a less careful wipe than the rim and lower body.

The four bowls from rubbish pits all lacked exterior polish.

**OBSERVATIONS** Rim treatment of this sort is specific to late Phase IIIE and Phase IIIL, but rare. There are a few more elaborate examples included in Form Set 5.

#### 5.2.1.7 Serving bowl Form Set 7

Rims: 16 (0,0,1,15)

**FABRIC** All fabrics are fine, with cores grey or black, and surfaces are various shades of brown, grey, red or black.

**FORM** The upper section is vertical and rather short (Figure 96m), with an angle or sharp curve at the juncture with the lower section. The lip is simple and rounded. The lower section is moderately or steeply sloped to a bottom probably slightly rounded.



**DIMENSIONS** Diameters range from 130 to 290 mm. Rim thicknesses range from 4.5 to 6.5 mm. Upper sections are 15 to 25 mm tall.

**DECORATION** Exteriors are usually undecorated, though one vessel has red slip both on the exterior rim and on the interior, and another has red slip on the exterior rim alone. Interior backgrounds are otherwise smudged to either dark brown or black. Iridescent paint occurs on most interiors (n=14).

**FINISH** Interiors are mostly well polished. The exterior rim is given a low polish on half the vessels. else it is wiped. Lower bodies are mostly wiped, but two have polish.

**OBSERVATIONS** The only rim not from Phase IIIL is from late Phase IIIE. In Phase IIIL, the rims represent 4.9% of serving bowls, dividing more or less equally between layers (n=7) and rubbish pits (n=8).

#### 5.2.1.8 Serving bowl Form Set 8

Complete Vessels: 1; Rims: 21 (0,0,0,22)

**FABRIC** Fabrics are fine (n=17) or medium fine (n=5). Cores are grey or dark grey. and surfaces are various shades of brown, red or red brown.

**GENERAL DESCRIPTION** Vessels of the set are distinguished by a short or very short rim with a triangular or tapered profile. In addition, the majority have iridescent paint on the exterior rim. Four vessels represented, including the complete example, have hollow legs, and it is assumed that the rest were generally supported in this way. There are three subsets.

1) In Form Set 8A (n=17), the rim is vertical (Figure 98a) or inverted (Figure 98b). Mostly (n=11) the rim exterior is slightly

concave, but it may be flat (Figure 98c), or convex (Figure 98d). The exterior angle may be slightly pinched (Figure 98e).

Diameters range from 110 to 330 mm. The vertical height of the rim ranges from 5 to 22 mm, with maximum body thicknesses between 5 and 7.5 mm.

Two have red-slipped interiors: their exterior rims are also red-slipped, one finished with a low polish, while the other is without polish. With one exception, the rest have smudged (black or dark brown) interiors and exterior rims. Nine have iridescent paint around the exterior rim and over the interior, and a further two sherds have the paint only on one or other of those surfaces.

Interiors have standard or good polish. Exterior rims mostly have a standard or lower polish, save two which are wiped. Lower bodies are simply wiped.

One vessel (Figure 98f), however, is odd in two respects: first, the rim exterior rises vertically before presenting the more standard triangular apex (cf. Form Set 6 for similar profiles); and secondly, the exterior rim has an unpolished red slip, while the lower body is a polished black.

2) Form Set 8B includes just three examples, one of them complete and a grave offering, the other two both from a single rubbish pit. They have in common a rim initially upright, but then with an outward extension that creates, over the interior upper surface, a flat field wide enough to carry an iridescent design.

All three have black interiors, with iridescent paint and polish. Two, including the smallest of the subset (Figure 99a), and the widest (400mm diameter) of all serving bowls in the assemblage (Figure 99b), have exteriors simply wiped, with no slip. The third (Figure 99c), however, has the exterior rim smudged (very dark brown)

and decorated with iridescent paint, this rising up the underside of the lip.

Exterior and interior designs, however, are independent, as perhaps in all other vessels of the set.

3) Form Set 8C consists of two vessels (Figure 98g) from a single rubbish pit. Here, the rim is very short, with a pinched underside, so that it has two triangular points, apical and basal, that are independent of the contours of the main body. While the rim exteriors are smudged and have iridescent paint under standard polish, the lower bodies are simply wiped. Diameters are 250 mm and 280 mm.

**OBSERVATIONS** Vessels of this set are mostly restricted to Phase IIIL rubbish pits, amongst which they comprise 16.1% of serving bowls. (The three vessels from layers, by contrast, represent a mere 1.6% of serving bowls.) The only other vessel categories in the assemblage that compare for this near exclusivity of association are iridescent bottles and iridescent jars.

Further, not only do four out of five of the smaller subset members pertain to two single depositional events, but thirteen of all vessels of the set derive from just four rubbish pits. These bowls, then, are very context specific.

#### 5.2.1.9 Serving bowl Form Set 9

Rims: 125 (12,22,41,50)

**GENERAL DESCRIPTIONS** This set comprises restricted bowls with unelaborate rims. It includes simple, rounded vessels (Form Set 9A), and a composite form (Form Set 9B), as well as less clearly defined forms and vessels represented by sherds too short for certain identification of overall form (Form Set 9C).

1) Form Set 9A simple rounded vessels, with round or

fine-rounded lips. number forty-three, with members in each of the phases (n=7, 12, 18 and 6 respectively). Fabrics are very fine (n=2), fine (n=31) or medium fine (n=10), with cores mostly black or dark grey, and surfaces shades of brown.

Rim diameters range from 70 to 240 mm, though only four measure more than 190 mm. There is a possible, but uncertain, trend which sees earlier vessels more often open (Figure 100a,b), and later vessels more often closed (Figure 100c,d). A Phase IIIE vessel (Figure 100e) represents a mid-point between those extremes. Walls range for maximum thickness between 3 and 6 mm. and for minimum thickness between 2.5 and 5.0 mm.

Interiors are variously grey, brown, dark brown or black, and only four of the more open Phase IIIE bowls have iridescent paint. Exteriors are half of them (n=21) red-slipped, with most others red brown, and only five dark grey or black. The exteriors of just three Phase IIIL bowls have iridescent paint (Figure 100f). One Phase IIIE vessel has an exterior decorated with simple red paint, in horizontal bands (Figure 110j).

Polish is absent from the interior in a quarter of cases (n=11). There is only one instance, however, where it is absent from the exterior.

2) Form Set 9B composite vessels number fifteen. Upper sections, mostly close to upright, have concave interior surfaces. Lower sections are probably rounded but shallow. All are from Phase IIIL. All are of fine fabric, save one medium fine and one fine medium. Cores are grey, dark grey or black, and surfaces are shades of brown, grey or black.

Diameters range from 190 to 360 mm. Wall thicknesses range from 2.0 mm at the base of the upper section (Figure 100g) to a

maximum of 9.5 mm at the rim (Figure 100h). Upper sections are between 37 and 51 mm tall.

All interiors are polished, but none have red slip, being brown, dark brown or black. Seven interiors have iridescent paint. The exterior upper sections of four bowls have smudged backgrounds and iridescent paint (Figure 100i) under polish. But the other eleven exteriors all lack polish, and are simply wiped, four of them having red slips.

3) Form Set 9C consists of the remaining heterogeneous sixty-seven vessels. Many sherds are very short, and fail to reach the corner point. There is a range of variability with respect to lip shape (rounded, squared, flat or vertical), wall shape and orientation of the upper section (though most are rather upright). Most fabrics are fine, though nearly a quarter (n=16) are fine medium or medium. Diameters range from 60 to 360 mm, and wall thicknesses from 2.5 to 9.5 mm.

Interior red slip is carried by seven bowls, exterior red slip by twenty-six. Ten have iridescent paint on the interior, two on the exterior. Ten have interiors without polish. Eleven have exteriors without polish, all from later contexts. Only four have both interior and exterior unpolished: three from Phase IIIE, one from Phase IIIL. Rather than attempt an exhaustive presentation of this mixed and uncertain group, I shall pick out a few examples to demonstrate its range.

In Phase II are the most closed (Figure 100j) and most open (Figure 100k) examples. Both have the lip painted red.

From Phase IIIE, there is a form (Figure 100l) unique for its thick, rounded but upright upper section and bevelled interior lip. Another rim (Figure 100m) has a vertical lip.

From Phase IIIL, there is an example (Figure 100n) of the combination, of a finely scraped exterior and an interior with iridescent paint under a good polish, that is particular to vessels of that phase. A smaller, more squat form (Figure 100o) is also found at this stage.

There are three tall, upright, flat-lipped upper sections from Phases II-IIIL (Figure 100p-r).

There is one bowl in Phase IIIL (Figure 100s) that has an upright upper section, which tapers to a narrow juncture with the lower section.

Two more open bowls of Phases IIIE and IIIL (Figure 110l,m) each have a red band around the rim of the polished exterior.

Among the more restricted vessels is one (Figure 100t) with a medium fabric and thick wall.

OBSERVATIONS Better preservation of more sherds would have encouraged the creation of full sets out of Form Sets 9A and 9B, and would have allowed better discrimination of the Form Set 9C members. It may consequently have led also to a better grasp of the chronological significance of differences observed.

#### 5.2.1.10 Serving bowl Form Set 10

Rims: 82 (3,8,18.53)

GENERAL DESCRIPTIONS The set comprises all identifiably composite bowls, plus all those of generally simple form but modified rim, not falling into Sets 1-8 or 9B. They are best treated as a group of generally small subsets. All have fine or medium fine fabrics unless otherwise stated.

1) Form Set 10A are Phase II bowls (n=4) with thickening or slight inversion of the internal rim. Diameters are from 120 mm to 200

mm. All are polished inside and out. Two have dark red slip on both interior and exterior (Figure 101a,b). One (Figure 101c) has a red-slipped exterior rim, but with a yellow red lower exterior body, and a dark grey brown interior.

2) Form Set 10B are Phase II to Phase IIIE bowls (n=3; Figure 101d-f) with short, upright upper sections. Diameters are from 200 to 270 mm. All are polished inside and out. Just one (Figure 101d) has a red slip, on the exterior.

3) Form Set 10C are Phase IIIE to Phase IIIL bowls (n=6) with taller upper sections (35 to 60 mm).

The two from Phase IIIE (Figure 101g,h), with diameters of 240 mm and 200 mm, each have a flat lip, and an exterior upper section red-slipped and polished; but only the former has an interior with iridescent paint.

Three Phase IIIL vessels, with diameters from 240 to 310 mm, have interior iridescent paint on black or dark grey backgrounds. Two also have exterior iridescent paint (Figure 101i). The third (Figure 101j)) has an unpolished red-slipped exterior. A fourth Phase IIIL bowl (Figure 101k) has an elliptical form (110 x 160 mm) unique in the assemblage.

4) Form Set 10D (Figure 102a-g) are Phase IIIE (n=3) and Phase IIIL (n=25) bowls with shorter upper sections (10 to 33 mm). Their diameters are from 150 to 310 mm.

On the interior, two have red slip, thirteen have iridescent paint on dark or black backgrounds, and all are polished. On the exterior upper body, six have polished red slips, and seven are red-slipped without polish, while five are polished without red slip. Mostly, they suggest affinities with vessels of Form Sets 4 and 5.

5) Form Set 10E are Phase IIIL bowls (n=4) with pinched and

everted lips, and rounded exterior carination. Upper sections are short. Interiors are smudged and carry iridescent paint, exteriors are unpolished. Two are unrestricted (Figure 102h), while the other two are slightly restricted (Figure 102i).

6) Form Set 10F are Phase IIIL bowls (n=4) of exceptional late forms. All are from layers.

First is a shallow bowl (Figure 102j) whose interior has a concave rim and an undercut, squared lip. The interior is black, and the exterior grey brown, both surfaces being polished.

Next is a bowl (Figure 102k) with an outward flaring upper section, from whose underside, close to the lip, hangs a notched flange. The interior is a well polished dark grey brown, with iridescent paint; the exterior is wiped from the lip to well down the upper section, then polished as the transition is made to the pedestal.

The third vessel (Figure 102l) has a stepped rim, a lip everted and flattened, and concavities just below the lip and opposite the interior step. The interior is a well polished black, with unclear iridescent paint from the outer edge of the lip inwards. The exterior rim is wiped, with a red slip, while the lower body is just wiped.

The fourth (Figure 102m) has a similar rim, but with a single concavity halfway down the exterior. The interior is a polished red brown, the exterior wiped and without slip.

The latter two rims compare with those of pedestalled bowls reported by Stothert (1993, 55, Figure 47) amongst her early Guangala assemblage at Valdivia, though the fabrics there may have been less fine (*ibid.*, 33).

7) Form Set 10G has two bowls from a Phase IIIL rubbish pit, with the same exotic fabric (medium texture, red brown surfaces, red



brown and dark grey cores), and the same red slip. One (Figure 102n) is smaller (diameter = 180 mm) and shallow, with a very short, upright rim and an annular base. The red slip, finished with a low smoothness, covers the whole interior and the exterior as far as the toe of the ring. Simmons (1970, 22. Figure 56d) illustrates a similarly shaped bowl of his Engoroy Polished Red: La Libertad variety.

The second (Figure 102o) is a unique form: the shorter upper section (6 mm thick) is inverted from a main point whose diameter is 390 mm, the base (8 mm thick) is concave, and the vessel depth is 165 mm. The slip covers the whole interior, but stops just below the lip exterior. There is a polish which covers the slip and then continues down the exterior to 35 mm below the carination.

8) Form Set 10H are eight other odd vessels. Two have red paint decoration (Figure 110g,k), and two have exterior incision (Figure 111b,e).

A small Phase I bowl (Figure 102p) has an everted lip off a convex upper section. Red slip, with low polish, covers the exterior body and interior rim. The pale grey interior is simply wiped.

In Phase II, a moderately sloped bowl (Figure 102q) has the rim both slightly thickened inside and out, and slightly everted. The interior is a well polished dark red brown, and the exterior a polished red.

In Phase IIIL, one bowl (Figure 102r) has an upright, convex upper body and slightly everted rim. Interior and exterior have a low polish over a red slip. Another (Figure 102s), with an upright upper section, slightly everted lip, and rounded carination, is comparable to the subset E bowls; but it has an unusual very pale brown interior slip, well polished, and a polished light brown exterior.

9) There remain twenty-three vessels, represented by short or

ambiguous rim sherds, distributed through the phases as follows:  
2,2,9,10. All but four are polished inside and out, the exceptions  
being two each from Phases IIIIE and IIIL.

#### 5.2.1.11 Serving bowl Form Set 11

Complete Vessels: 1; Rims: 132 (19,16,42,56)

**GENERAL DESCRIPTION** This set includes all simple unrestricted vessels with unelaborate rims and mostly rounded lips. After a general review of fabrics, dimensions and surface treatment, the more definable morphological tendencies of the phases are described, along with unusually decorated vessels.

Fabrics are mostly fine (n=74) or medium fine (n=32), with four very fine and twenty-two fine medium or medium. The coarser fabrics are perhaps more common in Phases I and II than in Phases IIIIE and IIIL. Cores are mostly fired to black, grey or dark grey, while surfaces are brown, red, red brown, grey or black.

Diameters range mostly between 140 and 290 mm. Rim thicknesses range from 2.5 to 9.5 mm, but lie mostly (n=115) between 4.0 and 7.5 mm.

Red slips are found on 30.1% (n=48) of exteriors, peaking at 45.2% (n=19) in Phase IIIIE, and on 11.3% (n=15) of interiors. Dark brown, dark grey and black interiors are found on 47% (n=62) of bowls, with a rise in frequency from 36.8% (n=7) in Phase I to 58.9% (n=33) in Phase IIIL. Interior iridescent paint is absent in Phase I, but rises from 18.8% (n=3) in Phase II and 21.4% (n=9) in Phase IIIIE, to 44.6% (n=25) in Phase IIIL.

Almost all bowls are polished inside and at least on the upper section of the exterior. Eight, however, are unfinished inside and out; thirteen are finished inside but not out; and three have

exterior finish but none on the interior.

It is extremely rare to find the exterior upper body distinguished by differential surface treatment from the lower. In this is an added point of contrast with the composite bowls, though it may reflect the paucity of sherds preserved below the transition between upper and lower sections.

The few undulating (n=3) and notched/nicked (n=6) lips are limited to late Phase IIIIE and Phase IIIL.

SPECIFIC FORMS 1) Phase I. in addition to its high proportion of coarser wares, has the vessels with the narrowest walls. Four (Figure 103a-d) are 2.5 to 3.0 mm thick at the rim/upper section. A fifth (Figure 103e), while 4.5 mm at the rim, narrows to only 1 mm as the transition is made to the lower section.

Of its less fine bowls, three have a marked curve to the short upper section. Two (Figure 103f,g) have unfinished interiors, with low polish to the exterior: while the third (Figure 103h) has no finish other than polish to its red-painted lip.

There are two bowls (Figure 103i,j) with square lips and straight upper sections. Both have very worn surfaces, but the former, at least, appears to have been polished.

One rim (Figure 103k) has a pinched, finely pointed lip like that of a Phase II example (Figure 103l), and both have smoothed surfaces.

2) The simple form with vertical upper section leading to a rounded bottom, has a thicker wall after Phase I. The only example from Phase II (Figure 103m) has a fine medium fabric but polished surfaces. In Phase IIIIE and IIIL, there are examples with fine fabrics, rounded lips and interior iridescence, with exterior red slip (Figure 103n) or without, but they are not common (n=9). The form is

also found (n=3) in Phases IIIE and IIIL with fine medium or medium fabrics and walls up to 8.5 mm thick, with lips perhaps more often flattened, and with or without a low finish (Figure 103o-q).

3) Phases IIIE and IIIL have a small number (n=3 and 1 respectively) of bowls of fine fabric with upright upper sections that thicken towards rounded lips. Surface treatment is varied. One bowl (Figure 103r) is polished dark grey inside and out. Another (Figure 103s) has a low polish over red brown surfaces. The third (Figure 103t), dark red-slipped inside and out, is unusual for the iridescent band along the top of the interior. The fourth (Figure 103u), with low-polished 10R red surfaces, has the smallest of all diameters (120 mm) in the set.

4) In Phase IIIL, fine fabrics and interior iridescent paint are associated with bowls that may be more shallow (n=8; 3 have nicked lips; Figure 104a,b), or more upright (n=3; Figure 104c,d). There are several of intermediate curvature (Figure 104e). These later vessels commonly have the rim slightly bevelled, either just on the outside, or inside as well. On the exterior, there is usually no polish, though there may be red-slipping.

UNUSUAL DECORATION Four vessels (Figure 110c,n,o,r) of Phase IIIE have red-painted designs. A final Phase IIIE bowl (Figure 103v) is odd both for the flat-topped but bevel-edged lip and for its use of red paint over the lip and lower section of the interior, the interior rim being left undecorated. Two vessels (Figure 111i,j) from Phases IIIE and IIIL contexts have punched rims.

OBSERVATIONS This set accounts for 17.4% of serving bowls, with no significant variation in frequency through the sequence. Many sherds are too short to allow confidence in definition of overall form, and there is a general background of forms intermediate between

the extremes described. Furthermore, vessels of the set do not appear to have been as important quantitatively or qualitatively as those of composite forms. Nonetheless, differences in form, wall thickness, decoration and finish indicate change through time, and also correlate with similar and other changes found in the rest of the assemblage.

#### 5.2.2 Serving Bowl Bases and Flanges

The majority of bowls sat directly on their own curved or flattened bases. There were, however, three other means of support.

1) Hollow cylindrical legs, set roughly vertical around the outer edge of the lower section of the bowl, occur throughout the sequence. Other than those attached to two complete grave offerings, nineteen complete legs were recovered, four of them attached to rim sherds, with a further thirty incomplete fragments. Counting only one leg for each complete vessel, and counting a fragment as a whole leg, the distribution by phase is: 7, 8, 8 and 15. There were also ten sherds found with the site of leg attachment preserved, but not the leg itself.

All are of fine fabrics, except for one that is medium fine. No legs have slip or paint; neither are any polished, with the exception of one Phase II fragment that is smooth. Though they are securely associated only with vessels of Form Sets 1, 3A and 8, they may have been used with other forms.

Though numbers are small, there are some general tendencies observable through time.

Wall thickness stays constant, at around 3.5 to 5.0 mm. But lengths increase, the ranges for each phase being 29 to 40 mm, 44 to 48 mm, 38 to 50 mm and 40 to 90 mm. Then, whereas legs initially tend to widen from top to bottom (Figure 105a), by Phase IIIE and IIIL, all

legs are parallel-sided (Figure 105b) and somewhat narrower, with diameter ranges of 26 to 34 mm in Phase I, 13 to 15 mm in Phase II, and 10 to 13 mm in Phases IIIE and IIIL. Finally, whereas in Phases I-IIIE the bottom edge is often rounded or pointed - and in Phase I the foot may not even stand flat (Figure 90f) - by Phase IIIL edges are sharply cut and the bottom rests squarely set (Figure 99a).

2) There is just one complete bowl (Figure 102n), an imported vessel, that is supported by a ring base. But there are forty-three fragments of ring bases (9, 12, 10 and 12 for each of the phases). Fourteen have some of the vessel body attached. All these base fragments are proportionally narrower at their juncture with the body than are external flanges. They slant out and away from the vertical, sometimes with a slight flare. They may have ends rounded or flat.

The majority are of fine fabrics, though five are medium fine, two fine medium and one medium. Ring exteriors from Phase I, II and IIIE contexts are red-slipped and polished, save for two that are black and one that has neither slip nor polish, all three exceptions being from Phase IIIE. In Phase IIIL only four have red slip and polish, the remaining seven being simply fine-scraped or wiped.

The vertical measurements from ring top (exterior) to toe, range from 7 mm to over 40 mm. Diameters range from 160 to 200 mm in Phase I, through 130 to 250 mm and 120 to 180 mm in Phases II and IIIE, to 70 to 180 mm in Phase IIIL. Thickness at the juncture is from 6 mm upwards.

One example from Phase II (Figure 105c) is a fair example of the general shape and dimensions of the majority, although the vessel form is notably lacking in carination. But another from Phase II (Figure 105d) is exceptionally tall (28 mm). From Phase IIIE is a tall ring (34 mm) that also flares (Figure 105e).

In Phase IIIL, the tall, flaring ring is found again in three incomplete and unusual examples. One (Figure 105f) also has an odd medium fine fabric and an oddly matte polish over a very dark brown slip. The other two (Figure 105g,h) both have more complex exterior profiles and unpolished surfaces, while the latter, of medium fabric, has red paint at the top and the toe. These clearly belong to forms distinct from those of the earlier phases.

3) Concave bowl bases are found in Phase IIIL contexts. In addition to that of a larger, imported vessel (Figure 102o) of medium fabric, there were five examples, unattached to upper sections, all but one coming from rubbish pits.

These five, all of fine fabric, 4.5 to 6.0 mm thick, have polished interiors, three with iridescent paint (Figure 105i). One exterior has a low polish, and is likely to have been of an uncarinated vessel; but the rest are wiped, and perhaps more likely to have been off carinated bowls. Diameters of the interior convexity (or exterior concavity) measure from 30 to 50 mm.

The base with raised centre is also associated with iridescent bottles and jars of Phase IIIL.

4) Four solid conical feet were found (Figure 105j-m), two each from Phase IIIE and Phase IIIL contexts. They are of medium fine/fine medium fabrics, with red brown exteriors and black cores. They measure 8 to 32 mm in height, and 12 to 23 mm in width at the juncture with the bowl. Surfaces are wiped or scraped.

Although they might be residual, they differ from the Valdivia Polished Red tetrapod bowls reported by Meggers, Evans and Estrada (1965, 76, Figure 43a), in that they lack both slip and polish, and are not fine wares. Secondly, their absence from earlier contexts hints at a non-Valdivia origin. Beckwith (1996, 451-3, Figure

7.52) reports solid legs from the Late Late Formative Achallan assemblage, although they are larger than the Salango examples.

5) Some vessels carried external flanges. Only three instances are certain. One vessel each from Phases I and IIIE (Figures 94a, 105n) are both otherwise unexceptional for their contexts, supported by hollow legs; but they have a short, thick flange at the site of external carination. A Phase IIIL bowl, however, has its notched flange just below the rim (Figure 102k).

### 5.2.3 Designs on Iridescent Serving Bowls

Iridescent paint is the most commonly used medium for decorative design on fineware serving bowls, and is carried by 37.6% (n=288) of rim sherds from these vessels (Table 29). There is a notable increase in its frequency through time: from 17.0% (n=17) in Phase I and 18.8% (n=21) in Phase II, through 35.8% (n=88) in Phase IIIE, to 52.8% (n=162) in Phase IIIL. In Phase IIIL, however, while the frequency for layers is 45.5% (n=86), for rubbish pits it is 64.4% (n=76).

The substance of the paint and the firing methods used have been discussed elsewhere (Sonin 1977). Here, it is to be noted 1) that there is a range of strength of colour in the paint itself, from invisibility - what is seen is simply the lustre - to a definite, if perhaps light, 5R red; and 2) that in almost all cases, iridescent paint on bowls is found without further decoration of the surface. One uncarinated bowl of IIIE, however, has an incised pattern across the iridescent design (Figure 94h), and one early IIIL carinated bowl rim sherd has small appliqué pellets adjacent to the area of iridescent paint (Figure 91h). There are also three body sherds, all from IIIL contexts, that have patterns of line burnish on exteriors otherwise



simply wiped (Figures 108a. 109r). They are the only cases of exterior line burnish found in the assemblage.

Iridescent paint is mostly limited to the interior (Table 30), but sixteen rims have it on the exterior as well as the interior, while ten have it on the exterior only. Exterior iridescent paint appears for the first time with context 5117, a Phase IIIE layer; and there is one other case before Phase IIIL. Both rims also have iridescent paint on the interior. Iridescent paint on the exterior only is limited to Phase IIIL.

Backgrounds are usually smudged to dark or very dark grey browns. browns or red browns. But thirty rim interiors have unsmudged red slips under the iridescent paint: they are most frequent in Phase IIIE.

The finish generally given to painted surfaces is a standard or good polish, though there are very occasional instances of low or incomplete polish.

To define the elements, motifs and designs found within the assemblage, and to identify any possible correlations with time or vessel form, both the 288 rim sherds and the 307 body sherds with iridescent paint were reviewed. 256 rims had enough paint to allow classification of motif.

Most designs probably consisted of elements and motifs serially repeated around the bowl. However, overall design was in most cases impossible to describe with certainty, on account of two factors: 1) the rim sherds rarely extend much below the carination point (or the mid-point where uncarinated), so that there is no idea of how the lower body was treated: 2) they are neither, usually, wide enough to include much more than part of a motif and/or interval, so that the full extent of motif or motif-plus-interval is undefined. On

the other hand, there are many interesting individual, often unique, examples of design possibilities. All bands are finger-width (c12 mm) unless otherwise stated.

There are correlations between design components and their application through time. There are not enough secure data to make a very detailed classification, but the more certain variants of each motif can be shown, and this allows comparison of the behaviour of each of the main motifs.

Figures 106 and 107 show the major elements and motifs identified: all are drawn directly from actual sherds. In most cases, relevant sherds have already been shown in the context of Form Set descriptions. Here, a few other actual examples (Figures 108, 109) are given in order to substantiate the classification. Interiors are seen first, exteriors second.

A curvilinear reticulated design (Figure 106.1) is found once, on a very early bowl of Form Set 2A (Figure 93e). The design extends well down the body, and perhaps covered the entire vessel interior. While the portion along the rim could be read as a zig-zag or as a sequence of lower halves of the lozenges that form the main design, they may also be seen as a series of small V's comparable to and perhaps leading to those (Figure 106.2) of three rim sherds from Phase II and two from Phase IIIE.

The bowls of Phase II are of Form Sets 2A and 3A. In two cases, the V's are arranged as two series, the top points of the lower hanging from the bottoms of the upper (Figure 92b). The third vessel has a series of small V's detached from the lip and nested by larger V's, there being no contact between any of them (Figure 94c). In Phase IIIE, an early rim of Form Set 2A has the V's hanging from the lip, but independent of each other and with no lower series (Figure 108b);

while a later vessel is of Form Set 5A, and has the bases of the V's bedded in a horizontal band that covers the interior angle (Figure 97j).

The most common elements and motifs along the rim/upper body are rectilinear diagonals (84 rims; Figure 106.3) and the large V's and zig-zags (54 rims; Figure 106.5,6) produced by their combination. There are no secure examples of independent inverted V's. Many diagonals, registered as such, may well have been parts of V's, zigzags or more complex motifs. Diagonals are most popular in Phase II, and show a marked decline in Phase IIIL. All vessel forms are associated except those of Form Set 8.

Variations include diagonals ending at a horizontal band at the angle point, or crossing it (Figure 97d); diagonals branching below the end point at the lip (Figure 108c); and more complex arrangements (Figure 108d). Much of it is unclear, but some is apparently phase specific. For instance, multiple parallel diagonals of 4, 5 or 6 strokes (Figure 106.4) appear only in Phase IIIL carinated bowls (n=9; Figure 108e), although there is one body sherd from a Phase II context (Figure 108f) which has three diagonals crossing the angle point.

Independent V's are limited to one secure example (Figure 92e) from a Phase II Form Set 2A vessel.

Definite zig-zags are rarely found (n=10). Earlier examples are simple, running from lip to angle point, crossing the angle point, or being bound along the angle point by a horizontal band. But in Phase IIIE and particularly Phase IIIL, the designs are more complex, with a consequent potential for greater variation. Specific possibilities for these later designs are: 1) (Figure 106.7) a zig-zag that reaches the lip, with a large V nested within each of the V's

created by the zig-zag (Figure 104d); 2) (Figure 106.8) a zig-zag that reaches the base of the rim, with small V's at the intervals along the rim (Figure 93b) or with the small V's rising from the apical points of the zig-zag (Figure 95b); 3) (Figure 106.9) a shallow zig-zag along the rim, with two staggered, interlocking zig-zags (these latter are alternatively read as horizontal lozenges, or as a horizontal reticulation) following beneath it, and a horizontal band at the corner point (Figure 90m).

Triangles (Figure 106.10) are a late development of the zig-zag, found only in Phase IIIL rubbish pits on six rims and three body sherds. Five of the rims are of Form Set 8 bowls, and the sixth is of a very closely related Form Set 5B vessel. Here, then, there is the most specific and exclusive correlation between design motif and vessel form, time and context. Triangles, formed by diagonals between two horizontal bands, are found above (Figure 97n) and below (Figure 108g) the angle point. In the latter case, the sequence of triangles is matched below with pairs of nested loops that hang from the lower band, and above by vertical strokes up the upper body. One body sherd (Figure 108h) suggests nested triangles (Figure 106.11) beneath the angle point.

The joint use of diagonals and verticals (Figure 106.12) is very rare. A single Phase I bodysherd (Figure 108i) strongly suggests the combination in simple form. A late Phase IIIL carinated bowl (Figure 101k) has a long motif consisting (as a minimum) of a sequence of four vertical and four diagonal strokes that produce a central V linked, to the left to an N, and to the right, to a reversed N, all bounded beneath by a horizontal band along the interior angle.

Only slightly less rare are rims (n=4) with curvilinear diagonals or V's (Figure 106.13). Three are from Phase I Form Set 1

bowls, and all suggest parallel or nested strokes (Figure 90a). The fourth rim is from a Form Set 2A vessel found in a Phase IIIL rubbish pit (Figure 108j): whether this is a residual sherd or not is uncertain. There are also four body sherds (three from Phase I, the fourth perhaps residual in a IIIE context) with diverging curved bands suggesting other patterns (Figure 108k).

Undulating bands (Figure 106.14) are very rare (n=3), uncertain, and limited to IIIE rims (Figure 91e).

The majority of curved motifs involve loops, arcs or semi-circles that hang directly from the lip, or from a band along the lip, rim or corner point. All twelve rims are from Phase IIIL contexts, and are particularly associated with Form Set 7 (n=5) and Form Set 8 (n=4) bowls.

Two rims have single, independent and relatively widely spaced loops, with no horizontal banding (Figures 106.15, 109a,b). Two rims have single juxtaposed loops with horizontal bands (Figure 106.16): in one case (Figure 98g) with the loops hanging from one band around the lip, with the second band beneath; and in the other (Figure 98b) with the two bands on top, and the loops hanging from the lower.

Five rims have nested pairs of loops (Figure 106.17): direct from the lip and bounded by a band along the angle point (Figure 109c); direct from the lip and passing through the horizontal band at the angle point (Figures 109d, 99a - though here the upper sections of the loops are executed as separate curved strokes); or hanging from a horizontal band at the lip (Figure 98c), though this may have triple loops. The fifth rim (Figure 95f) has the loops very close to each other. A body sherd (Figure 109e) suggests inner and outer rows of nested loops separated by a band from which the inner row hangs.

One rim (Figure 109f) has single loops of double-band

thickness direct from the lip (Figure 106.18). Two rims (Figure 96m) have triple loops direct from the lip (Figure 106.19). Finally, there are two base sherds (Figure 105i), from late Phase IIIIE and Phase IIIL contexts, with centrally sited concentric circular bands (Figure 107a).

Horizontal bands without other elements (Figure 106.20-23) are found on twenty rims, none of them from Phase I or II contexts, only three from Phase IIIIE, and seventeen from Phase IIIL. (It is possible, however, that many of these sherds are misleading, and represent only sections of bowls whose total design did in fact involve other elements.) Only three small sherds have just a single band along the lip; eleven have just a single band along the corner point; four have a band at the lip and a second at the corner point (Figure 96a); and one has three (or more) double-width bands (Figure 98d). One bowl (Figure 109g) has a band along the angle point, with an interrupted band along the lip; while another (Figure 109h) has, merging with the band at the corner point, a second interrupted band (or series of extended ovals?) that reaches the lip.

Rectangular designs (Figure 106.24-27) are rare (n=7) and short-lived. They first appear in Phase IIIIE with two rims from layer 5117, and are represented in Phase IIIL by just one rim from a layer capping Phase IIIIE occupation. Five rims are of Form Set 5A bowls, and a sixth, of Form Set 1A, also has a lip with 5A exterior indentation (and the seventh is of Form Set 6): this represents the second strongest correlation found between any general design possibility, vessel form and time. Most of the angle points are missing, and none of the motifs are completely represented, but suggested variations include: nested pairs of wide U's hanging from the lip (Figure 97f); short U's around the rim, and below and staggered with them, inverted

U's or squares (Figure 97g); inverted nested U's or squares (Figure 109i); H's joining horizontal bands at lip and angle point (this is perhaps overinterpreted, but see Figure 97i). One early IIIL basal sherd (Figure 109j) indicates a central cross nesting right-angled elements in each quarter (Figure 107b).

Vertical strokes at the rim (Figure 106.28), alone or detached from other elements, reaching or detached from the lip, are mainly limited to Phase IIIL sherds (n=12), though there are three from later Phase IIIE that might also be relevant. One rim (Figure 109k) from a Form Set 4 bowl, and two body sherds, have three parallel strokes each up the upper body and down the lower from the angle point. Two or more strokes are also found on an uncarinated bowl with multiple steps down the interior (Figure 95d), the stroke apparently being reinitiated with each step. However, it is quite possible that in some if not all cases, the strokes at a lower point either bend or join other elements.

Oval spots (Figure 106.29,30) are found on only two rims, both of them a little doubtful; but seventeen body sherds amplify the sample. They are absent from Phase I, and the one sherd from a Phase II context derives from a layer interfacing with Phase IIIE occupation. Phases IIIE and IIIL each have one rim and eight body sherds. There are broadly two forms of application: first, clusters of irregularly spaced and overlapping spots (Figure 109l); second, regularly spaced ovals placed between pairs of bands, either straight (Figure 109n), or curved (Figure 109o), which sees an elaboration of the double loop. Phase IIIL rubbish pits have only one doubtful rim sherd of relevance.

Circular spots (Figure 106.31) were identified on only two sherds of one bowl (Figure 109m), of Form Set 2A and an early Phase

IIIE context. The motif and overall design are unclear.

The final interior motif (Figure 106.32) of any clarity represented more than once (on one rim and three body sherds, all from Phase IIIL layers), involves pairs of widely spaced, though not parallel, bands that cross the bowl interior and are each linked internally by a series of closely spaced perpendicular or oblique bars (Figure 104e). More complex, but unclear designs involving loops and bands are found on four body sherds from late Phase IIIE and Phase IIIL contexts (e.g. Figure 109p,r).

Designs on the exterior (Figure 106.33-36), as well as being few, are relatively simple. They are not found to match or follow the rhythm of interior designs. Paired elements, in particular bands ( $n=16$ ), are common, whether horizontal (Figure 96l), diagonal (Figure 108g), or vertical (Figure 98e). Very often, the concavity of the exterior rim/upper body results in a vertical stroke with an hourglass-like outline rather than two parallel sides (Figure 98a). There is one example of a V or a zig-zag (Figure 109q). Pertinent Form Sets are 6 ( $n=1$ ), 8 ( $n=14$ ), 9A ( $n=3$ ), 9B ( $n=4$ ), 10 ( $n=4$ ) and 11 ( $n=1$ ).

Overall, then, the main motifs consist of diagonals, V's and zigzags. There is increased complexity and variation from late Phase IIIE onwards. Oval spots are very rare, and of Phases IIIE and IIIL. There is a sole example from early Phase IIIE of circular spots. Rectangular motifs are a late Phase IIIE phenomenon. Loops and triangles are linked to Phase IIIL forms. Also specific to Phase IIIL are: the use of double thickness bands; and, with two late Phase IIIE exceptions, the application of iridescent paint to the exterior. Finally, analysis of motifs and designs reinforces the identification of the form sets as classificatory units of chronological, contextual



and thus cultural significance.

#### 5.2.4 Red-painted Serving Bowls

##### 5.2.4.1 Bowls with red-banded interiors

Rims: 7; Body Sherds: 7

PHASE II An upper body sherd (Figure 110a) from a Form Set 1 bowl has 7.5R paint that suggests irregular horizontal and vertical finger-width banding.

One small body sherd (Figure 110b) has an unusual 5YR brown slip over interior and exterior, both with standard polish. The interior has a clearly defined straight left edge to a vertical band.

PHASE IIIE Six rim sherds from five vessels, and five body sherds have fine fabrics highly fired to produce unusual light red, red yellow or pink bodies. The bowl forms also tend to be unusual. The bands are mostly a little irregular, but finishes are all very even.

There is a simple unrestricted bowl (Figure 110c) with a tapered, upright rim and rounded lip. It has 7.5R red paint, on 5YR red yellow surfaces, around the exterior and interior rim, with loops hanging down the upper body interior. While the exterior rim and interior lip are polished, the interior body and exterior sub-rim are both very smooth. For its combination of form, design and finish, this vessel is unique among fine bowls. Its design is matched in the sample only by Phase IIIL Widebowl interiors (Figure 113d). Its limited polish is also suggestive of Phase IIIL tendencies.

Two sherds (Figure 110d) are off a single Form Set 4 bowl, distinguished by a slight pinching of the outer rim and a slight convexity below the centre point of the interior upper body. Under a high polish, smaller areas of reddish yellow background are surrounded by irregular bands or patches of 7.5R red paint. The exterior upper

body is red-slipped and polished. the lower body a wiped pink grey.

Two Form Set 5A bowls (Figure 110e,f) have upper body exteriors red-slipped and polished. The interiors have irregular bands or patches of red paint, on pink and yellowish red backgrounds, and are polished. A Form Set 10H rim (Figure 110g) has a background colour of 7.5YR brown.

A third Form Set 5A rim (Figure 110h) has a very marked upward thickening of the rim/upper body and a consequently wide flattened lip. Its interior background is an unusual 2.5YR very dusky red, the exterior a 10R weak red. The horizontal and diagonal red bands of interior red paint are also unusually straight.

PHASE IIIL A Form Set 3 stepped rim (Figure 110i) has a black fine medium fabric, low polish, uneven contours and irregular finger-width stripes of paint down the interior from the lip. The exterior upper body has a red slip which reaches over to the interior lip.

#### 5.2.4.2 Bowls with red-banded exteriors

Rims: 4

PHASE III Two rims have two or more horizontal bands around the exterior. One (Figure 110j) is a restricted vessel of late Phase IIIE, unusually straight down the upper section. Both interior and exterior surfaces are a polished 7.5YR strong brown. There is one band, 17 mm wide, around the rim; and, after an interval of 1.5 mm, a second, which extends 16 mm down to the edge of the sherd.

The second rim (Figure 110k), of early Phase IIIL, is an unusual composite form: its upper body is biconvex, steeply everted, but with a straight axis, and 35 to 37 mm from rounded, undulating lip to an emphasised external angle. The interior is a polished 7.5R red

slip. The exterior, incompletely polished, has a 7.5YR pink background, with three slightly irregular bands of 7.5R red paint, up to 11 mm wide, extending from the lip to the angle point. Each of these vessels, for form and background colour, as well as the type of decoration, suggests an exotic origin.

There are two rims of otherwise unexceptionally simple, slightly restricted bowls that have bands around the exterior rim. From a late Phase IIIIE context, one (Figure 110l) has a 5YR yellowish red interior and exterior, the one only lightly, the other more firmly polished. The band, of 10R dusky red, is 13 mm wide, and extends round to the interior lip. The other (Figure 110m) has polished 5YR reddish brown interior and exterior. The exterior rim band is 15 mm wide.

#### 5.2.4.3 Bowls with red-spot paint

Rims: 4; Body Sherds: 17

PHASE II One simple unrestricted bowl (Figure 110n) has the lip exterior rounded and the lip interior bevelled. Main surfaces are polished 7.5YR brown/strong brown. The lip is painted red, and small spots of red paint run diagonally across the upper body.

PHASE IIIIE The only other vessel (Figure 110o.p) with a comparable form is also red-spotted, and comes from the interface between Phases II and III. Main surfaces are around 10YR light yellowish brown, well polished on the interior, less well on the exterior. The lip is painted red, and there is unevenly distributed red paint over the main interior, probably originally applied as spots which were subsequently blurred and streaked by the action of polishing.

The body sherd (Figure 110q) of another bowl has red paint in very fine lines that may represent a similar blurring of small spots

of paint during the production of a good polish. The exterior, however, is not finished beyond a fine wipe.

Another unusual form (Figure 110r) has a thickened upper section rising vertically to a flattened lip. Its polished interior and exterior surfaces are 5YR yellowish red. Decoration consists of red paint along the lip, and spots of red on the interior body.

One Phase II body sherd (Figure 110s) has the combination of small red spots and line burnishing otherwise associated with Early Tradition Widebowls (Figure 112c). However, the exterior surface has a weak red/dark brown slip, with an incomplete polish; and the profile of the sherd does not fit comfortably with the Widebowl form.

Of the remaining fourteen sherds, one is from a late Phase I context; five each are from Phases II and IIIE; and three come from Phase IIIL. Thicknesses range mostly from 3.0 to 5.0 mm. There is no sign of symmetry or repeated, specific patterning in the distribution of the paint. Smaller spots may be associated with larger patches (Figure 110t,u). Interior surfaces tend to be light in colour, with standard or good polish. Two, however, of the Phase IIIL sherds, probably off the same vessel (Figure 110v) have interiors lacking polish, but with a good wipe instead.

#### 5.2.4.4 Observations

Simple red paint is rarely found (2.0%) as a design medium for serving bowls (Tables 29 and 31).

Vessels with red-banded interiors, while generally comparable with the main contemporary composite forms, have designs that do not match those of the iridescent tradition. Those of late Phase IIIE form a small but coherent subassemblage. The red-banded exteriors are all of late Phase IIIE or early Phase IIIL, but are not obviously

comparable with any main contemporary forms. Nor are the designs found on any contemporary iridescent bowls. The bowls with red-spot paint are all of unusual forms with rather lighter backgrounds than are normal. Their few numbers cluster around Phases II and IIIE.

There are a further nine rim sherds with red painting of the lip as sole decoration (n=4. 3 and 2 for Phases I, II and IIIL). The vessels are all simple, whether restricted or unrestricted (see Bowl Form Sets 9C and 11).

#### 5.2.5 Miscellaneous Decorated Serving Bowls

##### 5.2.5.1 Bowls with exterior incision

Rims: 5

PHASE II A Form Set 1 rim (Figure 111a) has a well polished black interior slip, and a polished exterior red slip. Just below the exterior lip is a 60 mm long incision, less than 1 mm wide.

An odd, unrestricted form, of medium fabric, has a short everted rim (Figure 111b). The interior red slip is polished. The slip carries over to the bottom outside of the lip, but the polish stops at the point of the lip. The exterior is scraped, but is decorated with 1 mm wide incised lines, perhaps in a cross-hatched design.

PHASE IIIE A bowl with a wavy rim (Figure 111c) has a well polished, very dark brown/black interior, and a polished exterior red slip. Three fine incised lines run along the exterior, 4 to 5 mm apart.

PHASE IIIL A bowl with simple rim (Figure 111d) has a polished red slip over both surfaces. The exterior carries a wide (2.5 to 4.0 mm) V-shaped incision.

A restricted vessel (Figure 111e) with an unusual, slightly

bulbous rim, has polished red paint around the lip. Surfaces are otherwise wiped and brown - although there is the hint of a cream slip over the exterior. The exterior is decorated with zig-zag incision, up to 1 mm wide.

**OBSERVATIONS** Complex design appears on only two of the sherds, both of which are also of exotic forms. The marks on the other three rims may or may not be deliberate design elements.

#### 5.2.5.2 Bowls with interior incision

Rims: 1; Body Sherds: 3

**PHASE II** A body sherd (Figure 111f) has a well polished black interior, across which is a single fine incised line.

**PHASE IIIE** Another body sherd (Figure 111g) with polished red exterior, but with an interior that is an unusual light brown, has the interior crossed by a straight incised line, 0.75 mm wide.

A Form Set 3C bowl (Figure 94h) has a design of narrow (0.25 mm) incised lines over its iridescent paint.

**PHASE IIIL** A body sherd (Figure 111h) of medium fine fabric with many small quartz-like crystals, has 5YR red brown surfaces, the interior well polished, the exterior less so. The interior is decorated with a carefully executed lattice of very fine incised lines. Fabric, surface colour and finish are all unusual.

**OBSERVATIONS** Again, the one sherd with complex design is clearly an import.

#### 5.2.5.3 Bowls with punched rims

Complete Vessels: 1; Rims: 1

**PHASE IIIE** An overall simple and unrestricted vessel rim (Figure 111i) has a slightly unusual thickening towards the rounded

lip. The medium fine fabric is odd, containing small black grit. Both surfaces are covered with a 7.5R red slip, the interior with standard polish, the exterior with incomplete polish. At the lip, there is a semicircular impression (26 mm wide and 11 mm deep) that has the clay displaced 4 mm inwards.

PHASE IIIL A unique bowl (Figure 111j) has an overall simple, unrestricted profile, and a lip beaded on the exterior. Maximum thickness is at the base. Over a black body, the surfaces are slipped with a 5R red slip. The interior has a good smooth finish, while the exterior is perhaps a little more lustrous. The final effect is streaky, either because the slip was thin, or because of the effect of the smoothing, or both. There is a single circular impression or reversed boss (13 mm diameter) just below the lip, encroaching slightly over the beading, and displacing the clay both inwards and slightly upwards, so that the lip is not quite horizontal.

OBSERVATIONS Both examples are likely to have been imported. Beckwith (1996, 141f., Figure 5.14) comments on and illustrates a bossed rim from 141C which has smudged surfaces.

#### 5.2.5.4 Bowls with line burnished interiors

Rims: 1; Body Sherds: 1

PHASE IIIE A rim (Figure 111k), slightly incurving, with a flattened lip, has the interior a 2.5YR red, the exterior dark brown. The main surfaces are wiped (the interior perhaps smoothed), and the lip has a low polish. There is a single diagonal burnished stroke (1 mm wide) running to the lip.

The angle point of an unrestricted bowl (Figure 111l) has the interior a wiped grey, the exterior upper body a polished dark brown, and the lower body grey and wiped. The interior has wide line

burnishing, with a 3 mm stroke along the angle, and 1.5 to 2.0 mm diagonals from that up the upper body, producing a roughly right-angled lattice.

**OBSERVATIONS** Line burnishing over black or red surfaces is a well documented decorative technique for later Late Formative and early Regional Development assemblages from Manta (Stirling and Stirling 1963, 16) to La Libertad (Simmons 1970, 319-324). Those shown here, however, appear to have thicker lines than the others, and are earlier than one might have expected.

### 5.3 WIDEBOWLS

#### 5.3.1 Early Tradition Widebowls

Rims: 2; Body Sherds: 6

**FABRIC** Textures are medium fine or fine medium, with brown or red brown interior surfaces, brown or dark brown exteriors, and black cores.

**FORM** The two rims are of unrestricted vessels. Their walls rise steeply with no modification of the interior surface and rim. One (Figure 112a) has a rim exterior that is rounded and emphasized by a waist 20 mm below the lip. The lip itself presents a slight, rounded protruberance over the interior. The other (Figure 112b) has a sharp, almost right-angled carination, from which the rim rises unevenly to a pointed lip.

**DIMENSIONS** Rim diameters are 420 mm and 320 to 400 mm, and rim thicknesses are 8 mm.

**DECORATION AND FINISH** The interior has line burnish, more or less horizontal, over small spots of red paint (Figure 112c), though the paint does not extend to the rim. On the exterior, the rim might be lightly polished or scraped, while the body might be smooth, wiped



or scraped.

OBSERVATIONS The few sherds are from layers of Phases I (n=4), II (n=3), and IIIE (n=1).

### 5.3.2 Main Tradition Widebowls

Rims: 126 (10,22,32,62); Body Sherds: 89

FABRIC Medium fine (n=45, 35.7%) and fine medium (n=50, 39.7%) textures dominate, closely followed by medium textures (n=27, 21.4%). There may be a slight tendency to increasing coarseness through time. Firing generally produced a buff or red brown surface, with cores grey, dark grey or black. Some fabrics are unusual. The relevant sherds in each case have abnormal decorative attributes. These imports are discussed below.

FORM The vessels are generally characterized by a wide base or lower section, and a high carination, sharp or rounded, that introduces a short, inverted upper section or rim. Depending on the angle of the carination and the slope of the lower wall, the vessel may be unrestricted or restricted (but never by much more than a 10 mm).

There is an overall, background trend in rim form, which sees the replacement of 1) a shorter (15 to 20 mm) subtriangular rim, thicker than the lower wall and with a sharp exterior angle (Figure 112d), by 2) a longer rim (up to 30 mm), with a gradual curve from lower section to upper, a rim thicker than the lower section, but with sides tending to be parallel (Figure 112e). But there is considerable variation, particularly in Phases I-IIIE. Thickening of the rim, for example, does not always occur. (Figure 112f,g); or the rim may be very reduced (Figure 112h,i).

The lip is usually round and simple, but may be squared

(n=6; Figure 112j-1), or inverted (n=4; Figure 112m,n). The base of the vessel can be assumed to have been slightly rounded, the lower body wall rising through a moderate or steep slope to the upper section.

**DIMENSIONS** Rim diameters vary for the most part between 200 and 420 mm, with the radius at the maximum point up to about 10 mm more. However, there are three smaller diameters (180 mm, 130 mm and 120 mm) and three greater (430 mm, 440 mm and 580 mm).

Upper body wall/rim thicknesses range from 4.5 to 14.5 mm. There is no correlation with diameter. Minimum lower body wall thicknesses range from 2.5 to 8.5 mm.

**DECORATION** The bowls have five fields, each of them treated separately: 1) the lower body of the interior; 2) the upper body/rim of the interior; 3) the lip; 4) the exterior rim or upper body; 5) the lower body of the exterior. The lip was variously treated as an extension of the outer rim, as the top of the interior rim, or as an independent zone.

A wash or self-slip was usually applied to the interior surfaces and exterior rim. Beneath this wash, the interior rim was often marked with closely set, very fine grooves, produced by some sort of shaping tool. The exterior lower body was scraped, creating a distinctive pitted surface, unique to this vessel category. There was considerable variation in quality of manufacture, with a general trend to greater and more common regularity in Phase IIIL.

All decoration was through the application of red paint to the exterior rim, the lip and/or one or other or both of the interior fields. If painted, the exterior rim was decorated with a continuous horizontal band that did not always reach the angle point. Interior surfaces carried more complex designs.

Twenty-four rims (19.0%) were unpainted (Table 35). Twenty-three (18.3%) had paint only on the exterior rim. Thirty-three (26.2%) had paint overlapping from the exterior rim onto the top of the interior rim, creating a thin band along the interior lip. Forty-six rims (36.5%) carried paint on the interior surface below the lip.

The sample size is small, but in Phases I and II, 30.0% (n=3) and 31.8% (n=7) of rims were completely unpainted, and 30.0% (n=3) and 22.7% (n=5) had paint only on the exterior rim. For Phases IIIE and IIIL, the figures are reduced to 15.6% (n=5) and 14.5% (n=9) without any paint; and 15.6% (n=5) and 16.1% (n=10) with paint only on the exterior rim. Decoration, then, particularly of the interior, became more prevalent in Phase III, and, as we shall see, more varied in Phase IIIL.

Paint was applied to the interior in two main ways. Small spots were flicked or dropped onto the surface from a brush (Figures 112d, 113a-c); or bands, with obvious design, were made with the end of the finger (Figures 112e, 113d-f). In addition, there are vessels with paint applied as a slip over the whole body (Figure 113g,h), or only over the lower body (Figure 113i-k); as irregular bands of paint with no clear design (Figure 114a-c); and as extensive but discontinuous and irregular areas of paint (Figure 114d,e).

The small spots maintain the method of the Early Tradition. They were applied more intensely over the lower section of the vessel, but were not excluded from the upper. The sixteen rim sherds so treated occur throughout the sequence (n = 1, 2, 5 and 7 for each phase).

The finger-applied bands occur in Phase IIIL (fifteen rims), though a single rim and a single body sherd were excavated with Phase

II and IIIIE layers. Designs fall into two groups. More commonly, the paint is found on rim sherds (n=15) as a series of strokes down the rim/upper body (Figure 113d-f). The strokes may form a series of separate elements or may be linked in groups of two or three. They may also be either attached to a thin band at the lip, without such a band, or slightly separate from the band. They are limited to the upper body, with no sign of complementary design on the lower body (though it is possible that the irregular bands of Phase IIIL decorated body sherds belong with this group.)

Second, there are designs that are found only on the lower body. There are just three body sherds (Figure 114f-h), and one rim sherd (Figure 114i). On the rim sherd, upper body decoration was limited to a thin band along the lip. The elements on bodies were: straight bands; extended ovals; extended ovals plus spots; and curved, interconnecting bands. Each of these sherds, however, has an unusual fabric, and they were clearly all imported. Stirling and Stirling (1963, 9, Plate 8a, second row especially) describe and illustrate Red on Buff bowls from Tarqui that match the Salango examples well.

Irregular bands are absent from Phases I and II, occur rarely on Phase IIIIE body sherds, are most common of Phase IIIL decorated body sherd motifs, and on rims (n=4) are found only in Phase IIIL. Slipped and part-slipped interiors are also limited to Phases IIIIE and IIIL.

Discontinuous patches of paint, mostly represented by body sherds, do not favour any one phase, and seem to represent a decorative style parallel with the small spots.

The lower exterior body was never painted.

FINISH Finishes applied to the exterior rim and interior surfaces suggest a break between Phases I-IIIIE and those of Phase

IIIL. On the exterior rim (Table 35), while 80.0% (n=8), 86.4% (n=19) and 87.5% (n=28) of rims of the earlier phases carry polish, in Phase IIIL the figure is reduced to 25.8% (n=16). In that phase, however, there is also a difference in frequency of application of polish to the exterior rim between layers (42.4%, n=14) and rubbish pits (6.9%, n=2).

On the interior, upper and lower body commonly received different treatment, any post-paint finish being normally limited to the lower surface. But the chronological trend, from polish to no polish, is the same as that of the exterior rims. In particular, it is notable that of the Phase IIIL vessel interiors decorated by finger, only one rim sherd had any sign of post-paint treatment, and that was not quite to a polish.

OBSERVATIONS Stability of general form suggests a very specific function of continuing importance. Fabric of medium fine to medium textures, restriction of decoration to the exterior upper body and interior surfaces, and common blackening of the exterior lower body indicate intended or actual use over fire, and that use is most likely to have been culinary. But it is notable that the interior surfaces should have been painted, and in the early phases polished. The sherds of the four imported vessels with unusual finger-painted designs have been mentioned. Another rim (Figure 114j), though of a standard form, has an unusual fabric which it shares with those of two other odd bowls of a different category (Figures 115g, 116f); and all three of these rims came from the same early Phase IIIL layer.

There are two other odd vessels from Phase IIIL. One (Figure 114k) has the lip drawn outwards so as to form a rim with an interior bevel. The other (Figure 114l) has an interior rim distinguished from the lower body by a sharp angle.

Widebowls are slightly more common (at 19.3%) in Phase IIIL rubbish pits than in layers of all phases up to and including Phase IIIL (Table 27).

#### 5.4 WIDE-WALLED BOWLS

Rims: 16 (0.3,5,8)

All these vessels have thick walls (mostly between 8 and 10 mm), odd forms, and often large diameters (up to 470 mm). Fabrics are medium fine or fine medium unless otherwise stated.

1) There are seven bowls with steep or vertical walls (see Simmons (1970, 200, Figure 44a) for comparable examples of his Engoroy Plain).

From Phase II, there are two: one (Figure 115a) has a polished rim, perhaps with red paint - the body is otherwise just scraped on the interior and wiped on the exterior; the other (Figure 115b) is smoothed inside and out.

From Phase IIIE, one (Figure 115c) is smoothed inside and out, and another (Figure 115d) has its interior wiped and exterior scraped. Of two of fine fabric, one (Figure 115e) has both surfaces smoothed; while the other (Figure 115f) has a polished exterior red slip that continues over to the interior lip, below which the surface is probably just wiped.

The thickest rim (14.5 mm), comes from Phase IIIL. The bowl (Figure 115g) has a light red slip over its interior and exterior surfaces, but without polish.

2) There are then five rims from shallow or moderately sloped bowls (cf. Simmons (1970, 198-201, Figures 42, 43a, 45) and Beckwith (1996, 254, Figure 6.10, 396, Figure 7.6) for vessels of similar shape and thickness).

From Phase IIIE contexts are two with wiped surfaces (Figure 116a,b), the first being of fine fabric.

From Phase IIIL, one (Figure 116c) has unpolished red paint around both sides of the rim, with its surfaces roughly wiped. There is one very worn rim (Figure 116d). The last (Figure 116e) has both surfaces wiped.

3) From Phase IIIL, there are four vessels with everted lips (cf. Simmons (1970. 404. Figure 102) for comparable forms, though of his Palmar Red: Black-on-Red Finger Painted).

One (Figure 116f). is red-slipped inside and out, but very worn, so that finish is uncertain. The second (Figure 116g), of medium fabric. has an interior with weak red slip under a low polish, and an exterior, unpolished, with a very pale brown slip. The third (Figure 116h). also of medium fabric. has red slip over the interior and down the exterior to just below the rim. then an unpainted light brown body; neither surface is polished. The fourth (Figure 116i) has a flat rim. painted dusky red under a polish that continues down the interior: the exterior is scraped and unpainted.

OBSERVATIONS These vessels are a very small percentage (1.7%) of all bowls for the sequence (Table 27). but they are diverse in treatment and form. None of the sherds were found in rubbish pits. Two of the sherds (Figures 115g. 116f). along with that of a Widebowl (Figure 114j). share the same distinct fabric and firing, to 5YR yellow red/reddish brown. and all come from the same early Phase IIIL layer.

## 5.5 MINIATURE BOWLS

Rims: 3 (0,2,0,1)

Two very small bowls came from Phase II layers. One (Figure

116j), with a diameter of 25 mm, has a well shaped form with a rounded lip. The other, however, of medium fine fabric, with a diameter of 40 mm, is crude and irregular, though of the same general shape as the former. Neither was polished.

A slightly bigger bowl (Figure 116k) came from a Phase IIIL rubbish pit. Of fine fabric, and with a diameter of 90 mm, it has a fine, pinched lip, and a low polish inside and out, over black and very dark brown surfaces.

## 5.6 BOTTLES AND JARS

### 5.6.1 Bottles

Complete Vessels: 3; Spout Rims: 4; Handles: 1;

Body Sherds: 1; Large Fragments: 1

All fabrics are fine.

PHASE I A single, incomplete handle (Figure 117a) off a simple bottle was recovered from the backfill of a post-pipe. The smudge and polish of the surface suggest that iridescent paint was used. It is 38 mm tall, and 20 mm wide at the base.

PHASE II In the midden outside the platform was part of a very fine spout rim (Figure 117b). An exotic origin is suggested by: an unusual yellow brown fabric and surface; a small rim diameter (20 mm); a very thin spout wall (1.5 mm); an absence of smudge; a stepped underside to the everted lip; and a high polish. Indeed, the polish suggests Chorrera High Polish (Simmons 1970, 152ff.), though Simmons limits his type to bowls.

Also from the midden was a residual fragment of a Machalilla double-spout-and-bridge bottle (Lathrap, Collier and Chandra 1975, Figure 34).



PHASE IIIE One spout (Figure 117c) has the rim evert simply from a vertical wall 3.5 mm thick. The exterior is dark brown, with a good polish. Its smudge indicates the probable application of iridescent paint over the body.

There was also the rim of a Machalilla stirrup spout bottle (Lathrap, Collier and Chandra *ibid.*).

PHASE IIIL Two complete single-chambered strap handle bottles (Figures 118, 119) formed part of the burial goods of two separate graves. Both have pastes fired to brown/grey/brown. Though there are differences, they are very similar to each other, with squat chambers, well defined though not quite angled carinations, and stepped upper sections. Their dimensions are also close, with body diameters of 154 mm and 152 mm, body heights of 75 mm and 86 mm, spout heights of 56 mm and 55 mm, and overall heights of 131 mm and 141 mm. Spout rims are 26 mm wide, and spout walls 3.5 to 4 mm thick.

Both are decorated with iridescent paint set against a smudged, dark grey brown background, under an unexceptional polish. The first has four pairs of parallel, finger-width arcs around the main body of the chamber. The lower arcs join, to form a single, sinuous band. Between and overlapping each of the upper arcs and lower band, are seven circular spots, up to 18 mm wide. This main design is aligned with the axis of handle and spout. The raised upper section has two pairs of arcs, each with four spots, either side of the handle, while opposite the handle, a single arc extends between them. The composite element of paired arcs with connecting spots is one that also occurs on jars.

The second bottle has a unique design. There are twenty straight bands down its sides, each with a separate stroke for the side of the upper platform, the step, and shoulder of the chamber. On

the top of the platform. there are six arcs around the outer edge, with a band around the base of the spout, paint then rising 5 mm up the side of the spout.

There is one zoomorphic bottle (Figure 120), also from a set of grave goods. It possibly represents a dog. It has a barrel chamber for torso, four short hollow legs with flat, unmodelled feet, and a stubby solid tail. The spout sits over its rump, slightly off-centre, with a strap handle projecting forward to a point just behind the neck. The head contains a single whistle. but with three finger holes - one at the back of the top. and one in each cheek. Details of the head are shown with appliqué and incision.

Dimensions are as follows: body length: 159 mm; overall length: 184 mm; body diameter: 56 mm; spout height: 55 mm; spout rim diameter: 22 mm; vessel height: 144 mm.

Most of the bottle has an unusual grey brown or light brownish grey slip (2.5Y 5/2 - 10YR 6/2), with an uneven polish. The feet have light red paint (7.5R 6/8) rising up the legs. The chest, neck and throat are painted yellow (stronger than 10YR 8/8). And the head is an unpolished brown (7.5YR 5/2).

Lathrap, Collier and Chandra (1975, 23-25, Figure 7) show a Chorrera example of a bottle representing a hairless dog. The Salango bottle is of the genre, but of less sophisticated execution. The use of incision to mark off separate painted and unpainted fields is not common at this stage in Salango, but appears on two other bottles of the phase (see below). with probable origin around Salaite; and it seems likely that a similar source, or one more local, could be attributed in this case also.

A single body sherd (Figure 117d) from a rubbish pit represents a tradition which, on available evidence, centred around

Salaite. Lathrap, Collier and Chandra (1975, 57, Figure 79) show a bottle with spout attached via handle to an anthropomorphic figure. The bottle chamber carries three fields separated by wide incised lines. The central field has three flat appliqué nubbins around the figure.

The sherd terminates with a section of the aperture into which the figurine was inserted, and includes part of each of the three fields, with one smooth, brown nubbin. The inner field carries weak red paint, but no polish; the middle field, also lacking polish, is brown, but with a hint of yellow; the outer field is brown, polished, and with a suggestion of iridescent paint. The piece is extremely well crafted, and the paste fired to red.

Simmons (1970, 451, Figure 119) also illustrates several fragments of his Guangala Sombre: Iridescent Variety, with Incision and Appliqué Buttons, that are of vessels of this sort, and Zevallos (1995, Figure 51d) shows a closely related idea.

Also from a rubbish pit are the remains of another exotic form (Figure 117e). The vessel was double chambered, with a squared connecting tube and strap handle. One chamber's diameter was about 110 mm, with a wall thickness of 4 mm. The tube survives to 100 mm long, with height and diameter of about 32 mm. The handle has a surviving width of 40 mm, and a thickness of 11.5 mm.

The surface is differentiated by three combinations of paint and finish: the main body of the chamber, the handle and the sides of the tube are a polished very dark brown, with bands of iridescent paint running from side to side over the chamber and handle; the top and bottom of the tube, and the base of the chamber, are unpolished grey; while around the shoulder of the chamber, and separated from the main area of smudge and iridescent paint by a fine incised line, is

unpolished green paint.

Gartelmann (1986, 238) has a triple bottle from Estero that also appears to have iridescent paint bands across the connecting tube and an unslipped, unpolished grey underside. Adoum, Holm and Valdez (1989, 119, Figure 23) show a similar double bottle. These examples, however, appear to differ in that post-fire and iridescent paint are applied to separate elements of the vessels, while the Salango piece has post-fire and iridescent paint on the same chamber.

**OBSERVATIONS** The main local tradition of bottle manufacture involved smudged surfaces, iridescent paint and an unexceptional polish. At least half of the bottles found were imported. However, the distance travelled to Salango was not necessarily great. If Salaite was one late source, only 30 km is involved; and none of the later material suggest the need to look much further for place of origin.

Regarding change and variation within the main tradition, little can be noted beyond the smaller size of the Phase I handle compared with those of Phase IIIL, and the slightly less everted rim of the Phase IIIE spout.

#### 5.6.2 Iridescent Jars

Complete Vessels: 2; Rims: 20; Necks: 15; Body Sherds: 24

Fabrics are fine, unless otherwise indicated, and mostly brown or dark brown on the exterior and interior, with cores grey or black.

**PHASE I** A large, thick-walled (5 to 6 mm) vessel with a body diameter of over 150 mm, is represented by a single sherd (Figure 121a). Paint is applied in straight, parallel bands, a band's width apart, which run diagonally. The fabric is soft and of fine medium texture.

Two incomplete rims of an upright form with polished interiors. may derive from iridescent vessels. One (Figure 121b) is of fine medium fabric, of 40 mm diameter, and has a black surface. The other (Figure 121c) is of medium fine texture, of 60 mm diameter, and has a very dark brown surface.

There are two well polished sherds. One has iridescent paint on a very dark brown background. but no obvious design. The other (Figure 121d) carries iridescent paint in zones marked off from the black background by fine engraved lines. The general design suggested is of a circular band around the neck. with straight-edged bands or blocks radiating down the body. Wall thickness is 3.0 to 4.5 mm. This seems to be an example of Chorrera Incised (Meggers, Evans and Estrada 1965. 121f.; Simmons 1970. 154ff.; Evans and Meggers 1982, 122). in which case it is probably residual.

PHASE II From early deposits. two sherds (Figure 121e,f) have good polish and thicknesses of 3 to 4 mm; while a third (Figure 121g) is exceptional for its high polish and very thin wall (1.5 to 2.5 mm). One body sherd (Figure 121j) has the wall thickness. 5 to 6 mm. of the large Phase I vessel. but with a fine fabric.

From a late deposit are two shoulders without necks, one (Figure 121h) more rounded than the other (Figure 121i). both with a standard polish, and they also clearly come from smallish jars - i.e. with a body diameter less than 200 mm.

One of the early sherds has spots. the rest all have straight-sided elements. either bands or Vs.

PHASE III There are three vessels with standard polish, black or very dark brown backgrounds and fine fabrics. represented by sherds offering good ideas of the upper body. One very rounded shoulder (Figure 121k) has marked thickening before the neck, and

comes from a small, globular vessel. Another (Figure 121l) is less rounded, with an even interior contour, and a rim that everts directly from the neck. The orifice diameter is 110 mm, and the body diameter must be about 180 mm.

The only complete rim sherd with body attached (Figure 121m) is of a neckless jar. The fabric is unusually sandy, but does not suggest foreign origin. From a steep, rather straight and thick (8 mm) shoulder, the short and thinner (4 mm) rim rises vertically, offering an orifice diameter of 102 mm, with a probable body diameter of about 200 mm.

A single incomplete rim (Figure 121n) of very fine fabric and good polish, is of the upright variety, and has a diameter of 70 mm. Also with good polish are two body sherds (Figure 121o,p).

Designs in each case are far from clear, but there is increased complexity over Phases I and II. Curved bands become present.

PHASE IIIL Form 1 is a large jar. The largest rim (Figure 122a) is 40 mm tall, with a diameter of 150 mm, and a thickness of 7 mm. It has unclear iridescent paint on the exterior shoulder, and on the interior down to the neck. The other rims (Figure 122b,c) are smaller and less everted, and their interiors, though smudged and polished, lack paint.

The body sherds are of slightly squat chambers, with shallow sloped shoulders. One (Figure 122d) is 2.5 to 7 mm thick, and indicates a body diameter of 380 mm. Under a standard polish, against a very dark brown background, the painted motif is of a band of three fingers' width that undulates around the upper body, crossing over the mid-line to make its lower bends.

The second body sherd (Figure 122e) gives a body diameter of

300 mm. It has a good polish, and a design on black that involves pairs of parallel, curving bands, with finger spots between the bands of each pair. The third (Figure 122f), also well polished and black, has three concentric bands around the shoulder, and a wide curving band beneath.

Form 2 is a medium sized version of Form 1. There are five rims, all upright, with diameters of 65 to 80mm (Figure 123a-e). Only two have necks attached, giving interior heights to the lip of 25 mm. Four have good polish on the interior. None have iridescent paint, but all are very dark brown or black.

Of two body sherds, the first (Figure 123f) has a compressed but still rounded profile, with a lower body that makes a sharp angle to meet a flat base. The body diameter is 200 mm, and the body height 114 mm, while the orifice diameter must be less than 50 mm. The wall is 2 to 7 mm thick, being thinnest at the mid-line. The painted design, on dark brown and under standard polish, has oval spots between bent bands. The second vessel (Figure 123g) is less compressed, has a body diameter of 180 mm, and a wall that tapers gradually from 6 mm below the shoulder to 2.5 mm above the base. The design, on black, has a pair of single-width bands that undulate around the body, crossing beneath the midline to make the change of direction. Also, at least one circular band encompasses the neck.

Form 3 is a steeply shouldered, medium to large vessel. A neck (Figure 123i) has an orifice diameter of 100 mm, a slightly concave shoulder (which is unusual), and a directly everted rim. The painted design is not clear. A rim (Figure 123h) has an orifice diameter of 150 mm, with a rim diameter of 180 mm, and has a band of paint around the neck. Wall thicknesses below the neck are 6.5 mm.

An alternative classification would see the rim put with Form

1. and the neck left on its own.

Form 4 is a small to medium sized jar, with wall thicknesses, away from the neck, of 2.5 to 3.5 mm. It is possible that upright rims ascribed to Form 2 belong here.

There are some slight variations in vessels form. Three (Figure 124a-c) are steep shouldered, with a slight bulge at the interior angle. (The last of these has a bevelled edge, smoothed after breakage of the rim.) The fourth (Figure 124d) has a flatter shoulder. Two shoulders (Figure 124e,f) have thickening before the neck, and moderate slopes. Orifice diameters range from 40 to 70 mm.

Designs are varied. There are no spots. The necks all have circular bands around them. One shoulder (Figure 124e) has a nested zig-zag, or inverted Vs.

Form 5 vessels are narrow necked, high-shouldered, and small to medium. There is one complete example (Figure 124g) from a grave. It has a squat profile, marked carination, and a rounded bottom. The rim (3 mm thick) is very short, slightly everted, and simple. The lip is bevelled on the exterior. Body, rim and orifice diameters are 110 mm, 36 mm, and 31 mm respectively. The design has a band around the base of the neck, almost grazed by six arcs (between one and two fingers' width) that rise from the mid line.

Two necks (Figure 124h,i) are of rather higher shouldered vessels, with walls 4 to 6 mm and 5 to 5.5 mm thick. Their orifice diameters measure 35 mm and 30 mm. There is no thickening at the neck. One has two concentric finger-width bands around the neck, with a row of large spots along the interval; the other has two bands of two fingers' width, with a narrower interval and no spots.

Form 6 vessels are small, and relatively open. One example (Figure 124k) is a complete grave offering. The shoulder is rounded



but steep, and a sharp angle marks the mid-line. The lower body has more moderate, less rounded sides, with the base flattened. The rim flares outwards directly from the neck, with no thickening. It has body and rim diameters of 90 mm and 74 mm, and is 56 mm tall. The upper body is adorned with five arcs (about one and a half finger's width), which rise from the mid-line to a little way up the rim. The rim interior had eight finger spots. truncated at the lip. This vessel is almost identical to the complete Form 5 vessel (Figure 124g) in fabric, background colour. paint and finish.

A rim sherd (Figure 124j) has only indistinct paint on rim interior and the exterior body. where vertical bands are suggested.

Form 7 is a neckless jar. wide mouthed but restricted, represented by a single rim sherd (Figure 123j). The rounded lip is accentuated by a shallow depression around its exterior. The orifice diameter is 150 mm. with a body diameter probably not more than 60 mm greater. The fabric exterior and interior are light red brown under the smudged surfaces. The paint is indistinct.

Form 8 is represented by one rim (Figure 123k) from the same pit as produced the Form 7 example. The mouth is very wide, with no difference between body and rim diameters (160 mm). The upper section is little more than a short extension of the rounded carination. The directly everted rim has convex sides that taper to a sub-squared lip. The wall is more or less parallel-sided at 6 mm. On the polished exterior, vertical bands of paint run down from the neck - a unique design to match the unique body. The rim interior is polished and smudged, and possibly completely covered with iridescent paint. The interior body is wiped and grey - it is this lack of interior finish and decoration that suggests a functional affinity with jars, rather than the bowls whose form it borrows.

Though this and Form 7 are undoubtedly odd, they do not appear to be imports.

**OBSERVATIONS** There are two, perhaps three, general size classes through the sequence: one large (with body diameters of 300 mm and over); and one medium to small (200 to 100 mm), where there might be a tendency for clustering around each of the range ends. There are no large jars from Phase II or IIIE contexts, but they are present, if not commonly, in Phases I and IIIL (Form 1). There is great variety of form within the medium to small range in Phase IIIL (Forms 4-8).

Phase IIIL designs include concentric bands around the neck, undulating bands around the body, or rows of spots between paired bands, whether curved or straight-edged. They appear to be specific to that phase only, with no earlier examples, and are applied to vessels irrespective of size difference.

Most Phase IIIL examples came from graves and rubbish pits, with one (Figure 122a) from a structured artefact deposition. Only two rims, two necks and one body sherd came from Phase IIIL layers.

There are no obvious imports amongst iridescent jars.

### 5.6.3 Red-slipped jars

Rims: 59 (14,11,16,18); Body Sherds: 8

Overviews of fabric, form and finish are presented as background before discussing specific individuals and groups.

**FABRIC** Textures are fine (n=10, 16.9%), medium fine (n=28, 47.5%), fine medium (n=13, 22.0%), medium (n=7, 11.9%) and coarse medium (n=1, 1.7%). The sequence suggests an initially close association of red-slipped rims with finer textures, and a subsequent movement towards less fine textures. There is, however, no correlation between specific fabric textures and vessel or rim forms.

Surfaces are mostly fired to a red brown or brown. Cores are mostly black, dark grey, grey, or brown.

**FORM** There is a wide variety of generally simple rims. There is no large number of any form that could be seen to have a particular association with red-slipping, although there are individuals not found within other categories. Forty-six have diameters between 90 and 200 mm. with eight between 230 and 290 mm. There are two smaller, while three are undetermined.

**DECORATION AND FINISH** Regarding rims, the red paint is applied in most cases to the interior only. In eight cases (none from Phase I), however, the exterior rim is also painted. On the body, it seems that paint is rarely applied below the maximum point.

In Phase IIIL, one vessel with red-slipped rim interior has a finger-painted exterior; and three vessels have the exterior body red-slipped and rim interior finger-painted. Three red-slipped bodies are found with banded rim interiors in Phase IIIL.

Rims from Phase I and II contexts all have interior polish. With Phase IIIE, polish is applied to only 75%, while for Phase IIIL the proportion is down to 45%.

**EXAMPLES** A Phase I rim (Figure 125a) has the narrowest diameter, 60mm. Another highly curved but more robust rim of Phase I (Figure 125b) also has both sides polished.

Typical of the unelaborately everted forms of most of the remaining rims are two sherds from Phase I (Figure 125c,d), and one from Phase IIIE (Figure 125e). Some are rather short, and of two such rims from Phase II (Figure 125f,g), and three from Phase IIIL (Figure 125h-j), all but the last have the rim exterior painted. The latter two, however, are without interior rim polish.

From Phase I (Figure 125k) and Phase II (Figure 125l) are

early examples of the rims with heavy squared interior angles more commonly associated with Phase III horizontally banded rims (Figure 126a-d). One Phase II sherd (Figure 125m) has an upright rim and high shoulder that compare closely with those of another Phase II vessel (Figure 126i), whose rim also has, instead of a continuous slip, horizontal bands. And three long, thick rims of Phase IIIE (Figure 125n), whose pastes are red brown throughout, compare closely with a Phase IIIE banded rim (Figure 126k).

A relatively restricted, unpolished Phase IIIE vessel (Figure 125o) has slip in irregular patches over rim interior and exterior body. But another Phase IIIE rim, and two from Phase IIIL are so wide-mouthed that rim and body diameters are more or less equal. The Phase IIIE rim (Figure 125p) has red slip on the rim interior and the exterior rim and upper body, but only the rim interior and exterior body are polished. Both Phase IIIL vessels have slip over the rim interior and over the main body of the exterior, from the shoulder down. One (Figure 125q) has no polish, and the other (Figure 125r) has the rim interior polished, and the exterior body slip smooth.

One Phase IIIL rim (Figure 125s) is unique for the flange at the maximum point. The rim diameter is relatively great, at 260 mm, and the overall form is open. The rim itself has the reversed-S form otherwise exclusive to contemporary Phase IIIL finger-painted jars; but contrary to their finish (and the general trend for red-slipped jars), both rim interior and exterior body are polished.

Finally, there are two rims of exceptional form from Phase IIIL layers. One (Figure 125t), with polished slip on the interior rim only, is thickened around the interior angle. The second (Figure 125u) has good polish applied equally to the dusky red of rim interior, exterior rim and shoulder. At the base of the rim interior, a short

fillet of clay is drawn back down and round outwards, and the outer edge of the shoulder is accentuated by a sharp angle.

**OBSERVATIONS** There is a broad spread of fabrics, less than half the rim sherds (46%; n=27) have their necks, and the possibility of classification of form is accordingly reduced. But even so, it is clear that red-slipped jars are of a relatively wide range of rim form, but not of any rim form exclusive to the technique.

Red-slipping is the principle paint technique applied to decorated jar rims in Phase I at 63.6%, but declines in popularity through the rest of the sequence to just 12.0% in Phase IIIL (Table 37).

#### 5.6.4 Horizontally Banded Jars

Rims: 49 (2,7,15,25); Necks: 3; Body Sherds: 27

##### 1) Rims

**FABRIC** Textures are medium fine (n=18, 36.7%), fine medium (n=19, 38.8%) and medium (n=10, 20.4%), with two that are fine. Cores are mostly black or grey, and surfaces brown or red brown.

**FORM** Most easily distinguished is a set of Phase IIIE and early Phase IIIL rims (n=13), each with a squared angle from rim to neck and a straight rim interior. The lip is variously squared, rounded and pointed/tapered. It may be simple (Figure 126a), or more elaborate (Figure 126b). Others are intermediary in size and shape (Figure 126c,d). Rim diameters range from 160 to 250 mm. Although this form occurs with red-slipping of the rim interior, and on one jar undecorated but with polished rim interior, (but never with finger-painting), it is most strongly associated with horizontal banding of the rim.

Related forms are: a Phase II example (Figure 126e), which

has a concave interior surface and pinched underside to the interior angle; a Phase III E example (Figure 126f), which has a concave interior and parallel sides; and one from Phase III L (Figure 126g), which has a convex interior and pinching at the lip.

Otherwise, there is a range of rim form that generally reflects the broader patterns of the times. In Phase I, one (Figure 126h) has a steep, convex interior with a wavy exterior; while another (Figure 126j) is 40 mm long from lip to interior angle. In Phase II, one (Figure 126i) is comparable for its slenderness (4 mm thick), upright stance and high shoulder to a red-slipped rim (Figure 125m). In Phase III E, one rim (Figure 126k) has the distinctive thick, relatively tall upright curve otherwise found with contemporary red-slipped jars (Figure 125n).

In Phase III L there is the greatest variety. For example, four simple rims (Figure 126l-o) contrast with the more elaborate forms mentioned above. Another (Figure 126p) is extremely slender. One rim (Figure 126q) is flat and relatively thin after a neck of 11 mm. One vessel (Figure 126r) is unusual for its openness.

**DECORATION** Bands of red paint are applied in a variety of ways: 1) singly along the lip and top of the rim interior (n=6; Figure 126n); 2) as 1, but with a second band along, and perhaps just above or embracing the base of the rim interior (n=29; Figure 126a); 3) as a band beneath and detached from the lip, with a second band along the base of the rim (n=1; Figure 126s); 4) as a single band embracing the angle at the base of the rim (n=1; Figure 126r). Variations on 2) see paint extending down the exterior of the rim from the lip to the shoulder (n=4; Figure 126j). A further nine rims lacked the angle to the neck, but were probably of the first (n=6) and third types (n=3).

The second type dominates throughout. In Phase III L there is

greatest variety, all possibilities being present.

**FINISH** In Phases I and II, all rims (n=2 and 7 respectively) have polished interiors. In Phase IIIE, the proportion is 46.7% (n=7), while in Phase IIIL, it drops to 20.0% (n=5). Alone, the small numbers would lend doubt to any conclusion. But the trend they present, towards less use of polish, is confirmed by the figures for red-slipped and unpainted jar rims. It is also notable that polishing frequently resulted in blurring of the bands.

## 2) Body exteriors

**FABRIC** The horizontally banded body sherds are all of medium fine, fine medium or medium textures, fired to brown or red brown at the surfaces, with cores mostly black or grey. Two necks have fine fabrics.

**FORM** For Phases I and II, there is no evidence beyond the fact of bodies being rounded. In fact, there were only three and two body sherds respectively from layers, with walls between 3 and 5 mm thick.

For Phase IIIE, the walls of the seven body sherds from layers are thicker, with a minimum width of 5 mm, mostly around 6 mm, but rising to 10 mm. There is one shoulder (Figure 126t).

For Phase IIIL (twelve body sherds from layers), there is more variety of form, as we saw with the rims. Walls can be as thin as those of Phases I and II, or as thick as those of Phase IIIE. Two rim sherds (Figure 126r,x) have body diameters of 250 mm, and one neck (Figure 126u) gives a comparable 270 mm.

There is one unusual vessel (Figure 126v) of very fine fabric and low polish, which has an orifice diameter of only 55 mm and a body diameter of about 120 mm. It is of very similar form to an iridescent

painted jar (Figure 124c), and shares its otherwise unique attribute of having had its rim reshaped after breakage.

**DECORATION AND FINISH** Bands vary in: 1) their width (5 to 24 mm); 2) width of the intervals between them (1 to 15 mm); and 3) their number, between one and at least four. Application is usually less than regular: on any vessel, the bands and intervals may, individually and against each other, be of variable width with uneven edges.

Four Phase I/II body sherds have band widths of 16 to 19 mm, with intervals of between 3 mm and 10 mm, while the bands of a fifth (Figure 126w) are only 5 to 7 mm wide, with intervals of 1 mm and 4 mm. For Phase IIIE, band widths are between 7 mm and 21 mm, and intervals between 1 mm and 9 mm. For Phase IIIL, bands are 6 to 18 mm, intervals 3 to 15 mm.

Bands are normally applied to the body from just below the neck to the area of the maximum point. There is just one certain instance (Figure 126r) where paint is limited to a band around the neck itself - the rim interior's band is also uniquely positioned astride the angle. The only other rim with a band round the exterior neck (Figure 126x) has unique diagonal stripes around the interior rim.

Finishing treatment of body sherds follows the trend of rim interiors, with general application of polish in Phase I leading eventually to absence of polish in Phase IIIL. Any polish was only applied to the upper body and area of decoration. When polish became unfashionable, a better quality finish - i.e. a carefully wiped surface - maintained the distinction between upper and lower bodies.

### 3) Observations

The application to jars of red paint in horizontal bands was



practiced throughout the sequence (Table 37), though rare in Phase I, where both rims are of fine fabric. In Phase II, the association with medium fine to medium fabric jars was begun, i.e. with jars that might be more roughly treated and used for cooking. During Phases II, IIIE and IIIL. these jars were roughly constant as a proportion of all decorated jars from layers - 31.8%, 34.1%, and 25.7%. In Phase IIIL rubbish pits, however, they were only 8.8% (n=7) of decorated jars.

Nine jars have horizontal banding on one surface with finger-painting on the other: and horizontally banded rim interiors can be found with red-slipped body exteriors.

#### 5.6.5 Finger-painted Jars

Complete Vessels: 2; Rims: 71 (0.0,2,71); Necks: 15;

Body Sherds: 53

**FABRIC** Textures are medium fine, fine medium or medium, with two coarser. Surface colour is mostly red brown, with cores grey or black.

**FORM** These jars have globular bodies, with a mid-line carination usually without hint of angularity (Figure 127a). Proportions vary, with greater range between most open and most closed (Orifice Diameter:Body Diameter ratios are between 1:1.3 and 1:2.64) than between most and least squat (Body Diameter:Height ratios are from 1:0.42 to 1:0.68). Walls may taper from neck to base; or may taper first from neck to carination and then widen between carination and base. The two bases preserved (Figure 128a,b) are slightly flattened.

Rims fall into two groups. The more common form (n=42, 57.5%) is exclusive to these jars with the exception of an unusual red-slipped vessel (Figure 125s). The interior profile is a reversed

S. with an interior angle point pinched and drawn inwards slightly along a horizontal axis (Figure 127b). The rims flare outwards at around 45°, with sides that are for the most part curved and parallel, or slightly tapered. Lips are mostly rounded, though some are subsquared (Figure 127c) or more pointed (Figure 127d). Variations on the overall shape include vessels with marked thickening on the underside of the transition from shoulder to rim (Figure 127e).

It is by the absence of pinching of the interior angle point that the remaining thirty-one rims are set apart. Most other characteristics, and their ranges of variation, are common to both groups. There are rims straight and parallel sided (Figure 127f); tapered and thin with straight sides (Figure 127g); tapered and thick with rounded interior sides (Figure 127h); curved and tapered (Figure 127i); curved and parallel sided (Figure 127j); and with biconvex sides (Figure 128a).

The smallest jar (Figure 128b) has a lip whose lower exterior edge is uniquely accentuated by drawing clay round and down onto the rim wall, but without smoothing. One of the two Phase III E rims (Figure 128c) is poorly preserved, and lacks the neck. But it is thinner than other rims, very short, and has a biconvex profile. There is also a shallow groove along the lower edge of the interior lip.

Two vessels are undoubted imports. One, of late Phase III E context (Figure 128d), has an exotic fabric, with tiny red grit inclusions. The rim has the squared lip, rounded edges and straight sides more characteristic of Phase I-III E decorated jars, but with clay for the interior point drawn solely from the shoulder underside. Uniquely in this category, it has a polished finish.

A Phase III L vessel (Figure 128e) has the common pinched

interior angle, but has several unusual characteristics: 1) the fabric is fired to a rare reddish yellow on the interior; 2) the interior rim is smoothly concave; 3) there is an absence of taper on the body wall; and 4) the motif of the exterior body decoration is unique.

**DIMENSIONS** While rim diameters range from 94 mm to 280 mm, the mode (32.9%, n=24) is at 170 to 180 mm.

The smallest vessel (Figure 128b) has a body diameter of 146 mm and a height of 93 mm.

The largest body diameter of any near complete example (Figure 128e) is 328 mm. with a height of c200 mm. the largest recorded or estimated. There is, however, a body sherd that indicates a body diameter of 380 mm.

The most open jar (Figure 129a) has an orifice diameter of 200 mm and a body diameter of 260 mm, producing a ratio of 1:1.3. It is also the most squat: at c110 mm high, its Body Diameter:Height ratio is roughly 1:0.4.

The least squat, most roundly shaped vessel (Figure 129b) has a Body Diameter:Height ratio of 1:0.68. actual measurements being 250 mm and 170 mm.

Vessel walls are mostly in the 3.5 to 8.5 mm range. The smallest vessel (Figure 128b). not surprisingly also has the thinnest wall, at 2.5 to 4.0 mm. The thickest wall (Figure 127e) measures 11.5 mm through its shoulder.

Interior rim lengths range from 14.5 mm (Figure 128b), to 36.0 mm (Figure 129c). Neck-lip interior heights range from 7.0 mm (Figure 129d) to 21.0 mm (Figure 129e).

**DECORATION AND FINISH** It is the application of red finger-painted designs to rim surfaces and/or body exteriors that sets apart the vessels of this category. The designs may be found on all

three surfaces. just the rim interior. or just the exterior body. from which the paint may extend shortly up the rim. They are also, though not commonly, found in association with the two painting techniques developed and favoured in earlier phases - red slipping and horizontal banding.

Most rims (82.2%, n=60: 38 from rubbish pits. 20 from layers, and 2 from graves) carried design. on at least one surface. sufficiently preserved for interpretation. A further six body sherds carried designs or design elements not represented by the more complete vessels and rim sherds.

The narrow linear fields of rim interiors carry designs that for the most part consist of simple elements. repeated around the orifice. occasionally extending very slightly over the lip or across the interior angle point. On the exterior. there is again serial repetition. But the rim. neck and body present a larger. broken surface or set of adjoining surface. which allowed for the development of larger. more complex motifs. and consequently. for greater variety of design. The exterior neck and rim. if decorated. are always dependent on and extensions of the body. Decoration reaches the mid-line carination. but never extends more than a centimetre or so below it. However. in most cases. there is not enough preserved of the body for any certain idea of the complete design. Interior and exterior are always independent of each other.

Designs found on rim interiors are shown in Figure 130, while Figure 131 presents those on exterior rims and bodies. These elevations. while based on actual examples. have been slightly altered to aid comparison. Rim designs have been stretched or compressed vertically. to fit an arbitrary but not unrealistic 20 mm standard between lip and angle point. Secondly. there is some idealization:

strict regularity in application of elements seems to have been not commonly sought, and certainly rarely achieved.

Representation of body designs includes only the top 50 mm. Little useful information would be added by showing more; and, in any case, there are few enough instances where the total depth of design is available. Broken lines indicate the upper and lower edges of designs incompletely preserved.

By far the most common interior rim design (Figure 130) is No.1 (n=17, 28.3% of interpretable rims), which consists of simple, separate ovals descending from the lip with more or less regularity of size, orientation (vertical, slanted or horizontal) and spacing on each vessel, but with notable variation between vessels. The ovals may reach the interior angle point, pass over the lip to the exterior, or be detached from the lip. Similar and related are Nos.2-8 (n=20; 33.3%), which present various combinations further involving: narrow horizontal bands along the interior angle point or lip; overlap between the ovals; and ovals along (and crossing) the angle point. Altogether, these variations on the oval are found on 61.7% (n=37) of interpretable rims.

No.9 (n=2) uses an incomplete oval to connect upper and lower bands. No.10 is represented by two incomplete rims: painted half-ovals, larger than the norm for rim interiors, overlap at the angle point and rise to the lip, leaving narrow triangles in negative. No.11 (n=4) uses vertical, straight-sided strokes; No.12 (n=1) has alternating sets of parallel, but diagonal strokes (at least three in each set); No.13 (n=2) adds a lip band to the diagonals; No.14 (n=3) has strokes with edges that are irregular but also parallel; in No.15 (n=1) the strokes form variable V's.

There is one example of an interior rim completely

red-slipped (No.16), and three of narrow horizontal bands along lip and angle point (No.17), in association with exterior finger-painting.

The regular, parallel, sharply truncated diagonals of No.18 occur once, on a vessel (Figure 126x) whose exterior is decorated with horizontal bands.

The next two designs (Nos.19 and 20) are each represented by single rims lacking necks. and are uncertain. No.20, similar to No.10, is from one of the two Phase IIIE rims (Figure 128c).

In No.21 is an elaborate use of the oval. to connect thin bands along the lip and angle point. It is found only on the polished Phase IIIE specimen (Figure 128d). an import.

Exterior designs (Figure 131) are more varied. and are represented by only one example. unless otherwise indicated.

Just one rim. decorated on the interior. had no exterior paint (No. 1).

A simple. thin lip band with no other element (No.2) is found twice on rims with little or no body attached. It is. then. more potential than actual.

Nos.3-5 show three variations on the use of the horizontal band (found twice. twice. and once respectively). No.6 has a slipped body and neck only, while No.7 sees the slip include the whole rim. In No.8. the slip reaches down the rim. over the neck, to the top of the body, below which a separate. non-linear element appears.

A similar ambiguous mass appears below the irregular blotch that straddles the neck of No.9. In No.10. the blotch lies beneath a lip band.

The simple ovals so common on the interior, occur in only two forms (Nos.11 & 12) on the exterior rim.

There are two jars with diagonal bands from the neck, but no other element (No.13). The bands are grouped in threes or fours, and may be contiguous within each group or apart. They have rounded upper ends, but the bottoms may be sharp tails (Figure 132f,g). Groups of bands may splay from a shared starting area, and in part run across each other (Figure 132e,f).

No.14 has sets of vertical strokes, made with the fingers set close together, not quite reaching the neck. No.15 (n=5) shows a possibility not represented on more complete examples: vertical strokes made down from the neck over the body, but, either deliberately or accidentally, separate at the neck and united below.

In No.16, irregular, separate vertical strokes from the rim have a lip band.

In No.17, shorter separate vertical strokes run down the rim and across the neck, and are matched by others, presumably longer, that would reach to the mid-line. In No.18, the upper strokes are joined at the rim and are of equal length; the lower groups of three are quite separate, the central element projecting.

No.19 is the most ornate: between a lip band and vertical strokes down from the shoulder, there are four rows of horizontal ovals. The upper three overlap, and the fourth sits between the third and the vertical strokes. The ovals of the lower three rows each have a very small circular spot painted over the lower right end. The upper two rows are combined to produce the sinuous negative image seen on one of the interior rims (Figure 130.21). This image is again found, but enlarged, in No.20.

In No.21, the different fingers are barely distinguishable at the head of each of the groups of four strokes that make up the body cover; while the ovals of the rim/neck have thickened and become more

blunt.

Nos.22 (n=3) and 23, both incomplete, have small circular spots along the base of the rim, in the one case attached to the unclear body design, and in the other more or less detached. No.23 also has curved bands along the top of the shoulder, as well as a lip band.

No.24 has columns of slightly reduced horizontal ovals radiating down the body, the only rim adornment being a lip band.

No.25 has a row of ovals along the top of the shoulder, each matching a vertical stroke beneath.

In No.26, there are long ovals down the rim, some of them carrying over the neck. Long vertical strokes then reach down the body, some of them overlapping at the top with the rim/neck ovals, but without any regularity. No.27 is similar with respect to rim and neck, but has, in addition, a lip band.

In No.28, there are carefully executed horizontal ovals, two matching rows either side of the neck, a with a staggered third beneath.

From four small rims and necks, there are a group of motifs (Nos.29-32), not otherwise represented: large, overlapping ovals; variably shaped and positioned ovals; vertical strokes linking beneath the neck; and small circular spots detached from other elements.

No.33 uniquely has horizontal tear drops, in vertical sets of three along the upper body. Other than a lip band, there is no other element. We have already met this vessel (Figure 128e) as a definite import.

Figure 132a-c shows designs from the body sherds of three vessels with variant uses of rows of spots in conjunction with vertical bands, while Figure 132d shows a unique set of large vertical



ovals.

Out of all this varied detail, there are two general points to be made. First, combinations of three or four identical or similar elements are recurrent, as sets either of ovals, or of long vertical or diagonal strokes. In the latter case, it is clear that the strokes were made simultaneously; and the design is thus directly related to the disposition of the fingers on the hand. This being so, it is notable that there should have been no freedom felt to depart from the practice followed - e.g. to apply and deploy strokes singly. Secondly, detail is massed between rim and shoulder.

With the exception of the Phase IIIE import (Figure 128d), polish is never applied to these vessels, either on the rim or on the body exterior, and finish is limited to a wipe. The lower body may be given a lesser finish than the upper body - i.e. a scrape instead of or without a wipe.

OBSERVATIONS That these jars were used for cooking is indicated by their relatively coarse texture, the blackening of many bottoms, and the restriction of decoration to the upper body.

While two unusual vessels derive from late Phase IIIE contexts, the rest are restricted to the more highly structured Phase IIIL occupation (Table 37), with no evidence for time-related change amongst that main body. The coherence of the category - in particular the decorative technique and the near-exclusive use of the reversed-S rim - is no less striking than the variation of design possibilities encountered. The absence, with two exceptions, of obvious intrusives is also to be noted.

The distribution of finger-painted jars presents a clear pattern. The two more complete vessels were grave goods. 64.8% (n=46) of the rims came from rubbish pits, and comprise 47.9% of all jars in

those contexts; whereas 32.4% (n=23) came from layers, where they represent only 22.3% of all jars. While, then, this category has a precise chronological association with Phase IIIL as a whole, dominating decorated cooking jars of that time, it has a particularly strong association with the rubbish pits.

#### 5.6.6 Engraved and Incised Jars

Rims: 0; Body Sherds: 19

##### 5.6.6.1 Jars with fine engraved lines

PHASE II Twelve small body sherds, with fine to very fine fabrics, their walls from 2 to 5 mm thick, highly polished, their surfaces very dark brown to black. are all decorated with fine line incision through the polished slip. This technique and finish are unusual, and the fabrics are generally darker than normal. They correspond to what is labelled Chorrera Incised (Meggers, Evans and Estrada 1965, 122; Simmons 1970, 154; Evans and Meggers 1982, 122).

Two suggest design. One (Figure 133a) has two roughly horizontal lines around the shoulder, from the lower of which radiate vertical lines. The other (Figure 133b) has parallel lines, up to 20 mm apart, descending and then making a sharply angled turn to the horizontal.

These are to be compared to the earlier sherd (Figure 121d) with iridescent paint within the zones created with the incised lines.

##### 5.6.6.2 Jars with zoned short incised lines

PHASE IIIL From a rubbish pit, there is a single sherd (Figure 133c) off the shoulder of a jar with fine paste and a wall 4.5

to 6 mm thick. The exterior is mostly covered with a polished red slip, but extending down the shoulder is a series of triangular zones, points down, whose borders are formed by pairs of closely set, and parallel, finely incised lines, up to about 40 mm long. These zones, which are neither slipped nor polished, are filled with short incised lines - maximum length is 5 mm. but 2.5 mm is more of an average - roughly aligned on the outside with the edges of the triangles, tending to be more or less vertical towards the centres. Stothert (1993, 46, Figures 32b, 34) and Beckwith (1996, Figures 6.83, 7.47) illustrate similar examples from Valdivia, Loma Alta and Achallán.

#### 5.6.6.3 Jars with wide incised lines

PHASE IIIL From both layers and rubbish pits there are six sherds of relevance. On two (Figure 133d,e) with soft brown medium fine fabrics and narrower walls, the exterior surfaces lack both paint and polish. In each case the near-vertical incisions are short - less than 10 mm long - and run, 5 to 8 mm apart, in at least two rough rows around the vessel. The incisions in one case are round-ended, and 1.5 to 2 mm wide, with the edges raised slightly on both sides of the cut; while in the other they are slit-like, pointed and 0.75 mm wide, with no upward displacement of the clay.

Three sherds carry unpolished red paint as well as wide incision on less fine pastes. One (Figure 133f), of medium fabric, with red brown surfaces, has a 12 to 14 mm wide band of paint around the upper shoulder, beneath which the pointed incisions, 1.5 mm wide, 12 mm or more long and 5 to 7.5 mm apart, slant down from right to left, with a slight raising of the right edge.

The second (Figure 133g), of fine medium fabric, with 2.5YR red surfaces, also has a red band around the top of the shoulder, and

an evenly wiped exterior, but the incisions are made differently: first, there is a continuous incision, 1.5 mm wide and 0.75 mm deep, parallel with and c5 mm below the paint; second, the slanted cuts (down from left to right) are longer (at more than 16 mm), broader (at over 2 mm wide), deeper (1.5 mm), and angled further away from the vertical. Further, the cuts are bevelled (the right or upper edge being vertical). there is no raising of the edges (all clay having been cleanly removed from the cuts), and the overall appearance is of even regularity.

By contrast, the third sherd (Figure 133h), of fine medium brown fabric, has gouges that are 1.5 mm deep, exaggerated further by a ridge up to 3 mm tall along the left side, formed by the clay displaced from the cuts. The cuts are irregularly spaced, shaped and angled. The paint is present as an irregular patch below but encroaching on the area of the cuts, and the surface in general is rough. A very similar sherd from Tarqui is illustrated by Stirling and Stirling (1963, Plate 5a top right corner) as an example of their Incised coarse plain ware decorated with red paint and bold incising, including fingernail indentation (*op. cit.*, 9, 13).

The final sherd (Figure 133i) stands apart for its hard fine medium fabric and for the light brown of its exterior. The incision sees holes with uniquely flat bases and vertical sides (2.5 mm or more wide, and 1.5 mm deep), with slender vertical ridges of clay rising up to 1 mm on each side. The design includes both short slits, c10 mm long, and continuous lines.

#### 5.6.6.4 Observations

The Phase II sherds were possibly all residual from earlier occupation. Probably all the sherds of Phase IIIL were imported, with

the region of Manta supplying some of them, but with a southerly origin for the jar with zoned short incision.

#### 5.6.7 Miscellaneous Decorated Jars

Rims: 2; Necks: 1; Body Sherds: 8

##### 5.6.7.1 Finger-pressed jars

PHASE I From the occupation debris around Structure 1 came part of a very narrow necked jar (Figure 133j). The fabric is slightly coarser than fine. fired to black. The jar was modelled out of a lump or lumps of clay pressed into shape with the finger tips, and then wiped on the outside. Rim diameter is 30 mm, and body diameter is about 120 mm. while the wall has a maximum thickness of 12.5 mm.

Decoration was achieved by pressing the finger tip into the exterior surface. to create mostly circular spots. up to 2 mm deep and 9 mm across, their edges rounded or smoothed, with no upward or outward displacement of clay left visible. The design has columns of spots radiating down the vessel. with a row running around the shoulder across the columns. Surface finish and execution of the decoration are strikingly irregular, especially when contrasted with the good preparation of the paste. Prints and nail impressions are visible on both surfaces.

Meggers, Evans and Estrada (1965, 63-64, Plate 66) describe Valdivia jars decorated with finger tip marks (Fingernail Decoration, Technique 2). but their forms are quite different. The fabric is not out of place with that other Phase I vessels.

##### 5.6.7.2 Polished red-on-cream jars

PHASE II From a midden layer around the platform, came the neck of a unique and clearly exotic jar (Figure 133k). It has a fine

fabric with tiny red grit inclusions, with thin brown interior and exterior and a red core. The shoulder (5 mm thick) is steep, and the rim bent back directly with only a simple reduction of thickness of the clay (to 3 mm). Orifice diameter is 75 mm. The interior, both rim and body, has a smooth or low polished finish to its dark grey brown. The exterior, given a standard polish, has a pale brown or cream (10YR 6/3) slip, with finger-width bands of dusky red (10R 3/4) rising up the shoulder and closely converging on the neck and rim.

PHASE IIIL From three closely situated, but not intersecting rubbish pits, were found one rim sherd and five body sherds, all from the same vessel (Figure 133l-n). The fabric is medium. At the rim there is an unusual strong brown (7.5YR 5/5) exterior and interior, with a brown core; while the body sherds variously have reddish yellow (5YR 6/6) and light brown surfaces, with grey and grey brown cores.

The rim is upright - at least 30 mm tall - and flaring; 9 mm thick; and with a diameter of 190 mm. The body is globular; with a wall thickness of 7 to 8 mm; and with a diameter of at least 520 mm, making it the largest of jars in the assemblage.

Body and rim interior are covered with a light brown (7.5YR 6/3-7/4) slip. The rim exterior has a red slip over its finely scraped and wiped surface, extending over the lip and part way down the top of the interior. Red paint (c7.5R 4/4) is also applied as a wide vertical band (minimum width is 66 mm) down the side of the body, tapering to a probably pointed end. The rim interior and body are polished, though the lustre fades towards the bottom.

#### 5.6.7.3 Polished red-on-brown jars

PHASE II There is one sherd (Figure 133o) of soft medium fine fabric, with brown exterior and interior, and a dark grey core.

Wall thickness is 5 mm. There is a background of 7.5YR 5/3 brown slip, over which 7.5R 3/8 dark red paint is applied in a very straight edged geometric design (band width is 14 mm). The design compares with a Phase II incised fineware jar (Figure 133b). The polish is good.

PHASE IIIL Of two sherds from rubbish pits. one (Figure 133p) is of fine fabric, with red brown exterior, dark grey core and brown interior. Wall thickness is 1.5 to 3.5 mm, and body diameter at the angle point is 130 mm. Red paint is applied as a wide (at least 22 mm) vertical band, ending unusually with a clean line along the mid point. The background is red brown, possibly a self-slip. The polish is ordinary.

The second sherd (Figure 133q) is of hard fine fabric, with a thin black exterior, and a grey core and interior. Wall thickness is 5 to 7.5 mm, and the body diameter is over 300 mm. Over a light brown background slip, red paint is applied 1) as a band (12 mm) around the top of the shoulder, and 2) in a curvilinear pattern further down. The polish is low.

#### 5.6.7.4 Observations

All the Phase IIIL sherds came from rubbish pits.

#### 5.6.8 Jars with Undecorated Rims

Complete Vessels: 1; Rims: 130 (20, 22, 40, 49); Necks: 65;

Body Sherds: 15

These are jars whose rims lack both paint and plastic decoration, and for which there is no clear evidence of decoration of the body either. The different slip colours (browns, greys and blacks - red slips are treated as a separate category) have not been quantified or subcategorised. The vessels are subdivided according to

the presence or absence of finishing polish to rim surfaces and body exterior.

#### 5.6.8.1 Rims with interior and exterior polish

The twenty-six rims (19.8% of undecorated jars) are distributed by phase as follows: 5, 13, 6 and 2. Fabrics range from fine to medium coarse.

Rim forms are unelaborate. Rim diameters are between 30 and 260 mm, with the majority lying between 160 mm and 220 mm.

Three rims have necks attached. One from Phase II (Figure 134a) is unusually thickened towards the lip, with a thin wall immediately below the interior angle. The 30 mm diameter is of a unique Phase IIIE vessel (Figure 134b) whose orifice has a very short, vertical rim under the rounded lip. The body exterior is a polished grey brown. The Phase IIIL rim (Figure 134c) has a polished dark grey brown exterior.

From the neck sherds, there are three well polished fine ware vessels. One with a grey exterior, of Phase II (Figure 134d), is the most delicately structured, the wall of the high shoulder being 3 mm thick at the neck, and less than 1.5 mm at its narrowest, the rim being 2.5 mm at its base. Another of Phase II (Figure 134e), with a black exterior, has a minimum wall thickness of less than 2.5 mm. One from a Phase IIIL layer (Figure 134f), with a brown exterior, has rim and wall thicknesses of 3 mm.

From an early Phase II context, a more robust vessel (Figure 134g) has a smooth rim interior and (dark brown) body exterior, with a wall thickening from less than 5 mm to 15 mm at the neck.

From Phase IIIE, there are three maximum points of well polished fine wares, all of them with marked angles (Figure 134h-j).



The latter has a body diameter of 180 mm. A Phase IIIIL example (Figure 134k) has its polish down the body ending 10 to 15 mm below the maximum point. There is no evidence, indeed, that any jars other than those decorated with iridescent paint had polish over more than the uppermost region of the lower body.

#### 5.6.8.2 Rims with interior polish only

There are thirty rims (22.9% of undecorated jars), only six of which have necks attached. Their distribution by phase is as follows: 6, 6, 14, 4. Fabrics are mostly fine or medium fine. Rim diameters range from 90 mm to 210 mm.

Of the finer vessels, in Phase I, one rim (Figure 134l) thickens towards the lip, rising from a rather thinner (2.5 mm) stem above the interior angle. Another rim (Figure 134m) has the squared form found more commonly with the horizontally banded interiors of Phases IIIIE/IIIIL. A Phase II rim (Figure 134n) is simple but erect.

In Phase IIIIE, two (Figure 134o,p) are again simple, while a third (Figure 134q) has a very slender, sharply everted form, thickening to 4 mm from a stem of only 2 mm.

From Phases IIIIE and IIIIL respectively, two rims (Figure 134r,s) share a medium fabric, a 200 mm diameter, and a tall everted form, the former being more unusual for the thinner stem and straight underside.

#### 5.6.8.3 Rims with no polish

There are seventy-five rims (57.3% of undecorated jars), twenty-two of which have necks attached. Their distribution by phase is as follows: 9, 3, 20, 43. Fabrics are dominantly medium fine or fine medium.

Diameters range from 80 to 280 mm, with six unknown. 84.2% (n=59) lie between 120 and 220 mm. Rim forms are mostly very simple.

There are several simple, short rims, and examples are shown from Phases I (Figure 135a), IIIE (Figure 135b), and IIIL (Figure 135c,d). Variations of the short rim include, from Phase IIIE: one (Figure 135e) whose interior neck is substantially thickened to 11.5 mm; one (Figure 135f) where the rim appears to break out very close to the maximum point; and a third (Figure 135g), whose rim is almost negligibly deflected from the route of the wall. And from Phase IIIL contexts there are two less elegant forms (Figure 135h,i).

More unusual or extreme forms include, from Phase I, one (Figure 135j) whose exterior is bevelled to create a pointed lip; and another (Figure 135k) whose longer rim is everted from a very steep wall. In Phase IIIE, there is an erect, thin stem and thicker, everted rim (Figure 135l). In Phase IIIL, one rim (Figure 135m) has an underside bevelled at either end; another (Figure 135n) has an inverted lip, with the rim thicker than the shoulder; and a third (Figure 135o) has a short, erect but flaring rim off a very high shoulder, and a body diameter more than twice that of the rim.

Only three of the twelve rims from Phase IIIL rubbish pits have necks attached, being of simple but robust form and coarser fabric with reddened surfaces (Figure 135p-r). Similar forms are found among the layer contexts of Phase IIIL.

The one complete vessel is a jar (Figure 135s) from the goods of a Phase IIIL human burial. Of soft medium fabric, it is the smallest of all the jars, with a rim and body diameter of 66 mm. It is also unusually formed, having a slight beading at the outer squared lip, a shallow, rounded bottom, and a marked carination on the exterior. It is not, then, a reduced version of a more standard sized

vessel. The whole is not evenly produced. There are occasional lightly burnished lines of polish on the exterior body, but the finish is mostly of an irregular wipe.

#### 5.6.8.4 Observations

Rim polish becomes increasingly uncommon on undecorated jars, which comprise 35.5% of all jars (Table 36). They decline in frequency at the end of the sequence: from around 50% in Phases I to IIIE, in IIIL layers they represent 32.0% (n=33) of jars, while in IIIL rubbish pits they are only 16.7% (n=16) of all jars.

Among undecorated jar rims (Table 38), bifacially polished rims and rims with interior polish only are much less common in Phase IIIL than in Phases I, II and IIIE; and unpolished rims, having comprised at most 50% of undecorated jars in Phases I to IIIE, reach nearly 90% in IIIL.

### 5.7 CONCLUSIONS

#### 5.7.1. Residuality

There were thirty-nine rim sherds from Machalilla carinated bowls (Meggers, Evans and Estrada 1965). This residual material represents 4.1% of all bowls recovered (Table 27). Distribution is uneven, but shows an unsurprising decrease from Phases I and II (7.5% and 10.3%) to Phases IIIE and IIIL (1.7% and 2.3%). Apart from two bottle spout rims, several Machalilla decorated body sherds were also recorded, and it is likely that some other Machalilla bowl and jar rims have not been identified as such. Nevertheless, these figures give an idea of the degree of contamination from below through mechanical mixing, and suggest that there is no significant distortion inherent in the major trends as presented below.

### 5.7.2. Sample Composition

The sample is dominated (Table 26) by bowls (n=951). Of these (Table 27), the great majority (n=765; 80.4%) are serving bowls. These tend to be of fine fabric with decorated and polished surfaces, although there are a few (n=52) of the same form but with coarser fabrics (Table 34), and a very small number (n=18) that lack both decoration and polish. Widebowls (n=128; 13.5%), used for cooking, comprise the second largest category. In addition, there are sixteen bowls with unusually wide walls, and three miniature bowls. The thirty-nine residual Machalilla serving bowls complete the inventory.

The jars (n=369) are less securely divided according to likely function. However, if very fine and fine fabrics alone are taken as indicators of vessels destined for serving, then most jars (n=300, 81.3%) were for cooking, and relatively few (n=69, 17.7%) were for serving (Table 39). While these ratios may not be totally secure for the first three phases, in Phase IIIL the greater coherence of vessel categories encourages more confidence in their value.

When sample composition is taken by phase, there is a slight difference suggested between Phases I-IIIE and IIIL, and again between Phase IIIL layers and rubbish pits. The overall frequency of bowls (Table 26) drops from 74.1%, 78.0% and 77.4% in Phases I-IIIE, to 66.0% for Phase IIIL as a whole, with 69.7% for layers and only 61.0% for rubbish pits. Within jars (Table 39), there is a gradual increase in the proportion of cooking vessels from 59.5% in Phase I to 85.4% in Phase IIIL, at the expense of serving vessels. Within Phase IIIL, however, layers have a higher percentage of cooking jars (94.2%) than do rubbish pits (76.0%).

But rather than looking just at cooking vessel:serving vessel ratios within the broad categories of bowl and jar, a more instructive

analysis is perhaps provided by considering each of the four main categories of serving bowl, serving jar, cooking bowl and cooking jar, as proportions of the total sample for each phase (Table 40). (Zedeño (1985, 276-284) identified a similar set of functional categories in another coastal Late Formative assemblage.)

Serving bowls dominate throughout. At 61.8%, 56.0% and 66.1% in the early phases, they then drop to 52.4% for Phase IIIL, at 55.6% for Phase IIIL layers but only 48.0% for Phase IIIL rubbish pits.

Serving jars are the least frequent of vessels overall. From a high 10.5% in Phase I, they decline through the next two phases to 3.0%. In Phase IIIL, they are 4.9% of vessels, at only 1.8% in Phase IIIL layers, but they are 9.3% of all vessels in Phase IIIL rubbish pits and graves.

Cooking bowls (Widebowls) are the most stable group, though they rise and fall in contrary pattern to the serving bowls: 6.8%, 11.5% and 8.6% in Phases I-IIIE, then 10.6% for Phase IIIL as a whole, with 9.7% for Phase IIIL layers and 11.8%, the highest frequency, for Phase IIIL rubbish pits.

Cooking jars are the second most common vessels. They rise slowly in frequency through the early phases from 15.4% to 19.6%, then jump up to 29.0% for Phase IIIL with little difference between layers (28.5%) and rubbish pits (29.7%).

Phase IIIL, then, sees change in two groups: the frequency of serving bowls decreases and that of cooking jars increases. In both cases, the change is more extreme in the context of rubbish pits than layers. The greatest quantitative difference between these two context groups of Phase IIIL lies with the serving jars: there are more than three times as many serving jars (n=20, excluding the three bottles from graves) in the rubbish pits than in the layers (n=6).

### 5.7.3. General Trends

Serving bowls show:

1) an increase in the variety of form, as defined principally in terms of the shaping of the upper body and rim. In Phases I and II, the composite vessels of Form Set 1 dominate at 56.0% and 42.9%, falling to 19.5% and 4.9% in Phases IIIIE and IIIL: while in Phases IIIIE and IIIL, nine distinct, if overlapping, composite bowl categories (Form Sets 4, 5, 6, 7, 8, 9B, 10C, 10D, 10E), previously absent, comprise first 17.9% and then 50.5% of serving bowls (Table 28).

2) a gradual increase in the use of iridescent paint, with incidence on rim sherds rising from 17.0% and 18.0% in Phases I and II, to 35.8% in Phase IIIIE, 45.5% in Phase IIIL layers and 64.4% in Phase IIIL rubbish pits (Table 29).

3) an increase in the variety and complexity of iridescent decoration.

4) a higher frequency of red paint in Phase IIIIE, at 4.5%, than at any other time (Table 29).

5) a decrease in the use of exterior red slip, from 57.0%, 57.1% and 65.4% in Phases I-IIIIE, to 40.7% in Phase IIIL layers and 21.2% in Phase IIIL rubbish pits (Table 32).

6) a higher frequency of interior red slip in Phase IIIIE, at 20.7%, than at any other time (Table 32).

7) an increase in the frequency of alteration of the lip (to a wavy, notched, nicked or externally indented contour - Table 33) from 3.0% in Phase I, and 9.8% in Phase II, to 21.5% and 20.1% in Phases IIIIE and IIIL layers, where external indentation is so common as to justify isolation as Form Set 5A. In Phase IIIL rubbish pits, however, lip alteration is down to 8.5%, and that is mostly external

indentation.

8) a decrease in the application of polish to the exterior: in Phases I-IIIE, only 2.0%, 0.9% and 1.6% lack exterior polish; but in Phase IIIL layers it is 14.3%, while in Phase IIIL rubbish pits, the figure is up to 43.2% (Table 32).

9) an increase in the height of vessel legs, with the replacement of the flaring by the cylindrical form.

Serving jars are too few, and too varied, to allow general comments on trends.

Cooking bowls show:

1) an overall replacement of the initially angled external carination with a curved transition from lower to upper body.

2) an increase in the use of interior painted design, from 20.0%, 13.6%, and 25.0% in Phases I-IIIE, to 53.2% in Phase IIIL (Table 35).

3) an increase in the variety of application of decorative paint (Table 35).

4) a decrease in the application of polish. On rim exteriors, in particular, it falls from 80.0-87.5% in Phases I-IIIE, and in Phase IIIL to 42.4% for layers and 6.9% for rubbish pits (Table 35).

Cooking jars show:

1) increasing complexity and coherence of rim design. After an early background of generally rather simple rim design, Phases IIIE and IIIL see a structured rim with flat interior surface and squared interior angle, particularly associated with horizontal bands of red paint on the rim interior. In IIIL, this is replaced by a rim with reversed-S profile and pinching of the interior angle, particularly associated with finger-painting.

2) an increase in the use of decoration, from 52.4%, 50.0%

and 52.4% of all jars in Phases I-III E, to 68.0% for layers and 83.3% for rubbish pits in Phase III L (Table 36). This increase involves principally the successive use and favour of red slip, horizontal bands, and finally finger-painted designs (Table 37).

3) a decrease in the application of polish. Among undecorated rims, the frequency falls from 55.0%, 86.4%, and 50.0% in Phases I-III E, to 6.1% for layers and 25.0% for rubbish pits in Phase III L (Table 38).

#### 5.7.4. Ceramic Phases

Broadly, the ceramic sequence sees the main division falling between Phases III E and III L. Reference to the specific contexts, however, in which vessels of the different categories occur, points to various refinements of the chronology (Sequence Diagram 4).

1) Of the composite serving bowls, both Form Sets 5A and 6 made their first appearance with layer 5117 (Sequence Diagram 3). Form Set 5B first appeared just after Form Sets 5A and 6, with layer 4967, and Form Set 7 with layer 5033. Of Form Set 4, the first sherd appeared rather earlier in Phase III E, just before the first resurfacing (5364) of the outer SW area. The next two occurrences were just before 5117, and the rest followed 5117. Of the miscellaneous composite vessels of Form Set 10, the first appearances for subsets C and D were with layers 5133 and 5033 respectively.

It is just as these forms collectively appeared that bowls of Form Sets 1, 2A and 3A rapidly tailed off in popularity. This sudden replacement then, of the earlier composite forms by the new, was not coincident with a major building phase change. Rather, it occurred during a short occupational episode just before the creation of Structure 5.



Sequence Diagram 3. Stratigraphic sequence of contexts mentioned with reference to ceramic phases.

PHASE IIIL	STRUCTURE 6	PREPARED SURFACE	4885
	STRUCTURE 5	CLAY WALL	5000
		OCCUPATION LAYERS	4967/5033
		PREPARED SURFACE	5117
		LAYER	5133
		PREPARED SURFACE	5244
	STRUCTURE 4	PREPARED SURFACE	5364
		PREPARED SURFACE	5705
PHASE IIIE	STRUCTURE 3	CLAY WALL	5804

2) The first of the restricted composite Form Set 9B vessels appeared at the very start of Phase IIIL. Also restricted to Phase IIIL were the Form Set 8 composite bowls, more closely associated with the rubbish pits.

3) Finger-painted Jars and the Widebowls with banded designs share paste characteristics and a general decorative technique, although the actual red paint designs are not the same. With only insignificant exception, the jars were of Phase IIIL, starting soon after 4885; while the Widebowls were limited to later Phase IIIL layers and rubbish pits.

4) Just before the end of Phase IIIL, there were several disparate innovations among serving bowls that suggest the beginning of a broad mood of change. These innovations included: the shallow, uncarinated bowl with double-stepped rim of Form Set 3C (Figure 95d,e); the tendency to shortness of the upper section, combined often with a curved rather than straight or angled profile of Form Sets 10D and 10E (Figure 102a-i); the four shallow bowls of Form Set 10F (Figure 102j-m; cf. also the pedestal base sherds of Figure 105f-h);

the bowl of elliptic form of Form Set 10C (Figure 101k); the uncarinated bowl with bevelled rim (Figure 104d) or shallow, simple profile (Figure 104b) of Form Set 11.

Sequence Diagram 4. Order of arrival of vessels used in definition of ceramic phases.

PHASE	I	II	IIIE	IIIL
SERVING 1/2A/3A BOWLS	-----	-----	-----	-
4			? -	-----
5/6/7/ 10C/10D			-----	-----
8/9B				-----
10E/10F/ 11F/3C				-
FINGER-PAINTED JARS				-----
BANDED WIDEBOWLS				-----

5) The individual assemblages of Phase IIIL rubbish pits present the extreme or more numerous examples of developing tendencies, such as the withholding of polish from the exterior rim of serving bowls and cooking bowls, and the more common and more complex application of iridescent paint. This might suggest either 1) that the pottery in the pits represented the leading edge of ceramic design in Phase IIIL; 2) that the pit contents reflect a functional difference; or 3) that the pits stood towards the end of Phase IIIL and its ceramic development. The stratigraphy does not support the idea of a difference in date, and as we have seen, the pits are closely associated with graves. It is likely, then, that the

difference between the pottery in the rubbish pits from that in the layers reflects the association of the pits with funerary ritual. Whether or how this may be related to change in ceramic technique, is a matter beyond the scope of this study.

In conclusion, different aspects of the pottery changed at different rates and on different occasions. The most sudden and sweeping change in serving bowl form came just before Structure 5, late Phase IIIE, when an extensive new repertoire replaced the rather more simple and unvaried vessels that had been used till then. There were two important additions to the range in early Phase IIIL, and change was apparent again in late Phase IIIL. Two related sets of finger-painted cooking jars and bowls also appeared in Phase IIIL, though not precisely together. And in Phase IIIL, the pottery deposited in the rubbish pits was qualitatively distinct from that discarded over the floors.

#### 5.7.5 IMPORTS

A number of vessels were imported from various sources. Among serving bowls, there stand out the six represented by sherds (Figure 110c-h) with interior bands of red paint, all from Phase IIIE; the two vessels represented by rims sherds (Figure 110j,k) with multiple exterior horizontal red bands, from late Phase IIIE and early Phase IIIL; and the four rims and various body sherds (Figure 110n-v) with red spot designs of Phases II and IIIE. None of their fabrics have odd textures, but those of the bowls with interior bands were each highly fired to a very unusual light red - red yellow colour, and all are odd or slightly odd in terms of form.

There are also two odd forms (Figure 111b,e) with complex exterior incision, from Phases II and IIIL; two bowls (Figure 111g,h)

of Phases IIIE and IIIL with interior incision and unusual surface colour, the later one also having a fabric distinguished by small quartz-like inclusions; two bowls (Figure 111i,j) with punched rims from Phase IIIE and IIIL contexts, the former with small black grit in its fabric, the latter of unusual form and surface treatment; and two sherds (Figure 111k,l) with interior line burnish.

Of bowls with iridescent paint, none had unusual fabric attributes. Notable, however, were the combination of outward flare, thick, bevelled, indented rims and red slips of two Form Set 5 vessels (Figure 97f,g); and the unique appliqué pellets on the interior rim of a Form Set 1 bowl (Figure 91h).

Among cooking bowls, we have seen that four Phase IIIL vessels (Figure 114f-i) closely match examples characteristic of the Tarqui site. A fourth Phase IIIL vessel (Figure 114j) shared both the exotic fabric and the depositional context of two unusual wide-walled vessels (Figures 115g, 116f). Similar multiple deposition of exotics in a single context also occurred in the Phase IIIL rubbish pit 3259, where two bowls (Figure 102n,o) sharing an exotic fabric, as well as having odd forms and finish, were buried together.

Among bottles, only two had unusual fabrics. One was the highly polished spout fragment (Figure 117b) from the Phase II midden, suggestive of an inland high Chorrera technique. The second sherd (Figure 117d), from a Phase IIIL rubbish pit, was of a bottle directly comparable to examples from Salaité. The dog bottle (Figure 120), and the double-chambered bottle (Figure 117e), both from Phase IIIL, though with undistinguished fabrics, each had unusual surface treatment, as well as being unusually formed.

Of painted jars, undoubted imports, but from unknown sources, are the sherds from two vessels decorated with red paint over cream

slips. That from the Phase II midden (Figure 133k) has red grit in its fabric, while that from the Phase IIIL rubbish pit (Figure 133l-n) has fabric of an unusual brown. Two jars with finger-painted designs are also likely imports: one from a late Phase IIIE context (Figure 128d) has tiny red grit in its fabric, and the other (Figure 128e), from a Phase IIIL rubbish pit, is oddly fired to reddish yellow. Both also have odd forms, and the latter a unique painted design. Two red-slipped jar rims (Figure 125t,u) from Phase IIIL layers are of quite exceptional form, while a third (Figure 125s), from a Phase IIIL rubbish pit, is unique for an external flange. None of the iridescent jars seem odd.

Six jars represented by sherds with wide incision (Figure 133d-i), from Phase IIIL contexts, were all imported. The region of Tarqui is again a probable source for at least one (Figure 133h) of these vessels. The jar with short zoned incision represented by a sherd (Figure 133c) from a Phase IIIL rubbish pit appears to be one of several found widespread but uncommon along the Guayas coast, with a possible southerly origin.

This is slight evidence, but some patterns are suggested. First, even though serving bowls constitute nearly three-quarters of the entire sample, there are very few obvious exotics, and they are mostly red painted vessels limited to Phase IIIE. Second, indications of an early Chorrera influence from inland seem to give way to a more coherent coastal network in the later part of Period 1: Tarqui is the source of several Phase IIIL cooking vessels, both bowls and jars, and Salaite is implicated by two Phase IIIL bottles. And third, within the general context of Phase IIIL ritualised activity, there are two instances of multiple deposition of vessels from a single exotic source.

#### 5.7.6 COMPARISON WITH OTHER SITES

The sequence of Period 1 ceramics at 141B-T3 comprises two subperiods. Individual vessel categories each change fairly abruptly, but the process of transformation of the entire vessel set is staggered. Within serving bowls, indeed, new additions continue to be made well after the initial break. However, we can say that the first subperiod ends, and the second begins, around the time of Structures 5 and 6.

Beckwith (1996, 232-4) concluded that the Late Formative ceramics of 141C, Salango, were probably contemporary with Bischof's (1982) Engoroy Temprano at Palmar, with perhaps some correlation with his Engoroy Medio. She then pointed out that, although there was a clear Guangala presence immediately over this material, there was no sign of any intervening occupation at 141C. Period 1 at 141B fills part of that hiatus: its two subperiods correlate largely with Bischof's Middle and Late Engoroy stages, and with Beckwith's Middle and Late Late Formative.

More generally, Beckwith (1996, 462-7) found that there was an overall set of similarities between the assemblages of 141C Salango, Loma Alta, Palmar (Bischof 1982), OGSE-45 Achallán, and La Carolina (Simmons 1970) that set them apart from three other important Late Formative sites to the south - La Chorrera (Evans and Meggers 1957; Meggers and Evans 1982), Peñon del Río (Zedeño 1985) and the Bellavista site (Aletto 1988) on Puná island - and one important Tabuchila site to the north - San Isidro (Zeidler and Sutliff 1994). The material from 141B supports this view, and there is no need for any revision of it.

I shall, then, first show briefly how the 141B material shares the main traits of the Middle and Late Late Formative and

Engoroy as described by Beckwith (1996) and Bischof (1982) respectively. and then discuss the main differences of the 141B material, with reference also to La Carolina (Simmons 1970). In passing, I shall make some suggestions regarding the Chorrera problem. I shall also comment on a number of minor or peripheral but related assemblages.

Amongst fineware vessels, the first part of the Period 1 sequence is distinguished from the second by the dominant presence of the deep, carinated, unrestricted Form Set 1 Serving Bowls, sometimes supported by annular bases or three hollow legs, and commonly decorated with a red slip on the exterior and iridescent paint on a smudged interior. These correspond largely to Beckwith's Vessel Form #2 which she notes are very common in the Middle Late Formative Period (Beckwith 1996, 460). They also correspond with those described and illustrated by Bischof (1982, 155, Figure 4c,d) for his Engoroy Medio Palmar Delgado:Engobe Rojo. It is notable at 141B that there is not even a single residual sherd of Beckwith's Early Late Formative markers, her Vessel Form #1 mirror bowls and Vessel Form #5 and 6 brown bowls (Beckwith *ibid.*).

The latter part of the sequence sees a diversity of serving bowl form. Though there is broad similarity between the 141B bowls and those from the Guayas coast, there are exceptions or deviations from the possibilities described by Beckwith and Bischof. These will be assessed later.

For cooking jars, Beckwith (1996, 461) was not able to describe any specifically Middle Late Formative characteristics. Rather, she defines two groups, Early and Late, according to their red paint decoration. This consists of horizontal bands and/or half-circles along the rim interior, and 1) initially, one or two

bands around the shoulder, with or without additional plastic decoration; and 2) latterly, vertical rows of red paint dots with a band around the exterior neck. A change between Middle and Late Engoroy, from horizontal red bands (Palmar Alisado:Banda Roja) to vertical rows of dots (Palmar Raspado:Banda Roja) on the exterior of cooking jars is emphasized by Bischof (1982, Figures 4f, 5g). The general picture of horizontal banding being supplemented by, and in part replaced by, more elaborate finger-painted designs is matched by the transition from Phases I-IIIE to IIIL at 141B, though at 141B the finger-painted designs, including half-circles, only make any significant appearance in IIIL.

Regarding cooking bowls, Beckwith (1996, 461) notes little variation through time on the basic configuration of her Vessel Form #12, beyond a possible softening of the basal angle, a possible lessening of restriction, and an end to the early practice of decorating the exterior rim with two separate bands rather than a single band. Bischof (1982, 156) makes a similar statement with respect to the carination of his Palmar Raspado:Banda Roja bowls of Middle and Late Engoroy. Again, my analysis of the Period 1 Widebowls is in agreement.

The differences between the Salango 141B material and the rest relate principally to Late Engoroy vessels. However, two notable elements of Beckwith's Middle Late Formative at Loma Alta are absent from Salango: 1) the Vessel Forms 19 and 19a, unique to the site (Beckwith 1996, 279); and 2) bowls with more widespread "cuspidor pattern" decoration, i.e. incised designs on a the smooth upper body exterior of a restricted carinated vessel, with red paint on the lower body (Beckwith 1996, 318, 320).

At 141B, there is clear evidence of change through time in



the hollow legs of serving bowls: from shorter to longer, and from a flaring to a cylindrical form. Beckwith (1996, 379f.) could see no such change in her material. Bischof makes no explicit reference to the matter. The early shorter leg at Salango may then represent a minor regional distinction in the middle stage of the Late Formative across the border between Manabí and Guayas.

Beckwith (1996, 460) notes that in the Late Late Formative, the iridescent painted bowls are shallower, often multiply stepped, and often decorated with one or two notched appliqué fillets in place of red slip on the exterior. Both of the Engoroy Tardío shallow iridescent bowls illustrated by Bishof (1982, Figure 5b,c) have such fillets. At 141B, although there are shallow bowls, there are no instances of more than two steps on any rim interior, and there was only one nicked fillet. Although then, the multiple steps and fillets may be chronologically significant, they also appear to be regionally significant - i.e. they are perhaps more common features of the Guayas coast than of south Manabí. On the other hand, as Stirling and Stirling (1963, 12, Plate 6a) describe notched flanges for the Tarqui site, there may be some more complex or local factors at work.

At 141B, there are a number of methods of treating the lips and rims of serving bowls, other than notching, that are diagnostic of the second half of Period I. These techniques are not necessarily unique, though pinching of the lip (my Form Set 6), for example, appears not to be recorded anywhere else. But they suggest a local emphasis that differs from that of the other assemblages whose outstanding characteristic, by comparison, is the use of nicked and notched fillets.

The second major area of difference seems to lie in the designs applied to Phase IIIL cooking jars decorated with red paint.

First, the 141B designs are very much more varied than those described for the other late Engoroy sites, including La Carolina (Simmons 1970, 254-257). On rim interiors, half-circles, with or without horizontal bands, are most frequent, but there other possibilities including vertical and diagonal bands, circles or half-circles at top and bottom etc. On the outside, there are occasional vertical rows of dots, but perhaps only once as shown either by Beckwith or Bischof. Rather, the principal Salango motifs involve sets of three, four or five tightly placed bands, vertical or diagonal, regular or irregular, each set painted by the fingers of one hand. (Bischof (1982, Figure 7e) does present a cooking bowl with finger-painted vertical bands, and the rim form fits well with the Phase IIIL examples from Salango. However, his vessel is decorated with black paint, and he places it in early Guangala.) Further, the horizontal band around the exterior necks of the Guayas examples is absent from 141B, save in one instance.

A related difference lies in the designs applied to the interior of cooking bowls decorated with red paint. Bischof (1982, Figure 4e) shows the interior of an Engoroy Medio vessel decorated with what appear to be rows of small spots, but they are different from the irregular splashed patterns of the 141B spot decoration. Further, neither he, Beckwith nor Simmons (1970, 252-254) describe anything like the vertical bands down the inside upper bodies of the finger-painted Widebowls of the latter stage of the Period I sequence.

Potential differences in iridescent paint design, whether on bowls or jars, are difficult to assess as indicators of regional or subregional variation. Bischof (1982, 149) mentions bands on his Engoroy Medio Palmar Delgado type bowls, and he illustrates a complex pattern involving zig-zags and nested V's around the upper body

interior (*op. cit.*, Figure 4c); while for his Engoroy Tardío, there is no example of a vessel interior, but he lists bands and spots (*op. cit.*, 155) as the element possibilities for iridescent designs on his Morros Pulido bowls. Although the reference to Engoroy Tardío is vague, it and the Engoroy Medio description fit well enough with the 141B material .

Beckwith makes no explicit statement of change in iridescent paint design, but it is clear that the interiors of her Early Late Formative bowls from 141C (Beckwith 1996, 113-129, 143-155), are commonly decorated with small circular spots that are absent from the Period 1 bowls of 141B-T3, with a single exception quite different to the 141C examples. At Salango, then, small spots on bowl interiors indicate the earlier stage of the Late Formative, and this pattern holds for the Guayas coast sites. At Palmar, Bischof (1982, Figure 3a) seems to suggest that they are diagnostic of Engoroy Temprano. At Loma Alta they are mainly limited to early vessel forms (Beckwith 1996, 236-258) though they also appear with the possible Middle Late Formative Vessel Form 19b (*op. cit.*, 267). Finally, they are absent from Late Late Formative bowls at Achallán.

Unsurprisingly, small spots on jars and bottles also seem to be diagnostic of the earlier stage of the Late Formative. They are absent from the 141B Period 1 sequence. At 141C they are not common, being limited to three jar rims and various whistling bottle body sherds (*op. cit.*, 196f., 207f., 219f.). They are absent from the Late Late Formative Achallán assemblage. At Loma Alta they appear rarely (*op. cit.*, 324, 328, 331f., 360-2).

There is, however, a distinction to be made between small (c10 mm) iridescent spots in rows defined by engraved lines, and larger and more ovoid spots (c15x20 mm) which lie between bands of

iridescent paint. At 141C, the the former technique is clearly of the Early Late Formative (*op. cit.*, 219f.). At 141B, the latter are associated exclusively with Phase IIIL bottles and jars.

There are several other design possibilities for iridescent paint on bottles, jars and bowls, whose chronological significance at 141B can be extended to La Libertad. Simmons divides his iridescent bowls at La Carolina into three main categories: an early and intrusive trade ware, Chorrera High Polish (Simmons 1970, 152-4), and two local varieties, Engoroy Polished Red:Smudged Interior and Guangala Sombre:Iridescent (*op. cit.*, 234-236, 263-280), with a minor type of less well done vessels - La Libertad Soft Red Smudged (*op. cit.*, 289-296). The Chorrea High Polish has zoned bands defined by fine engraved lines, and the bands are filled with iridescent paint or rows of small (<10 mm) dots. This clearly corresponds to the spotted designs on the bowls and bottles at 141C.

Simmons then distinguishes between the broad vertical or diagonal bands (frequently in chevrons), and occasional large dots of Engoroy Polished Red:Smudged Interior bowl interiors, and the Guangala Smudged:Iridescent possibilities of vertical or horizontal bands around the rim interior, with nests of curvilinear lines or chevrons, and, very rarely and only at the centre, dots. Simmons makes no statement of any chronological priority for either of the varieties, and has them both more common in the early and middle stages rather than late Engoroy. But the differences in design possibilities correspond with those of the early and late stages respectively of the 141B Period 1 sequence.

This provides an introduction to the question of the relation between Chorrera and Engoroy. A great part of the difficulty in talking of Chorerra rests in the paucity of published data on the type

site Beckwith (1996, 3, 21, 463). This is not helped by the changes that have been made each time a Chorrera type list has been published (Simmons 1970, 424-427; Beckwith 1996, 24-27). In addition, not only has Chorrera never been independently dated, there has neither ever been any examination of its internal relative chronology (Beckwith 1996, 463, 467).

Simmons (1970, 432) and Bischof (1982, 161) observed that any similarities with the described Chorrera types are generally limited to early components of coastal late Formative assemblages. Amongst Beckwith's material, we have also seen that the high polish, small spot iridescent design, and combination of fine engraving with iridescent paint, all classic Chorrera techniques, all appear early. Reversing the direction of the argument, these traits are surely limited to early coastal assemblages because they represent, correspond to or are traded from, an equally early Chorrera stage of the Late Formative in the Guayas Basin.

Bottles help elaborate this point. Beckwith (1996, 366) notes the absence of any seriation of spout and strap handle whistling bottles for the Late Formative. However, the evidence from 141C and 141B can now be used to suggest at least two stages in their development.

First are the early bottles as represented by the 141C vessels with high polish, smudge and iridescent paint and/or engraving (*op. cit.*, 215-221). Other than surface treatment, they are characterised by handles whose bases are frequently embellished with a raised triangle facing upwards on the exterior (*op. cit.*, 219; cf. also Estrada (1962, Figure 50) for examples from Ayangue). One or two air passages to the whistling chamber exit through the triangle.

Secondly, at 141B, while there is one possibly residual spout

fragment with high polish from a Phase II deposit, the majority of bottles come from late, Phase III, contexts. Two have a relatively simple spout and strap handle configuration. The handles are both broader than the 141C examples, and lack the triangular embellishment, although the air passages still exit close to the base of the handle exteriors. In addition, finish (an ordinary polish) and iridescent design elements differ considerably from the early material (Beckwith (1996, 358-366) has comparable examples from Loma Alta).

The 141B sample also includes a late dog bottle, an apparently local version of an idea executed with greater sophistication by the "Chorrera" potters of N. Manabí. A second, very similar bottle came from 141B-T4 (A. Mudd, pers. comm.). The late date of the Salango bottles suggests that the more sophisticated examples of the interior represent a late stage of the Late Formative in that area.

At the very least, then, the evidence from Salango suggests that an inland Chorrera complex could be divided into two parts, represented in the early stage by the simple bottles with small spot iridescent paint and/or engraving, and in the later stage by the famous zoomorphic and phytomorphic bottles.

Finally, four other sets of excavated material can be related to that of Period I at 141B. The region of the Tarqui site (Stirling and Stirling 1963) was the likely source of several imported cooking bowls and jars from the late stage of the Period I sequence. Although iridescent paint is present at Tarqui, there is a much wider range of decorative techniques applied to both coarse and fine wares, including more extensive and more intricate plastic methods and more paint combinations. There is also a much wider range of vessel supports. If, as seems certain, the Tarqui material is in part contemporary with

late Period 1, all suggests a far more complex and qualitatively distinct set of traditions to which Salango was only loosely bound.

From La Plata Island, Marcos and Norton (1981, 150) illustrate three tripod bowls that correspond directly to the Form Set 1 bowls of Phases I-III E. A fourth vessel (*op. cit.*, 137) has the nested loops of Phase III L bowls, and the photograph, though unclear, suggests the shorter, upright upper bodies also typical of Phase III L.

The early Guangala ceramics excavated at Valdivia by Stothert (1993) are matched by only a few elements of the Period 1 sequence, the equivalences are mostly not exact, and the Valdivia site occupation is also probably mostly later. Her Vaso B (*op. cit.*, 46, Figure 34), however, which she suggests is early in her sequence, is a close match for the 141B Phase III L jar with zoned short incised lines. The jar with iridescent paint (*op. cit.*, Figure 13, and front cover) is also comparable to Phase III L Form 2 iridescent jars. And the rims of her Computera B (*op. cit.*, 55, Figure 47) are similar to those of two shallow bowls from Form Set 10F, though the Valdivia examples are not of fine fabric. Notably different is the technique of finger painting used on Stothert's Olla C (*op. cit.*, 42, Figure 30), on which very smooth, tapering lines are drawn down from the shoulder, and on the rim interior of Olla B (*op. cit.*, 37, Figure 28). On the other hand, the design of finger-width bands drawn down the vessel side on her Plato C (*op. cit.*, Figure 41b) is very close to that of the late Widebowls at 141B.

From Los Cerritos, three whistling bottles (Zevallos 1995, Figures 51a-f) compare well enough with 141B examples to indicate contemporaneity with Phase III L. Likewise, bowls and jars shown (*op. cit.*, Figure 50) mostly match or fall within the general parameters suggested by 141B Phase III L forms.

In sum, Bischof (1982, 138) proposed that Engoroy ceramics extended from the Santa Elena Peninsula as far north as Joá, about 30 km beyond Salango. Beckwith (1996, 462) concluded that the Late Formative ceramics from La Libertad to Salango had more in common amongst themselves than with material from sites, such as at Guayaquil and Manta, outside that zone. The Period 1 material supports these similar views. There is enough of a qualitative difference between the Tarqui material and that at Salango 141B to indicate that relations with Tarqui were more of the order of occasional movement of finished objects, in a ceremonial context, than close sharing of techniques. On the other hand, ignoring the tendency in the late stage for sites to present more individual taste and expression in their serving bowl forms, the range of the Period 1 material falls fully within that of La Libertad, and indeed is more limited.



## CHAPTER 6 CERAMIC FIGURINES

At least six general types of anthropomorphic pottery figurine are represented by twenty-three fragments, though there were no complete or even near-complete examples. All fabrics are fine, unless stated otherwise.

1) Three fragments (Figure 136a-c), each about 5 mm thick, of a single figurine came from two adjacent layers of Phases I and II. The fabric has variable brown surfaces, and a brown core. The exterior surface is a well polished 7.5YR dark brown. The larger fragment, 75 mm long, is of a right arm or leg.

2) In a Phase IIIIE layer was a single fragment, 3.5 mm thick, of the face of a hollow moulded, probably female figurine (Figure 136d). The fabric is pink (7.5YR 7/4). The exterior has no paint or polish. Nose, mouth and chin are clearly delineated, with lips separately formed.

A second fragment of a hollow moulded female (Figure 136e), most likely redeposited, came from the fill of a large Phase V post hole. It is of similar fabric to the first, also lacks polish, but has traces of red paint at the neck and is a little thicker (4.0-5.5 mm). There is a nose ring, and an upper ear adornment. The lips are continuous around the mouth. In general, it is rather less finely featured than the first, and its dimensions suggest something up to twice the size. There are textile imprints on the interior.

A third fragment (Figure 136f), 2 to 7 mm thick, is from a Phase IV layer. It has a right hand, holding a baton across the right chest, with the lower part of a necklace whose two ends do not quite meet. The interior has finger imprints. The exterior has 5R red paint over the lower surfaces, with some polish on the raised surfaces, which are a 5-2.5YR dark red brown.

Both the latter two pieces are from La Plata Hueco figurines (Estrada 1957, 61-63, Figures 27, 28), of which a complete example was found at Site 141A (Norton, Lunniss and Nayling 1983, 57; Programa de Antropología para el Ecuador 1984, 74 top left). The figurines are both whistling instruments: the blow-hole is through the top of the head, and there are two sets of finger-holes at the front and back of the waist, above the whistles themselves. The first fragment, though from an earlier context, should probably be classed with these.

3) From the bottom of the Phase IIIL Structure 6 perimetral sunken wall came a detached right lower arm and hand (Figure 137a). A groove around the wrist marks off the undecorated hand from the lower arm, which is painted (post-fire) yellow. The finger tips are absent, but it is clear that the hand was designed to hold some sort of baton, as the La Plata female figure, or staff, such as that held by another hollow moulded piece from 141A, which represents a male character (Norton, Lunniss and Nayling 1983, 57f.; Programa de Antropología para el Ecuador 1984, 74 top second left). However, it is also clear that the object held was made as an item initially separate and subsequently introduced to the hand, and in this the fragment differs from the complete specimens alluded to.

4) From a Phase IIIL post-hole came a fragment of a hollow moulded figure (Figure 137b). An ear spool is present, with what is probably an upper ear adornment. Again, there is a suggestion of the male figure from 141A, but with different treatment of the head-dress, where there is a hint of yellow paint. Otherwise, the surface is light red brown and smooth.

A further three fragments (not shown), probably also of similar figures, came from layers of late Phase IIIE, Phase IIIL and Phase IV. They are painted reddish yellow, two of them polished, and

are of upper arms or shoulders of hollow figures.

5) From the clay platform of the Phase IIIL Structure 6 came a semi-detached ear spool (Figure 137c). 21 mm in diameter, and 2-4 mm thick. The surface is grey, without finish beyond a careful wipe. It is most likely off a very large figure of the sort called Bahía Gigante Modelado (Estrada 1957, 61: see, for complete specimens: Gartelmann 1986, 236f; Adoum, Holm and Valdez 1989, 68f.).

A single right hand (Figure 137e), 50 mm long, is undoubtedly off a Bahía Gigante figurine. It has an appliqué wrist band (without paint, but very smooth), below which, to the front, there are a pair of horizontal grooves that delimit a band of bright green post-fire paint; and then four vertical slashes to delineate the fingers, which, with much of the rest of the fragment, are painted red. The context of this piece was the fill of a Phase IIIL rubbish pit.

6) A single coffee bean eye (Figure 137d) was found in a late Phase IIIE layer. It is of a distinct, medium fine red brown - brown fabric. The slit circular appliqué pellet sits on 4.5 mm thick section of flat clay. There is neither paint nor polish. It appears to be part of a hollow figure, and thus not of either of the two solid figurine types that might otherwise have suggested themselves: the earlier Machalilla type (see, for example, Lathrap, Collier and Chandra 1975, Figure 52), or Estrada's Estero type figures (Estrada 1957, 61, Figures 26 and 29).

The remaining nine fragments are all of hollow figurines, and came from Phase IIIL or Phase IV contexts.

OBSERVATIONS In early contexts (Phases I and II) just one figurine is represented. For Phases III and IV, two of the late Bahía I types described by Huerta (1940) and Estrada (1957) are represented, as well as at least one other previously undocumented type. All may

have been imported to Salango.

There is no pattern of deposition in the distribution of the fragments at 141B-T3, save that the majority come from contexts of the later stage of the Salango 1 sequence. None, however, were included in structured depositions there.

## CHAPTER 7 RELATIVE AND ABSOLUTE CHRONOLOGY

To provide a chronology for Salango 1, we can look at radiocarbon dates from sites related through their ceramics to Salango 141B, and compare this external evidence with twenty dates from 141B itself.

Twenty-three samples of ash and human bone from contexts of 141B-T3 were submitted for radiocarbon dating in three stages at two laboratories. The first two sets went to Kreuger Enterprises Inc., Cambridge, Massachusetts, and the third to the Oxford University Radiocarbon Accelerator Unit, Oxford, UK. With the first set were a further three samples of bone from graves directly comparable to those of Phase V in Trench 3, and generally contemporary with them, but excavated earlier in other sectors of 141B.

The results are of limited use. In only three cases were the standard deviations of less than a hundred years, and in five cases they were greater than four hundred years. Furthermore, only one (OxA-5836) of the third set of seven samples had sufficient collagen preserved to give a result (Paul Pettitt, pers. comm. 1995). This third set was submitted nine years after the second, and ten years after excavation. It seems likely that the collagen deteriorated during storage of the bones after excavation. The general imprecision of the second set (GX13667-13675) could be due to the same cause.

The two stages (Phases I-IIIE and Phase IIIL/IV) of the Salango 1 ceramic sequence at 141B correspond to the Middle and Late Engoroy of Bischof (1982) and the Middle and Late Late Formative of Beckwith (1996). With an Early stage at 900-600 BC, Bischof suggested Middle and Late Engoroy ranges of roughly 600-300 BC and 300-100 BC.

Five results (Table 23) from samples out of Early Engoroy contexts at 141C Salango (Beckwith 1996, 64, 232) fit Bischof's frame,

and allow a start for the 141B Middle Engoroy at around 600 BC.

Table 23. RADIOCARBON DATES FROM OMJPLP-141C: EARLY ENGROY

SAMPLE	DATE BP	CALENDAR YEARS (AT 1 SIGMA)	CONTEXT
GX-9992	2705+/-150	905-605 BC	0-2S/2-4E; Level 7
GX-9990	2765+/-175	990-640 BC	0-2S/2-4E; Level 6
GX-9994 <sup>1</sup>	2750+/-190	990-610 BC	ENT 10 ; Level 5
GX-9995	2590+/-170	810-470 BC	0-2S/2-4E; Level 4
GX-9991	2650+/-165	865-535 BC	0-2S/2-4E; Level 4B

<sup>1</sup> The sample was of bone. All other samples were of charcoal.

Reference for Phases I-IIIE at Salango 141B is given by Bischof's Middle Engoroy dates at Palmar of 435 +/-80 BC (Hv-1293) and 345 +/-75 BC (Hv-2978). At Loma Alta, Beckwith (1996, 384) uses a date of 590+/-80 BC (SFU-109) for her Middle Late Formative, and this again would correlate with early Salango 1 material.

The end of the Salango 1 sequence relates to ceramic material from three other dated sites. Tarqui produced a result of 220 +/-200 BC (Stirling and Stirling 1963, 5), was probably very close to the source of certain Phase IIIL cooking vessels imported to Salango, and contained elements of the Bahía I ceramic figurine repertoire also represented at 141B. The ceramic figurine fragments at 141B also tie in with the Estero cuts, on the basis of which Estrada (1957, 59-67) made his typology of Bahía figurines, and which produced a most recent date of 100+/-120 BC (Meggers, Evans and Estrada 1965, 153). At OGSE-MA-172, Valdivia, with whose Early Guangala material some Phase IIIL pottery at Salango had certain similarities, one sample (Tx-4455) produced a date of 80+/-60 BC (Stothert 1993, 66). This would suggest something around 100 BC for the end of Salango 1.

A likely range for Salango 1 ceramics, then, on the basis of external correlation is 600-100 BC, with the break between Phases IIIE

and IIIL (Structures 5 and 6) around 300 BC.

For Middle Engoroy (Table 24), a date of  $590 \pm 85$  BC (GX-13028) from a Phase I post-hole meets this expectation. The second date for Phase I is less comfortable: from an ash layer over the central floor, GX-13027 is, at  $1095 \pm 150$  BC, far earlier than expected. The third sample, GX-13026, from occupation debris that built up outside the house, offers a date of  $390 \pm 485$  BC. The deviation is enormous, but at least straddles the expected range.

From a Phase II (or IIIE) ash layer over the central platform, sample GX-13025 gave a date of  $705 \pm 85$  BC. This is slightly older than one would expect.

The eight dates from six skeletons and one hearth of Late Engoroy Phase IIIL are frustrating. The most precise result,  $1230 \pm 60$  BC (OxA-5836), from bone of grave 3804, takes us back into the range for Machalilla occupation. The four dates with deviations of 285 years or more (GX-13675, GX-13674, GX-13673, GX-13023) could not be used as primary evidence, and the first three are all too early, though the fourth covers the expected range.

This leaves three samples from Phase IIIL human burials, with standard deviations of between 165 and 195 years. GX-13024 was taken from charcoal found with the skeleton sampled as OxA-5836, and provided a date of  $130 \pm 195$  BC: while the deviation is greater than that of OxA-5836, the overall range covers what we might have expected. GX-13671 is slightly earlier, at  $225 \pm 170$  BC, and again comes close to expectation. GX-13670, however, offers  $525 \pm 165$  BC, a date more compatible with Middle Engoroy.

For post-Engoroy occupation, there were eight samples of human bone from Phase V pit graves. Four (GX-13667, GX-13668, GX-13669, GX-13672) had huge deviations and cannot be used as primary

evidence. Of the others, one (GX-10630) came from T3, with a result of AD 250+/-200. This is slightly later than the three dates from previously excavated skeletons. 210 +/-130 BC (GX-10632), 30+/-135 BC (GX-10635) and AD 95+/-165 (GX-10634).

Table 24. RADIOCARBON DATES FROM OMJPLP-141B

SAMPLE	DATE BP	CALENDAR YEARS (AT 1 SIGMA)	CONTEXT	CONTEXT TYPE	BURIAL
<u>PHASE I</u>					
GX-13028 <sup>1</sup>	2540+/-85	675 BC-505 BC	7277	Post-hole	
GX-13027 <sup>1</sup>	3045+/-150	1245 BC-945 BC	6653	Ash Layer	
GX-13026 <sup>1</sup>	2340+/-485	875 BC-AD 95	6666	Occupation Layer	
<u>PHASE II/IIIE</u>					
GX-13025 <sup>1</sup>	2655+/-85	790 BC-620 BC	5684	Ash Layer	
<u>PHASE IIIL</u>					
GX-13675	2870+/-360	1270 BC-550 BC	4068	Grave	4049
GX-13674	4970+/-900	2910 BC-1100 BC	3959	Grave	3942
GX-13673	2965+/-460	1475 BC-555 BC	3923	Grave	3899
OxA-5836	3180+/-60	1290 BC-1170 BC	3776	Grave	3804
GX-13024 <sup>1</sup>	1820+/-195	325 BC-AD 65	3776	Grave	3804
GX-13671	1725+/-170	395 BC-55 BC	3305	Grave	3315
GX-13670	2475+/-165	690 BC-360 BC	3301	Grave	3302
GX-13023 <sup>1</sup>	2220+/-285	555 BC-AD 15	3201 <sup>2</sup>	Hearth	
<u>PHASE V</u>					
GX-13672	2500+/-460	1000 BC-80 BC	3599	Grave	3624
GX-10635	1980+/-135	165 BC-AD 105		Grave	ENT 56
GX-10634	1855+/-165	70 BC-AD 260		Grave	ENT 79
GX-10632	2160+/-130	340 BC-80 BC		Grave	ENT 88
GX-13668	3370+/-800	2610 BC-1010 BC	773	Grave	771
GX-13669	2660+/-480	1180 BC-220 BC	768	Grave	768
GX-10630	1700+/-200	AD 50-AD 450	668	Grave	662
GX-13667	2530+/-340	910 BC-230 BC	468	Grave	467

<sup>1</sup> The sample was of charcoal. All other samples were of human bone.

<sup>2</sup> 3201 was burnt soil around fire pit 3116.

In the absence of Guangala dates from other sites earlier than 100 BC (Stothert 1993, 66). I suggest that Phase V probably began in the first century BC. Terminal dates for Phase V, VI and VII will



follow once their ceramics have been studied.

A layer of ash over the last of the yellow clay surfaces (4344) of the Salango 1 enclosures has been mentioned as being possibly of volcanic origin. Given the spread of ash falls over nearby areas of the coast (Isaacson 1994; Zeidler and Sutliff 1994), there are grounds for expecting volcanic ash to be found at Salango. If the material over 4344 was volcanic, then it would clearly be of great potential interest and importance for chronological dating and discussion of the wider context of cultural development. A precise determination, however, of the ash and its origin is not presently possible, as the original soil samples no longer exist, and the relevant area of the site now lies under a thick concrete floor, with no chance of access to collect new samples.

The evidence, then, from 141B itself is neither consistent nor precise. This is disappointing, given the high resolution of the stratigraphy. However, Phases I-III E can be dated roughly to 600-300 BC, and Phases III L-IV to about 300-100 BC.

## CHAPTER 8 INTERPRETATION OF THE SITE AND COMPARISON WITH OTHERS

### 8.1 THE CONTEXT OF SETTLEMENT PATTERN AND SUBSISTENCE

Schwarz and Raymond's (1996) study of the Valdivia Valley is the only published account of Late Formative settlement pattern on the central coast. Although there was a minor increase in the valley's population between Late Machalilla and Early Engoroy, "a general stability of population and settlement persisted for 1100 years, through the Machalilla and Early Engoroy [900-400 B.C.] Periods" (*op. cit.*, 219). They suggest that the valley's coastal Machalilla site "can *only* have been a specialised fishing settlement" (*op. cit.*, 220; their italics), and compare stable isotope evidence from human remains at Salango 141A (van der Merwe, Lee-Thorp and Raymond 1993) which indicate there "a reliance on marine foods much greater [in the Machalilla period] than in earlier periods, as well as a possible maize component in the diet". Further, "the large Machalilla village sites of the Valdivia Valley are characterised by extensive and deep midden deposits". They then note that "late Engoroy [400-100 B.C.] witnessed a number of abrupt transformations in Formative settlement in the Valdivia Valley, presaging post-Formative trends in settlement patterns. Overall population rose sharply...Late Engoroy saw the beginning of an expansion of settlement into new zones, previously unoccupied, in the hills distant from the Valdivia mainstream."

At Salango, the Machalilla settlement likewise left a deep, extensive midden, with abundant fish remains. Though post-holes and wall-trenches were found, there was no obvious sign of ceremonial architecture, and this matches Schwarz and Raymond's observation in the Valdivia Valley that the large Machalilla middens "represent

residential sites rather than empty ceremonial centres" (Schwarz and Raymond 1996, 220). It was over the remains of this fishing village that Engoroy occupation was concentrated.

The extent and density of Engoroy settlement at Salango is uncertain. Engoroy occupation is principally represented by sites OMJPLP-141A, 141B and 141C, with some activity at site 140. The focus of ceremony was at 141B, where the main structures faced north-east from the base of the headland hill, Punta Piedra Verde. A potential area of settlement would include all the flat ground either side of the three excavated sites, from the beach to the north-west, to the base of the hills to the east and south-east, i.e. roughly 6 hectares. However, sites 141B and 141C show that the different stages of Engoroy occupation did not cover exactly the same areas of ground, and that the ground was used very differently at different times. Thus, for example, there was no Middle or Late Engoroy domestic occupation identified at 141C, though there were Late Engoroy stone figurine depositions. This suggests that by Late Engoroy, the ceremonial area included site 141C, 50 m north-east from the main structures at 141B. But in the absence of excavated houses, it is still not clear where the main population of Middle and Late Engoroy Salango lived.

An archaeological survey of the Salango Valley was carried out in 1988 (Allan and Allan n.d.). Shovel scraping, along transect lines at 20 m intervals, identified 17 sites, other than the main settlement at OMJPLP-140 and 141. Of those, ten sites produced 20 or more identifiable sherds. No Machalilla or Bahía II material was found. 73 sherds were identified as Engoroy, coming from a string of four very small sites located on spurs or slopes along the north side of the valley. The majority of this material came from one site.

OMJPLP-V (64 sherds out of 86 for the site identified to period), set above the mouth of the river and now encroached upon by the present community's cemetery.

The Salango Valley's Engoroy material has not been identified to phase (Early, Middle or Late), but if we assume that no major occupation lies buried on the flood plain (an area that would have perhaps been too valuable for farming as well as too liable to flooding to attract settlement), then the picture is of overall continuity from the earlier, Machalilla occupation, and some very limited scatter away from the main site. The position of these small peripheral sites would suggest their focus on farming or exploitation of the forest. Future analysis of the botanical remains will give some indication of the dietary element provided by agriculture and the gathering of wild plants.

The principal source of protein was probably the sea, with fishing providing the greater quantity, and secondarily shell-fish collection (Béarez 1996, 137f.). Although vertebrate remains of other creatures than fish were recovered at 141B, their quantities (Sanchez 1989) were insignificant in comparison with those of fish, in terms both of numbers of bones and of flesh weight (Béarez 1996, 137). The majority of fish were of families of the open sea, most especially Scombridae. There appears to have been a change of preference, between Phase I and Phases II-III, from two species of Scombridae, *Katsuwonus pelamis* and *Thunnus albacares*, to a third, *Euthynnus lineatus*, indicating either a change in fishing technique or the discovery of a new fishing ground (*op. cit.*, 129). But the overall impression gained was of a broad but selective exploitation of marine fish, by net or line and hook, and perhaps also by poison (Béarez 1998), with a focus on the capture by seine net of the dominant pelagic species just off

the Island of Salango (Béarez 1996, 138).

In addition to providing food, the sea also yielded the raw material for many artefacts. Both shell hooks (of *Pinctada mazatlanica*) and beads (mostly of *Spondylus*) were recovered in different stages in the process of their manufacture at 141B-T3, and other artefacts, both ornamental and utilitarian, have been documented. It is not clear whether the rare imported obsidian was delivered in the form of flakes, as recovered, or in some cruder shape. (Mudd (1987) has shown that there was on-site production of flaked chert tools for use in a variety of purposes around Structure 1, and it is likely that on-site production of flaked stone tools continued through the following sequence.) But green stone beads appear to have come to the site in a finished state, and it can be assumed that the importation of this stone and obsidian, as well as that of the even rarer copper and gold, was part of a more generalised system of exchange of sumptuary goods. The main commodity exported from Salango itself would have been *Spondylus*, though other shells, products from them, and perishable goods such as fish (fresh, dried or salted) would probably also have been important.

Site 141B, then, during Middle and Engoroy times, was part of a community living next to and oriented towards exploitation of the sea, and had grown out of an earlier settlement with a similar material and subsistence base. But the ceremonial structures associated with Middle Engoroy and later occupation stood in stark contrast to what had preceded them.

## 8.2 CEREMONIAL STRUCTURES AND RITUAL AT SALANGO

Valdivia ritual is suggested by the three bundles of *Pinctada mazatlanica* valves from the margin of the lagoon at 141A. That these,

with the complete bowl, were intentionally deposited there at different times. is an interpretation strengthened by the later occurrence of grouped *Pinctada mazatlanica* valves in the context of a Machalilla interment. The burial of this male, beneath a ceramic vessel in the shape of sea-turtle carapace, is the most elaborate instance of Machalilla depositional ritual. But the 141A Machalilla graves in general show clear evidence of organised mortuary practice, both in the repeated flexed position of the individuals, and in the use of stones to mark the graves.

Early Engoroy occupation, recovered only at 141C, included no sign of ceremonial buildings. Rather, the site was a midden, similarly rich in organic material, especially fish bone, as the Machalilla levels, though perhaps with some clearer differentiation of microstrata. The single burial from the cut, and four possibly contemporary burials from the profile, were also all flexed, either seated or on their backs, but none had grave goods.

At 141B, the sequence from Machalilla to Middle Engoroy is not yet established, but certain key Early Engoroy ceramic markers are absent from the residual material found in Middle Engoroy levels, and this suggests that Structure 1 was built directly or almost directly over the final Machalilla occupation level. For the moment, then, it seems fair to treat Structure 1 as the first ceremonial building of the core sequence at Salango. While this does not necessarily correlate with an expansion of population and change in settlement pattern such as Schwarz and Raymond observed in the Valdivia Valley for their late Engoroy, it is evidence of major change in local settlement structure at Salango.

The Middle (Phases I-IIIE), Late (Phases IIIL-IV) and post-Engoroy (Phases V-VII) material of 141B-T3 is only part of a

larger complex, partly recovered also in other areas of 141B and at sites 141A, 141C and 140. Specifically, T3 covers just one rear corner of the main sequence of ceremonial buildings. But the evidence, nonetheless, is of a clear sequence, with a number of interrelated patterns of continuity and transformation. All structured deposition relates either to the buildings, which lie at the heart of the site, or to the human burials, which are themselves intimately bound to the buildings. As a means of controlling the interpretation of this sequence, I shall therefore focus first on the buildings and human burials and their changing relationship, and then draw in the remaining evidence for ritualised deposition.

There were three principal media for the construction of buildings, and for the definition of horizontal and vertical boundaries: coloured clay floors, coloured clay walls, and upright wooden posts.

The central space was first embodied in a floor (Phase I) or low platform (Phases II-III) of naturally yellow clay which served both materially and chromatically to distinguish that space from the surrounding area of dark sand. In Phases III-V the clay was extended so as to incorporate the area outside the central space within the sphere of control. The distinction, however, between internal and external space was maintained through the use of artificially coloured clay to create both the outer surface and a wall that, enclosing the interior, reinforced the boundary between inside and out.

Initially (Phase III) this wall was sunken, and served to extend the boundary down beneath ground level. Later (Phase V) walls, while retaining the deep foundation of their predecessors, rose gradually to create a hollow space about half a metre deep, and then decreased in height. Subsequently, the definition of subsurface space

lost its importance, and the sunken clay wall changed first (Phase VI) into a more surficial device for consolidation of the edge of the late Salango 2 low platform, and finally (Phase VII) into a single-coursed stone wall around the top of the platform.

Boundaries were also established between interior and exterior space through upright wooden posts. In the first period (Phases I-III E), they took the form of a rectangular superstructure rising over the central floor or platform. In Phase V, however, they appeared as a series of enormous, deeply set and widely spaced posts around the enclosed centre. In Phase VI, there were perhaps large corner posts on the platform top, but there is no sign of a Phase VII superstructure.

All these posts were most obviously visible above ground. But the artefacts buried beneath the posts of Phases I and V also indicate conscious attention to the under-ground. The posts, then, can be seen to have served both to mark a horizontal boundary, and to link space above and below the surface of the earth.

The final important principle of spatial order was building orientation. The axes of the main structures were NE-SW and NW-SE throughout the sequence. In Phases V-VII, the entrance was to the NE, and it is likely that this was also the case in Phases I-IV.

We can now see how human burials relate to this ordering. The five human interments of Structure 1 occupied a marginal, rearward position at the SW of its wooden building, with one of them lying outside it, and two of the grave fills were capped with clay similar to that of the floor. The area of their location was used before and after the interments occurred, without obvious change in general activity. This suggests that they were secondary to the main function of the building. There was just one adult, with one child and three



infants.

No burials were associated with the low platform and wooden building of Structure 2. But in Phases III and IV, following the development of a more complex platform, the graves were again concentrated to the rear of the central area. The blurring of the border between interior and exterior, however, was more pronounced, as some graves lay outside the perimetral sunken wall.

At this stage, adults were the dominant element, numbering twenty-two, with just one sub-adult and three infants. Intrusive destruction in particular of the tops of the graves that lay over the Phase III platform means that we cannot say whether any graves were capped with clay to match the floor.

However, there was a marked difference in general context. By the end of Phase III, the wooden superstructure had disappeared from the central enclosure. The platform itself, though clearly distinguished still by its yellow clay, had been reduced more or less to the level of the surrounding ground. The burials were closely associated with a range of other features, themselves mainly located outside the central space of the enclosure. The emphasis of activity, then, had shifted to mortuary rites on the foundation of the older structures. And Phase IV saw a continuation of this pattern.

The situation changed again in Phase V. The graves were all located inside what was now a dedicated funerary structure, with none, or very little, of the activity associated with Phase III/IV interments. All the individuals within Trench 3 were adults, and this was probably also the case outside Trench 3.

There was, then, a focus on human interment that increased in intensity until suddenly, in Phase VI, the funerary role of the site was abandoned. But parallel with this general process of concentration

of effort, were other, more complicated trends in the nature of the burials themselves.

Phase I and III/IV burials were linked by a common principal NW-SE axis of orientation. In Phase V, the main axis shifted to NE-SW, i.e. cross-cutting that of the earlier phases, and with a specific preference for a NE orientation. However, two Phase I skeletons faced NE, and all Phase III/IV individuals, if not facing up to the sky, also looked to the NE. It is possible, then, to trace a sequence which saw the development of the NE from 1) one of several possible directions for faces to look towards in Phase I; to 2), the preferred alternative for faces to look towards if not looking straight up at the sky in Phase III and IV; to 3), its adoption as the primary direction to which, in Phase V, both the faces should look, and the burials as entities themselves should be oriented. Thus, while Phase I and III/IV graves cross-cut the main building axis, in Phase V burial orientation was generally towards the same direction as the building entrance.

Selection and location of grave goods also changed. Pottery vessels were the dominant element of the goods. There was just one bowl in Phase I, but it was with the adult. In Phase III/IV, pots were found with over a third, at least, of the adults, while in Phase V, only one grave of Trench 3 was without them, and that may have been due to their relocation. In Phase III/IV there was a wider range of goods than in Phase V, and there was no specific location for them, or even for each type of them; whereas in Phase V there was marked regularity in disposition.

Sample sizes, in particular for Middle Engoroy (Phase I) and post-Engoroy (Phase V) are admittedly small, but the data suggest that treatment of the individual dead became more varied across the

transition from Late Engoroy (Phase III/IV) to the post-Engoroy stage. Phase I and III/IV burials were all primary. The Phase I adult was flexed, but on his/her side. All the other burials (of infants and child) of Phase I were supine. Supine too, with one exception, were all the burials of Phase III/IV, which were also predominantly extended. It was in Phase V that the widest range of possibilities occurred: if primary, then seated, and either flexed or cross-legged; and if secondary, wrapped in a bundle or placed in an urn (perhaps having been wrapped first).

The increasing importance, then, of human interment in site function sees an increasing coherence between building and burial orientation, an increasing focus on adult burial and ceramic grave goods, and increasing diversity in treatment of the dead prior to and at burial. As has been noted, however, Phase III/IV funerary rites involved a range of activity other than simple interment. This included some practices foreshadowed by earlier activity, but much also that was quite new.

Two feature sets related to the extended burials of Phases III and IV, were rubbish pits containing broken pottery, and fire pits. While burials tended to lie closer to the centre of the enclosure, and fire and rubbish pits lay around its edge, the fields of fire pits and rubbish pits both overlapped the field of human burials. Furthermore, in six cases, graves were directly associated with rubbish pits; and in five of those cases, one or more fire pits formed part of the feature cluster centering on the grave.

The sequence of activity varied, in that the grave might be dug first or last, and the rubbish pit might be dug before or after the fire pit was cut and used. The location of the different features with respect to each other in any cluster also varied. And the

majority of graves had no direct relation with either fire pit or rubbish pit. But the regularity of the pattern of association, and its continuation from Phase III into Phase IV, argue very strongly for close interdependence between the three feature types.

Whether all rubbish pits and fire pits were the product of funerary rites cannot be demonstrated. (It is notable, however, if inconclusive, that the number of features in each set was more or less the same.) Analysis of the ceramic content of grave fills, and comparison with the rubbish pit contents, would perhaps produce data bearing on this problem. The presence, however, of fragments of a single, imported jar in three separate rubbish pits, itself points to a complicated pattern of pottery disposal.

The general coherence of graves, rubbish pits and fire pits contrasts with the different distribution of the stone figurines of late Phase III. The first stone figures were set beneath the Structure 7 wall trench. None of the dedicated figurine depositions occurred inside the line of the Structure 7 enclosure. Although, then, the fields of human burials, fire pits, rubbish pits and figurine depositions overlapped, dedicated figurine depositions were excluded from the centre. (When two figures were buried as grave goods in the central area, the stones were both, and uniquely, mutilated.)

On the other hand, the presence of similar figurines 20 m to the east at 141A (Norton, Lunniss and Nayling 1983, 57), and 50 m to the north at 141C (Kurc n.d.), suggests that the platform of late Phase III was completely surrounded by a wide field of these depositions. Indeed, they present one of the more remarkable images of Late Engoroy Salango. The platform was not approached across a simple open space; rather, the surface around it, some of it laid with "purple" clay, was studded with these small white and green-painted

stone figures, still visible though set in their holes.

The incorporation of the figurines in the Structure 7 foundation wall was a literally fundamental element of the definition of the enclosure. The primary significance of the area outside the late Phase III enclosure may then well have been as a site for the location of the subsequent stone depositions. They comprise, after all, the most numerous and extensive feature set in that area. But it may be better said that the figurines brought importance or value to the place. were even essential to it.

In addition, the upright posture and developing visibility of the figurines, as they came to emerge from the ground, both ran parallel to the emphasis on the vertical axis embodied in more pronounced fashion by the wooden posts. Like the posts, the figurines were used to define space. It seems likely, then, that the figurines were not integral to burial ritual, but rather were important aspects of the place to which the human dead were brought for interment.

The two other types of structured deposition - animal and bird burials, and artefact depositions not involving stone figurines - are not easily subject to generalization: they were few in number, very varied in content and location, and not all too closely defined in stratigraphic terms. However, they do seem to have reflected the changing focus of human interment.

Stratigraphically and spatially, the dog burial was closely associated with the human burials of late Phase III, and lay inside the enclosure; while the tigrillo and bird burials, though also of Phase III, all predated Structure 5 and lay outside the enclosure. The two simplest artefact depositions, of Phases I (stone disc and bead) and II (gold ring), were placed on the central floor. Those of Phase III were all away from the centre of the enclosure. And the two (both

uncertain) of Phase V were within the funerary enclosure. No depositions were associated with Phases VI and VII. This may be because any such features were removed by earlier excavation. But it is also possible that they never existed. In that case, then, the end to human interment was accompanied by an end to all depositional activity on and around the platform.

Thus the artefact depositions collectively emphasise the importance, first, of interment itself, and second, of the site as a place for interment. Human burial was not simply a means of disposing of the dead. It was carried out in the context of space set apart from the world around it, and reflected the structure of that space. Artefacts were incorporated in the structure of the buildings - stone discs in Phase I, stone figurines in Phase III (one of these standing over a stone disc), stone anchors and grinding stones in Phase V - and thus linked the structures explicitly to the various realms of existence represented by those objects.

In addition, by Late Engoroy, the colour green had risen to a position of central importance. Four stone figurines, one disc and one stone fragment were painted green. Green stone beads, sometimes in matching pairs, were found across the range of structured depositions, including human burials, stone figurine depositions, bird burials, and miscellaneous artefact depositions. At 141A, stone figurines were found buried with green stone beads attached as necklaces. (And given the repeated associational importance of the beads in these structured contexts, it is at least possible that some of the isolated cases of deposition in holes were also intentional.) A further two green objects were the malachite discs found in late Phase III pits. Regarding pottery, green paint is found twice only, in the context of highly specialized forms: on a rare bottle form that probably carried

a human figure, and on a fragment of a Giant Modelled Bahía I figurine. Green, then, was used sparingly, but in a variety of media, to bind together many elements of Late Engoroy ritual.

In sum, the value of the site as a place for burial, first arising from ceremony conducted in the Structure 1 building, can be seen to have been reinforced subsequently both by each successive rebuilding, and by each addition to its contents through subsurface deposition. All the more elaborate secondary features were sited with reference to the organisational principles of the main buildings. And the features involving structured deposition demonstrate a collective though variable sharing of specific artefact types. The coherence of the ritual depositions, and the closely interdependent link between the buildings and what took place in them, could not be more clearly expressed.

### 8.3 COMPARATIVE DATA: BUILDINGS

No ceremonial buildings either of Machalilla or Early Engoroy date have yet been recorded for the coast. Valdivia settlements, however, include three with ceremonial structures described. At Real Alto (Marcos, Lathrap and Zeidler 1976; Lathrap, Marcos and Zeidler 1977; Marcos 1988), two opposed platforms projected into the central plaza of a village, and were capped by small wooden superstructures of oval form. At La Emerenciana (Staller 1992-93), a 3 m high sand dune was modified, with the addition of retaining walls and steps, into a single extensive (74 x 45 m) platform with two small oval clay floors towards one end. And at San Isidro (Zeidler 1994), there was a large mound (site M3D2-001), perhaps 6 m high and 30 to 40 m across on the summit, with a floor of possible ceremonial use, though with no sign of a superstructure; while an even larger mound (M3D2-002) sits on a

nearby hill (Pearsall and Zeidler 1994. 207).

La Emerenciana and San Isidro are both Late Valdivia, while the beginnings of the platforms at Real Alto date to Early Valdivia and their abandonment is set some time prior to occupation of the other two sites. This difference in dates, in combination with wide geographic range (Figure 1), variation in scale and configuration of components, does not permit extended generalisation.

The principal point of comparison, however, between these sites and Salango, particularly Structures 1 and 2, is the creation of an elevated and otherwise materially distinct setting for ceremonial or ritualised activities. A second shared feature evident most clearly at Real Alto, though absent from La Emerenciana and only in part suggested for San Isidro, is the practice of successive amplification of the ceremonial platform and reconstruction of its wooden superstructure.

That said, there is a clear difference in shape between the oval configurations found at Real Alto and La Emerenciana, and the rectangular or square forms adopted at Salango. (Damp and Norton (1987) suggest an oval outline too for an ephemeral Valdivia VI structure of presumed ritual purpose found on La Plata Island.) There are also marked differences in construction technique: there was, for example, no wall trench for the wooden superstructure at Salango such as was employed at Real Alto. Further, the Salango structures were a great deal more elaborate, both in general design and in detail: thus, for example, although there were ritual depositions at Real Alto and La Emerenciana, there was nothing to compare with the attention given to the post-holes for the roof supports of Structure 1 at Salango, with small stone discs carefully placed in the imported packing clay.

Middle Engoroy structures at Salango, then, though not



surprisingly, present significant changes in the embodiment of the ceremonial stage from their few known antecedents. There are still no contemporary ceremonial structures recorded for the coast, either for Middle or Late Engoroy, to indicate whether Salango followed a more general pattern of change. Estrada (1958, 77) refers to low platforms, probably house mounds, of Chorrera origin; but does not say where precisely he saw them, nor does he give any further details of their formation.

Buildings, however, modelled on ceramic jars offer another line of evidence. Holm (1985, Figure 1.7) illustrates a Machalilla stirrup-spout jar representing a circular, roofed structure with two opposed doorways, while a Chorrera-Bahía bottle (*op. cit.*, Figure 1.12) may show also a building that is quite round. He has (*op. cit.*, Figure 1.9) a Chorrera bottle that models a rectangular platform and building, with a short stairway leading to its entrance; and a second (*op. cit.*, Figure 1.10) that also shows a rectangular building. A third Chorrera bottle (*op. cit.*, Figure 1.11), however, depicts an oval building.

None of these need necessarily represent ceremonial structures, none of their proveniences are known, and it is not clear how the Chorrera vessels relate chronologically to the Salango sequence. But, they do indicate that the rectangular building form came into use in the Late Formative. And later vessels, from the north coast (Holm 1965, Figures 1.14-1.16; Meggers 1966, Figure 38) and south coast (Meggers 1966, Figure 20), suggest that the rectangular form was widespread by post-Engoroy times.

Bahía II platforms and rectangular superstructures have been recorded at Manta itself, and across the river at Esteros. Jijón y Caamaño (1995b, Figure 24) produced a plan and profile of a stepped

platform at Manta, with stone wall foundations, over 33 m long and 11 m wide, with its entrance and stepped approach at one, narrow end, which he ascribed to his proto-Panzaleo I and Estrada (1958, 76; 1962, 17) considered on ceramic grounds to be Bahía II. Estrada (1962, Figure 116) himself recorded a group of Bahía II rectangular platforms and wells at Esteros, covering an area of over 600 x 400 m. In terms of scale, the Period 2 buildings and settlement at Salango would have been of a much reduced order.

The Salango structures, then, present a number of unusual features. First is the use of sunken clay walls to define a platform perimeter (though the buried retaining walls at La Emerenciana (Staller 1992-93, 17, Figure 5) are possible antecedents.) Second, there is the use of differently coloured clays in the organisation and marking of surface and space. Third is the construction of an enclosed, above-ground, collective funerary enclosure. Fourth is the more square shape of the post-Engoroy period.

#### 8.4 COMPARATIVE DATA: BURIALS

There are Engoroy cemeteries reported at La Libertad, where Bushnell (1951, 85-94) recovered 42 individuals, and Stothert found a further 23 (Stothert n.d.; Ubelaker 1988), and at Los Cerritos, where Zevallos (1965/6; 1995, 138-189) excavated 172 individuals. At Loma Alta (Beckwith 1996, 47f., 83f.), 13 burials are recorded. There are also two mentions of single Engoroy burials, at López Viejo (Currie 1995, 10) and Palmar (Bischof 1982, 161).

Stothert (n.d.) dates her La Libertad OGSE-46B material to Middle Engoroy. But the precise chronology of Bushnell's La Libertad material, and that at Los Cerritos is not clear. Bischof (1982, 161) suggests that Zevallos' early and late phases at Los Cerritos are

indeed Early and Late Engoroy, and we have seen that some of his vessels seem close to Late Engoroy (Phase IIIL) examples at Salango. Bushnell's La Libertad pottery is hard to evaluate. Indeed, one of the "Engoroy" graves there is accompanied by a Guangala figurine (Bushnell 1951, 87), and other intrusions are possible.

No immediately post-Engoroy cemeteries are described for the south Manabí coast, though Estrada (1962, 20) suggested that he had found evidence for a large Bahía II funeral pyre at Bahía de Caráquez itself, and described (*op.cit.*, 75) calcified and almost completely pulverised Bahía II skeletons under a layer of volcanic ash fall at Estero, Manta. However, for northern Guayas, there are the early Guangala graves of 22 individuals at Valdivia (Stothert 1993), and another 20 Guangala burials reported by Bushnell (1951, 26-31).

The most distinctive feature of the Salango burials is their general ceremonial and architectural context. Of the others, all but Los Cerritos are reported in association with or close proximity to contemporary middens or occupation areas; but none, including Los Cerritos, are linked to ceremonial buildings. Neither were any of the graves from the other sites reported to be in direct association with rubbish pits and fire pits.

Second, the 141B burial assemblages, particularly those of Phases III and V, have an internal consistency of orientation matched by no other group. At Los Cerritos, there is perhaps a slight favouring of the west and north-west indicated on a plan by Zevallos (1995, Figure 37) of some of his first phase primary burials, but other directions are shown as well. Likewise there was no orientation favoured at Loma Alta (Beckwith 1996, 47), or La Libertad (Bushnell 1951, Figure 36; Stothert n.d.), nor is there any suggested by Zevallos for the second phase at Los Cerritos. At Valdivia (Stothert

1993. 13), though there is no single direction favoured, the early Guangala graves are mostly aligned to one of the cardinal points.

Burial type and position offer a third pattern of differences. In Early Engoroy, both Salango and Los Cerritos had primary, seated burials as the norm. However, in Middle and Late Engoroy, burials at Los Cerritos and La Libertad tended to be secondary, while at Salango (and at Palmar), the burials were all primary, and mostly supine and extended. Then, in the immediately post-Engoroy stage, primary extended burials became the rule at Valdivia and formed half of Bushnell's Guangala assemblage at La Libertad, the other half being secondary; while at Salango, secondary burials made their first appearance there, but the majority primary burials were once more seated.

The data, then, are not clear cut, and Loma Alta's variously flexed individuals cannot be used until they are more precisely placed within the Engoroy sequence. But it appears that after initially common practice in Early Engoroy, there was a Middle and Late Engoroy split between the north, represented by Salango (and Palmar), and the southerly sites of Los Cerritos and La Libertad. Continuation of the split into early Guangala is confirmed by the Valdivia assemblage.

Pottery vessels are the most common goods, where any are found, at all assemblages. Only the later burials at Los Cerritos were generally without goods. Otherwise, there is a wide range of objects and materials found, including beads and other objects of shell, stone and bone, amongst which green stone beads are the most characteristic of the period (Stothert n.d.). There is no obvious pattern of difference, between sites, in the location of goods within individual graves. However, at Los Cerritos, *Lyropectens* valves appear at least three times in direct association with the dead: over the skull of a

single secondary burial (Zevallos 1995, Figure 41a); over a skull of a multiple secondary burial (*op. cit.*, Figure 46d); and over the left knee of a primary burial (*op. cit.*, Figures 46a), this being a clear echo of the *Lyropectens* and *Spondylus* valves upright over the knees of grave 4471 at 141B-T3. Also present (*op. cit.*, 188, Figure 56) were numbers of worked gastropod columellas, as found also with grave 4471.

It is also notable (though the sample at each site is only two), that at Valdivia the early Guangala iridescent jars are not associated with females, as at Late Engoroy Salango, but with males.

General differences in cemetery size and internal populations cannot be satisfactorily assessed, given the likely incompleteness and/or lack of data on the excavated assemblages. However, the Late and post-Engoroy assemblages of 141B, with their increasing focus on adult burial, show a marked departure from the more inclusive system suggested by the 141A Machalilla assemblage, of whose thirty-eight individuals, twenty-four were adult, with one sub-adult, two children and eleven infants or new-borns (Ubelaker, pers.comm.). And although the Early Guangala assemblage at Valdivia is incomplete (Stothert 1993, 10), the dominant presence of infants in the recovered sample (*op. cit.*, 16-17) is again in marked contrast to the 141B Late and post-Engoroy figures.

Thus the 141B-T3 Engoroy burials are unusually coherent, and are found in a context of unmatched architectural setting and associated ritual. Further, though they follow general patterns of grave offering, they differ from the patterns of burial preparation and position found closer to La Libertad.

## 8.5 COMPARATIVE DATA: STONE FIGURINES AND RELATED ARTEFACTS

Three complete stone figurines were found on La Plata Island by Dorsey (1901, 255, 260, 265, Plate LXI). They were among the fragments of perhaps a thousand broken Bahía I ceramic figures, mostly anthropomorphic, some of them whistling vessels, discarded in piles on top of the Pampa de los Pitos, or washed into the quebrada beneath. Also, there were stone plaques, discs and beads, all of the same soft volcanic tuff as the figurines, some engraved, others not (*op. cit.*, 261-5, Plates XLIX-LX). Those engraved bore the same dot and circle design as the disc at 141B. Finally, there were coloured stone beads and unworked masses of the coloured stone used for making the beads (*op. cit.*, 266).

Marcos and Norton (1981, 147), on the other hand, found stone figurines buried intentionally at the back of the beach at Drake's Bay, with Bahía I, Tolita, Jama Coaque and Guayaquil ceramic whistling figurines, many stone plaques, beads of green and blue stone, as well as *Spondylus* beads, and fish-hooks. Both ceramic and stone figurines had been decapitated or disfigured, and the fish-hooks too, though unused, had been deliberately broken.

Reported finds at other sites are few. At La Libertad, Bushnell (1951, 24, 66, Figure 25i.) found three limestone figurines buried underneath a Guangala mound, though he does not say how they were buried. Estrada (1958, Figure 40) illustrated a "Bahía" example from his Libertad A cut. He later (Estrada 1962, Figures 97a-c, 97d,e) illustrated another thirteen, which he described as pendants, and a further three, which he called axes; but no provenience is given for these. The Parduccis (Parducci and Parducci 1972, 125) recovered a single similar axe form of figurine at Guayaquil. At Estero, Manta, amongst thousands of Bahía I ceramic figurines, Estrada (1962, 70)

only reports stone figures in the form of fish. For the islet off Cayo. Gartelmann (1986, 187) mentions, without original source, decorated stone blocks similar to those described by Dorsey for La Plata. No stone figurines are reported for Bahía de Caráquez.

The anthropomorphic stone figures mentioned above are for the most part closely comparable to, and probably all contemporary with, the Salango tusk-shaped examples of Late Engoroy. And La Plata presents, though more forcefully and with added elements, the same interassociation of stone figurines, stone plaques or discs, and green stone, as is found at 141B. But none of the stone figures are of the larger, flat-based form of 141B. And at Salango, Estrada's axe figures are unrepresented, there is only the single engraved disc, and there are no engraved stone beads. At no other site were flat river stones observed as figurine equivalents.

It is clear, then, that Salango presents an exceptional case amongst the sites mentioned, as in none of the others are stone figurines either associated with the foundation of a ceremonial structure, or found in a field of dedicated depositions. Indeed, at all other documented sites, the stone figurines seem not to have been of great importance.

This picture is probably, however, a distorted one, though how much so is unclear. The Museo del Banco Central del Ecuador, Guayaquil, has many Late Engoroy stone figurines in its collection. Many came from cemetery sites at Salaite and Joá (Olaf Holm, pers. comm.). This points to a link with mainland funerary practice, though we have seen at Salango that the link was not direct. It also suggests that Late Engoroy stone figurine use was centred in the immediate region of Salango and Joá.

By contrast, the wide range of Bahía I ceramic figurine types

(Dorsey 1901; Huerta 1940; Estrada 1957, 1962; Stirling and Stirling 1963) are essentially products of, and mainly limited to, the Manta-Bahía de Caráquez region. With the important exception of La Plata, they are only rarely found south of Manta. And even in their home ground, they seem only rarely to have been found intact. The most impressive such case was at Esteros, where in 1968, giant modelled figures were exposed along the shore by a large wave that removed the covering sand (Norton, Lunniss and Nayling 1983, 59; Gartelmann 1986, 185). Similar figures were found at Salaite (Gartelmann 1986, 236, 376n.). At La Libertad, Estrada (1958, 15, 71) mentions fragments of La Plata hollow figurines only as evidence of the contemporaneity of the site with Bahía I - i.e. there were probably only few fragments, and these were recognisably not of local origin.

At Salango, there have been found just two complete examples of Bahía I ceramic figures, probably intentionally buried, and a few scattered fragments. Salango, then, was linked to the Bahía-Manta-La Plata ceramic figurine cults. But the link was not strong. The ceramic figurines at Salango were clearly peripheral to a local ritual complex centred on the stone pieces.

Stone and ceramic figurines, then, have differently weighted, though overlapping distributions. But tusk-shaped pendants are depicted on Bahía I ceramic figurines, in particular the giant modelled figures (cf. Gartelmann 1986, 236; Adoum, Holm and Valdez 1989, 68f.), although there is no sign that the modelled pendants carry carved design. The stone tusk-shaped figures seem to represent a peculiar off-shoot of a wider tradition of pendant use.

The plaques, discs and beads of tuff, however, both engraved and plain, are apparently even more limited in distribution than the stone figurines, and the engraved stones are also numerically few.



Salango has produced the only mainland example of an engraved disc, and, with the exception of the Cayo islet, engraved stones are only otherwise reported for La Plata. Likewise, Salango is the only mainland site for which plain stone discs and plaques or rectangles are described. Those on La Plata (Dorsey 1901, 263, Plates LII-LV; Marcos and Norton 1981, 147) include all the shapes and sizes found at Salango. Dorsey (1901, Plate LIV), indeed, illustrates examples of small bevel-edged and slightly larger flat discs identical to those found in association with the Middle Engoroy contexts of Phases I and II at Salango. But the quantity of discs and plaques shown by Marcos and Norton in a single cache is many times greater than all those from Salango.

None of these sets of Late Engoroy or Bahía I objects, then, have wholly congruent patterns of distribution or deposition. The engraved beads are very rare. The plain plaques and discs are related, through contexts at Salango, to the structure of buildings, as are the larger stone figurines. The tusk-shaped figures are related on the one hand to the larger stone figurines, and on the other to pendants; but they are a generally separate group of objects, whose primary use lay in ritual deposition in the ground, but not burial.

The ceramic figurines, unimportant at Salango, are variously deposited elsewhere according to their type. The giant modelled figures have been found deliberately set, intact, on shore-line sites. The others are generally found broken, either in deposits of apparently domestic rubbish, as at Manta, or in more ceremonial context, as in the piles at La Plata. There are signs of deliberate mutilation on some of the ceramic figures buried at La Plata, and it may be that the fragments at Manta and elsewhere were also the product of intentional breakage.

No stone figures of the Machalilla period are known. But in the Valdivia period, stone and ceramic figurines are also most commonly found broken, probably as the result of deliberate mutilation, and discarded amongst household rubbish (Stahl 1986, 141). Although it is not possible here to evaluate fully these similar patterns of breakage, they emphasise, by contrast, the careful treatment of both the Bahía giant ceramic figurines at Manta and Salaite, and the Engoroy stone figurines at Salango.

#### 8.6 THE POSITION, ROLE AND SIGNIFICANCE OF SALANGO IN THE LATE FORMATIVE

The shape of the structures at Site 141 underwent many changes. So too did the activities practiced in and around them. I have dealt mostly with those relating to deposition or interment, whether of the human dead or artefacts, as these are what have left the greater quantity of material. But there were other traces left. For example, in the early phases, the repeated burning of fires on and across the central floor, to be followed each time by relaying of the floor, was clearly of great importance, perhaps in connection with some concept of renewal.

The many particular elements of ceremonialism at Salango, however, would each require more space for adequate assessment of their meaning and symbolic reference than is available here. Rather, I must focus on their general aspect, and suggest what they imply for our understanding of Late Formative communities of the central coast.

First, the ceremonial structures served as a point of reference. They embodied certain principles of construction and configuration that were successively readapted with almost insistent change. Each new building, though founded on its predecessor, was a

reinvention, and thus an assertion of renewed or new identity. Set against this process of change, the fixed point and underlying principles of the central structures, supported by the ever-growing substance of the site as more and more individuals and artefacts were invested in it, provided a statement of permanence and attachment.

Secondly, the objects brought to the site and buried there, as well as the buildings in and around which they were placed, were certainly important in their own right, as embodiments of particular symbolic meanings. But none of these were meant to last, or allowed to last, as visible expressions of identity, from one generation to the next. Rather, their importance lay in the accumulation of symbolic wealth that they provided.

Can I prove this? Perhaps not. But the impermanence of the individual structures and depositions as visible entities on one hand, and the constant re-creation of the site on the other, suggest strongly that the idea of place was of central concern. In other words, the definition of a specific place, through building, and identification with that place, through burial, are the main themes of site use.

What, then, can be said about the site, seen in this light, against the background of what else we know of the coast at this time? Six specific levels and directions of interaction are indicated.

First, Salango lay at the north end of a coherent, though internally variable, coastal ceramic zone whose largest known community was at La Libertad. As such, the first period of the 141B-T3 sequence (Phases I-IV) is part of the Engoroy pottery tradition.

Second, however, Salango's Middle and Late Engoroy burials are generally distinct from those of the area closer to the Santa Elena Peninsula. This suggests that the people of Salango and the

northern subregion of the Engoroy zone were socially distinct from those of the Santa Elena Peninsula.

Third, Late Engoroy Salango lay at the south of a small subregion reaching to Salaite and Joá in the north, which had its own repertoire of, and use for, mainly anthropomorphic stone figurines at the time that the more numerous ceramic whistling figures of the Bahía and other zones were being circulated.

Fourth, exotic cooking vessels and an elaborate double-chambered whistling bottle indicate Late Engoroy interaction with Manta, a major centre of the more northerly Bahía I zone. One of the salient features of Bahía I was its ceremonialism (Estrada 1957, 1958, 1962), and it is no coincidence that the context of interaction with Salango was funerary and associated ritual.

The movement and deposition of figurines is another aspect of the link with Bahía I ceremonialism. Indeed, the circulation of figurines and the more elaborate whistling bottles was a significant element of ritual activity and exchange. Stone figurines were found on La Plata Island in both known contexts involving multiple deposition of ceramic figures from different mainland regions. But only Bahía I ceramic figures were found at Salango. Salango, then, was less significant than La Plata and Manta at the interregional level of ceremonial interaction.

A fifth set of relationships involved the movement of materials and artefacts not available on the coast itself, linking Salango to a much wider community of exchange. Green stone most commonly, but also obsidian, copper and gold, were associated with ceremony, and all had to be imported.

Sixth, the Late Engoroy container made with a deer skull combined three surviving raw materials: the bone itself, the shell of

the lid, and the tar used as a plug at the smaller, anterior end. The nearest, and obvious tar source, was at Santa Elena (Sheppard 1937, 252). Whether the container came complete from there or not cannot be said, but it points to highly specialised exchange within the Engoroy region itself, and again within the sphere of production and use of ritual objects.

It is clear that there was a close connection between the exchange of ritually employed materials and artefacts on one hand, and ritual and ceremonialism itself. That ritual was the context of exchange is demonstrated by the fact that exotic goods are most commonly found in ritual depositions. However, it also clear that long distance exchange or movement of exotic and costly items had begun well before the explosion of Late Engoroy and Bahía I ceremony, as by Machalilla times green stone and obsidian were reaching Salango.

Machalilla subsistence and exchange systems, then, already provided many of the material needs, or routes to secure them, of Engoroy Salango. Structure 1, however, presented a radically new focus to the settlement. It also served as the foundation, literal and symbolic, of the sequence of structures that gave Salango its ceremonial and ritual core through the following centuries.

Ritual and ceremony themselves were not peculiar to Salango, and many of the ingredients of activity there were common elsewhere. But two points must be made. First, no two sites with evidence of ritual or ceremonial activity were close copies of each other. This may be a skewed picture, resulting from the poverty of the recovered archaeological record. However, it may also reflect the variability, within a general order of coherence, that is apparent in the pottery of the period. Each assemblage seems to have its own idiosyncracies, particularly during the Late Engoroy stage. A more marked

demonstration of this disparate standing of individual sites is offered by the stone figurines, whose deployment at Salango is matched by no other known site in the region.

Second, the particularity of Salango comes from its immediate location. Next to the ocean, facing the islands of Salango and La Plata, any community living there would naturally develop an existence largely dependent on and shaped by the sea. Also, it would be in a position to control access to the resources provided by the various marine environments, the most widely sought of which was *Spondylus princeps*.

The interpretation of Late Formative and Regional Development Salango as both a trading centre and an urban ceremonial centre was first put forward by Norton (Norton, Lunniss and Nayling 1983, 54; Norton 1992, 31, 38). More recently, Bruhns (1994, 258) posited a more active relationship between these two aspects of Salango, suggesting that it was increased traffic of *Spondylus* from the Ecuadorian coast to Peru that was "partly responsible for the appearance of urbanism and large scale architecture at sites such as Salango", and that "fishing sites such as Isla Puná and Salango became large and wealthy with the escalating market for the thorny oyster" (*op. cit.*, 284).

I would be more restrained. That coastal urban formations had developed by Bahía II times is clear enough from the picture given us by Jijón y Caamaño (1995a, 1995b) and Estrada (1958, 1962) of what they saw at Manta. What we have seen at Salango can be understood as a parallel phenomenon, an increasing investment in organisation, consolidation and careful maintenance of public spaces and buildings, but at a reduced scale.

The question of the centrality of Salango is a further debatable, and relative point. We have seen that Salango's position

with respect to regional society was complex. Each of the sites of the time seems to have played a separate part in the wider collective of ceremonialism. And that ceremonialism, in turn, was closely linked to traffic for the very objects and materials that were employed in its display.

At Salango itself, *Spondylus* did not play a dominant symbolic role. It was used, and worked there, but there were other red bivalves, such as *Lyropectens subnudosus* and perhaps *Chama buddiana*, incorporated in the ritual. Nor is there any direct evidence yet for specifically export-oriented *Spondylus* collection. That is not to say that Salango was not involved in its trade. Clearly there must have been exportive exchange for the items of exotic metal and stone that found their way into Salango. But in spite of excavation in several areas of the Engoroy settlement and recovery of *Spondylus*, worked and unworked, from all of them, no area has yet been identified as one dedicated to *Spondylus* gathering or processing.

At the same time, exotic stone and metal is not found in Salango in great quantity, suggesting that *Spondylus* exchange may not have been to the direct benefit of Salango itself. Alternatively, imported materials may have included other commodities, perishable or for direct consumption, that no longer remain to be excavated. But this still leaves an uncomfortable lacuna.

However, there is collateral data to help fill it. On La Plata Island, Bahía I cliff-top ceremony involved not only anthropomorphic ceramic ocarinas, but also unworked masses of coloured stone, and beads made from them. Like the green stone beads at Salango, these masses must have been imported, and again the presumption must be that they were exchanged for *Spondylus*. This, then, shows quite clearly how trade and ceremony were interdependent.

Further, there was no *Spondylus* at all found in that specific context, and this again emphasizes the absence of the shell from major ritual deposits in the region.

More to the point, though, La Plata seems to have been a more important, perhaps more direct recipient of the imported stone than was Salango. Salango, then, would have been secondary to La Plata Island in the overall system of *Spondylus* collection and export that was the principal source of wealth to the region. It was itself not so much a centre as a node. This may seem like hair-splitting to anyone more interested in the overarching systems of long-distance exchange. But a correct evaluation of sites such as Salango with respect to the larger schemes requires careful analysis first of their individual and local contexts.

Whether *Spondylus* trade can be invoked to explain the appearance of elaborate ceremonialism at Salango precisely at the start of Middle Engoroy, is a difficult question. For the Valdivia Valley, population expansion in the Late Formative was probably the result of improvements in production and exchange of food (Schwartz and Raymond 1996, 221). Thus there were changes occurring within the region that were quite independent of long-distance trade.

However, improvements in local agricultural techniques and increased external trade are not mutually exclusive possibilities. Thus it can be argued that Structure 1, representing a new form of settlement organisation, implies a new form of economic management and social structure, at a time when the regional population was itself becoming more dense. Thereafter, and certainly by Late Engoroy times, the growing markets and the expanding reach of trade would have provided the broad context for increasing investment and continuing change in the ceremonial component of the site. This does not explain



the particular forms that Engoroy rituals took, but it goes some way to explaining their energetic quality.

## CHAPTER 9 CONCLUSIONS

The purpose of this dissertation has been to give new focus and direction to understanding of the Engoroy occupation of the central Ecuadorian coast. Starting with the material remains and detailed stratigraphy of OMJPLP-141B-T3, I have first described individual components and phases for the site, and showed how these related to each other. Then, with data from other sites, I have been able to trace previously undefined patterns of cultural variation and interaction for the Engoroy period.

Central are the sequence of eighteen superimposed ceremonial buildings at Salango, and the activities carried out in and around them. This is, in fact, the first description of excavated ceremonial buildings of the Late Formative and Regional Development Periods on the central coast.

It has been shown how the principal components of the precinct were constructed, and how the precinct was successively rebuilt. This was not a simple matter of either replacement or expansion, although both processes occurred. In addition, there was constant reinvention, accommodating new configurations and practices within the world of public ceremony.

For the sequence as a whole, previously undocumented devices of construction and spatial differentiation include sunken clay perimetral walls and artificially coloured clay surfaces. For the immediately post-Engoroy period, we now have the first description of a dedicated funerary enclosure, and the first evidence for the use of large and free-standing wooden posts, possibly carved, prior to those known for the Manteño period.

Human burials have already been described for several Engoroy sites. At no other, however, have they been seen in a specifically

ceremonial context. Taken together with the Early Engoroy burials of 141C and the Machalilla burials of 141A, the Middle and Late Engoroy and post-Engoroy burials of 141B present a unique local sequence of changing mortuary practice.

The wide range of Late Engoroy stone figurines are for the first time placed in a firm context. So far, there is no other evidence on the coast for the practice of setting figurines in holes, while leaving them unburied, visible and protruding from the ground. The identification of an application of green paint to the figurines adds a new dimension for interpretation of these objects.

There has previously been no systematic documentation of features corresponding to the other structured artefact depositions of the Engoroy phases. While some of these were more easily recognisable, others were only identified as such when seen in the broad context of interment and deposition that characterizes the site. As a whole, they enlarge our view of Engoroy ritual and the range of its embrace.

Emphasized throughout the sequence is the importance of spatial organisation. This is not limited to what may be seen at or above ground level, but includes what lies beneath the surface. Thus while the material left to us by the depositional activity is of value in itself, it forces our attention towards the underground world that the occupants of Salango were so intent on defining and enriching.

In particular, the ritual complex extends to artefact depositions in the context of architecture. The small stone discs under Middle Engoroy (Phase I) posts have later, post-Engoroy (Phase V) equivalents in the form of stone anchors and metates under much larger posts. Similar configurations have yet to be found elsewhere. More interestingly, the sea:land division marked by the differential

distribution of anchors and metates is the earliest clear sign yet of symbolic structure in the foundation of buildings.

Two previously undetected elements of Late Engoroy funerary ceremony have been described: fire pits and pottery-rich rubbish pits. (Currie (1995) has noted the presence of fire pits alongside Manteño graves at Puerto López). The Middle and Late Engoroy rectangular and circular pits, some of which may have been used for mixing clay, are unparalleled in the literature.

The gold and copper from Middle Engoroy Salango are the earliest metal pieces from documented context in Ecuador (Hosler 1994, 106), and they add to the list of materials and objects circulated for use in coastal ritual. (Zevallos (1995, 181), however, mentions a small fragment of copper sheet from an Engoroy burial at Los Cerritos.) The small Phase V melting furnace, if correctly identified, is the earliest recorded coastal example.

A large body of Middle and Late Engoroy ceramics has been presented in the context of detailed stratigraphy. As a result, it has been possible to show how and when ceramic change occurred for the transition from Middle to Late Engoroy. Changes have been described and plotted in the forms and decorative designs of the iridescent fine wares that are the characteristically defining element of coastal Late Formative pottery. Attention has been brought to the range of design used in decorating cooking vessels with red paint, in particular the finger-painted motifs of Late Engoroy jars. On the basis of the little direct evidence available from other assemblage descriptions, these latter vessels seem to have great potential value as indicators of intraregional variation.

But it has also been possible to plot variability in the ceramic assemblage against specific events or sequences of events, and

in doing so to tie the pottery to complex, but demonstrable, human action and interaction. Thus, I hope to have shown that ceramic analysis, while obviously concerned in the first place with ceramic data, is parallel and linked to all other artefactual analysis, including that of site stratigraphy, and in fact shares the same structure. I hope also that the example of the Salango assemblage will create an aspiration to a more integrated approach to site analysis, and force consideration of assemblage variation to be directed more explicitly towards the mechanisms of ceramic production, circulation and use.

It was not my intention to create or recreate a general Engoroy typology. Far from it. I considered first the particularity of the assemblage at all stages in order the better to understand its own dynamics, and thereafter to be able to compare more specifically its individual components with those of other sites. As a result, however, it was possible to point to some of the intricate strands of ceramic development for the region as a whole, and show how the Salango assemblage is a compound of elements deriving from several sources.

Interaction with other zones of ceramic production is most notable in the more ritualized context of Late Engoroy. But this specificity of context should not lead us to identify the assemblage simply as an anomaly, since the region as a whole at this time was increasingly devoted to the development of public ceremony and the production and circulation of ritual paraphernalia. Rather, I hope to have shown that all site assemblages need to be understood in their own terms, if the significance of ceramic variation is not to be lost in the search for inappropriate overgeneralization.

Likewise, I have not defined Salango in terms of a range of possible site types. Instead, linking and comparing Salango to other

Engoroy sites. I have shown that differences between sites are as notable as similarities, and that similarities do not always overlap.

In other words, I have broken down the concept of Engoroy into various constituent parts, and thereby restored to each part the relative independence out of which it arose.

It is the result of contextual analysis, that artefacts regain their dynamic quality by being linked to their individual settings. But this setting is not simply the particular feature with which the artefact is associated, nor even the wider context of contemporary cultural behaviour and belief. In addition, it reaches back in time to include the antecedents of the artefact and its use. The virtue, then, of Salango and other sites of long occupation, is that they make more accessible the historical dimension that is crucial to interpretation.

The list of the "previously undocumented" is not designed merely to impress for its own sake. One aim was indeed to convey the unusual quality of the archaeological record at Salango. But it also leads one to wonder why it should be that Salango's record is so exceptional, and what future work should, and could be done, now that some of that record has been presented.

First, major Late Formative and Regional Development sites, including Bahía de Caráquez, Manta and La Libertad, have been lost to modern development. Others, such as Salaite, have been trashed by looters. Many of the more important sites had already disappeared before modern excavation methodologies were brought to the region. On the other hand, areal excavation with the explicit purpose of identifying architecture has only rarely been undertaken.

Salango's record is of course enhanced by excellent preservation of visible stratigraphy. Such preservation is likely to

be encountered elsewhere in northern Guayas and southern Manabí, as the combination of geological and environmental factors of which it is a product applies to the entire littoral zone from La Libertad to Bahía. Exceptionally, however, we were able at Salango to use water to dampen the ground and bring out differences in colour and texture that would otherwise have been difficult to distinguish. In fact it is doubtful that we would otherwise have managed to make sense of its formation, and much of the detail would have been lost.

At the same time, however, it would have been a hopeless task to try to document the depositional sequence without single-context planning and the use of the Harris matrix. Adequate means and method, then, were necessary to take advantage of the peculiar combination of stratigraphic complexity, detail and preservation.

The emphasis in this thesis has been on the presentation of a substantial body of new data, with a focus on the nature of the relationships between the different data sets. Foundations, then, have been established for future work which should include both more theoretical considerations and more specific material and artefactual studies.

At I41B three immediate major concerns will be: expansion of the structure plans for the Late Formative and Regional Development Periods to include data from the NE half of the site, in particular the entrances; analysis of the full Regional Development funerary assemblage; and analysis of the Regional Development ceramic sequence.

Mainly absent from this thesis is reference to ecofactual material. Although the fish bones from I41B-T3 have been studied (Béarez 1996), there remain all the shells and floral evidence. And the non-marine vertebrate component, subject of a preliminary study by Sanchez (1989), has to be fully reported. The great majority of stone

tools have also been ignored. More extensive comparative analysis is needed of artefacts, in particular of shell and stone beads and other ornaments. And source analysis needs to be carried out on materials and artefacts, in particular imported stone.

Future field work in the area should include the López Viejo site, where dense Engoroy sherd scatters are to be found (Currie 1995). At Agua Blanca, a little to the north, Engoroy stone figurines have been found (Colin McEwan, pers. comm.). Both of these sites are likely to provide important complementary information on patterns of Engoroy settlement and ceramic production.

Several strands of the complex fabric of Engoroy ritual and symbolism have been delineated, and it will now be possible to focus on them individually, and attempt more detailed study of their possible precursors and subsequent development. Colour symbolism, building and burial configuration and orientation, human and other figure representation, and decorative designs on ceramics are obvious subjects for such analysis. At the same time, it will be necessary to consider the possible meaning of the symbols in light of work, for example, on Valdivia drinking vessels (Damp 1979, 1982; Stahl 1984, 1985), Valdivia figurines (Stahl 1986), Manteño pearl oyster shell (Mester 1990) and Manteño building orientation (McEwan 2000).

Study of Late Formative and Regional Development occupation of the central Ecuadorian coast contrasts markedly with approaches to the Valdivia and Manteño periods. There is neither suitable ethnographic analogy nor ethnohistoric data to account for its peculiar components. Further, the Salango sequence shows that forms of cultural expression were subject to constant change, and that such expression is to be found not simply in material components, but also in more abstract and elusive patterns of association between those



components. The very richness and inventiveness of the period makes it more difficult to define.

The wider contribution, then, of this dissertation is twofold. First, it has presented a set of data that begins to provide a link between the forms of ritual expression of the Early Formative and Integration Periods. Second, it makes clear the necessity of a greater appreciation of the fact and force of change if we are to interpret those forms successfully.

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# APPENDIX

Table 25. OMJPLP-141B-T3: PERIOD 1 SHERD COUNT

	COMPLETE VESSELS	RIM	SHERDS EXAMINED NECK	BODY	TOTAL SHERDS
LAYERS	0	1057	86	809	17765
RUBBISH PITS(IIIL)	3	236	22	88	3198
GRAVE GOODS(I)	1	1	0	0	589
GRAVE GOODS(III/IV)	10	10	0	0	3473
OTHER NEGATIVE FEATURES	0	16	0	8	14885
ALL NEGATIVE FEATURES	14	263	22	96	22145
TOTAL	14	1320	108	913	39910

N.B. Complete vessels from the first column are included in the rim count of the second.

Table 26A. MAJOR VESSEL GROUPS: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
BOWLS	120	156	288	237	150	387	951
JARS/BOTTLES	42	44	84	103	96	199	369
TOTAL	162	200	372	340	246	586	1320

N.B. In this and following tables. Phase IIIL counts given are for layers (L), rubbish pits (R) and layers and rubbish pits combined (T). For Phases I to IIIE. the few vessels from negative features are counted with those from layers. For Phase IIIL. the vessels from graves are counted with those from rubbish pits.



Table 26B. MAJOR VESSEL GROUPS: PERCENTAGE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
BOWLS	74.1	78.0	77.4	69.7	61.0	66.0	72.0
JARS/BOTTLES	25.9	22.0	22.6	30.3	39.0	34.0	28.0
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 27A. BOWL FORM CATEGORIES: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
SERVING BOWLS	100	112	246	189	118	307	765
WIDEBOWLS	11	23	32	33	29	62	128
WIDEWALLED BOWLS	0	3	5	8	0	8	16
MINIATURE BOWLS	0	2	0	0	1	1	3
MACHALILLA BOWLS	9	16	5	7	2	9	39
TOTAL	120	156	288	237	150	387	951

Table 27B. BOWL FORM CATEGORIES: PERCENTAGE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
SERVING BOWLS	83.3	71.8	85.4	79.7	78.7	79.3	80.4
WIDEBOWLS	9.2	14.7	11.1	13.9	19.3	16.0	13.5
WIDEWALLED BOWLS	0.0	1.9	1.7	3.4	0.0	2.1	1.7
MINIATURE BOWLS	0.0	1.3	0.0	0.0	0.7	0.3	0.3
MACHALILLA BOWLS	7.5	10.3	1.7	3.0	1.3	2.3	4.1
TOTAL	100.0	100.0	99.9	100.0	100.0	100.0	100.0

Table 28A. SERVING BOWL FORM SETS: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
FORM SET 1	56	48	48	9	6	15	167
FORM SET 2	8	11	26	5	3	8	53
2A	6	9	15	1	2	3	33
2B	1	1	4	1	0	1	7
2C	0	0	4	1	1	2	6
2 Exceptions	1	0	0	1	0	1	2
2 ?	0	1	3	1	0	1	5
FORM SET 3	1	4	23	11	4	15	43
3A	1	3	4	0	0	0	8
3B	0	0	3	1	0	1	4
3C	0	0	10	8	3	11	21
3 Exceptions	0	0	3	1	0	1	4
3 ?	0	1	3	1	1	2	6
FORM SET 4	0	0	13	15	1	16	29
FORM SET 5	0	0	22	25	20	45	67
5A	0	0	19	22	7	29	48
5B	0	0	3	3	13	16	19
FORM SET 6	0	0	3	5	4	9	12
FORM SET 7	0	0	1	7	8	15	16
FORM SET 8	0	0	0	3	19	22	22
FORM SET 9	12	22	41	36	14	50	125
9A	7	12	18	5	1	6	43
9B	0	0	0	7	8	15	15
9C	5	10	23	24	5	29	67
FORM SET 10	3	8	18	34	19	53	82
FORM SET 11	19	16	42	38	18	56	133
UNCERTAIN	1	3	9	1	2	3	16
TOTAL	100	112	246	189	118	307	765

Table 28B. SERVING BOWL FORM SETS: PERCENTAGE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
FORM SET 1	56.0	42.9	19.5	4.8	5.1	4.9	21.9
FORM SET 2	8.0	9.8	10.6	2.6	2.5	6.8	6.9
2A	6.0	8.0	6.1	0.5	1.7	1.0	4.3
2B	1.0	0.9	1.6	0.5	0.0	0.3	0.9
2C	0.0	0.0	1.6	0.5	0.8	0.7	0.8
2 Exceptions	1.0	0.0	0.0	0.5	0.0	0.3	0.3
2 ?	0.0	0.9	1.2	0.5	0.0	0.3	0.7
FORM SET 3	1.0	3.6	9.3	5.8	3.4	4.9	5.6
3A	1.0	2.7	1.6	0.0	0.0	0.0	1.0
3B	0.0	0.0	1.2	0.5	0.0	0.3	0.5
3C	0.0	0.0	4.1	4.2	2.5	3.6	2.7
3 Exceptions	0.0	0.0	1.2	0.5	0.0	0.3	0.5
3 ?	0.0	0.9	1.2	0.5	0.5	0.7	0.8
FORM SET 4	0.0	0.0	5.3	7.9	0.8	5.2	3.8
FORM SET 5	0.0	0.0	8.9	13.2	16.9	14.7	8.8
5A	0.0	0.0	7.7	11.6	5.9	9.4	6.3
5B	0.0	0.0	1.2	1.6	11.0	5.2	2.5
FORM SET 6	0.0	0.0	1.2	2.6	3.4	2.9	1.6
FORM SET 7	0.0	0.0	0.4	3.7	6.8	4.9	2.1
FORM SET 8	0.0	0.0	0.0	1.6	16.1	7.2	2.9
FORM SET 9	12.0	19.6	16.7	19.0	11.9	16.3	16.3
9A	7.0	10.7	7.3	2.6	0.8	2.0	5.6
9B	0.0	0.0	0.0	3.7	6.8	4.9	2.0
9C	5.0	8.9	9.3	12.7	4.2	9.4	8.8
FORM SET 10	3.0	7.1	7.3	18.0	16.1	17.3	10.7
FORM SET 11	19.0	14.3	17.1	20.1	15.3	18.2	17.4
UNCERTAIN	1.0	2.7	3.7	0.5	1.7	1.0	2.1
TOTAL	100.0	100.0	99.9	99.8	99.9	104.3	100.2

Table 29A. SERVING BOWL DECORATIVE CATEGORIES: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
IRIDESCENT PAINT	17	21	88	86	76	162	288
RED PAINT	0	1	11	3	0	3	15
EXTERIOR INCISION	0	2	1	1	1	2	5
PUNCHED RIM	0	0	1	0	1	0	2
INTERIOR LINE BURNISH	0	0	1	0	0	0	1

Table 29B. SERVING BOWL DECORATIVE CATEGORIES: AS PERCENTAGE  
OF ALL SERVING BOWLS

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
IRIDESCENT PAINT	17.0	18.8	35.8	45.5	64.4	52.8	37.6
RED PAINT	0.0	0.9	4.5	1.6	0.0	1.0	2.0
EXTERIOR INCISION	0.0	1.8	0.4	0.5	0.8	0.7	0.7
PUNCHED RIM	0.0	0.0	0.4	0.0	0.8	0.0	0.3
INTERIOR LINE BURNISH	0.0	0.0	0.4	0.0	0.0	0.0	0.1

Table 30A. IRIDESCENT PAINT ON SERVING BOWLS: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
INTERIOR ONLY	17	21	86	81	55	136	260
EXTERIOR ONLY	0	0	0	4	6	10	10
BOTH SURFACES	0	0	2	1	15	16	18
ON RED INTERIOR	2	0	22	5	1	6	30
ON INTERIOR, WITH RED EXTERIOR	12	13	71	37	10	47	143
ON INTERIOR UNDER INCISION	0	0	1	0	0	0	1
ON INTERIOR WITH APPLIQUÉ	0	0	0	1	0	1	1
TOTAL WITH IRIDESCENT PAINT	17	21	88	86	76	162	288

Table 30B. IRIDESCENT PAINT ON SERVING BOWLS: AS PERCENTAGE OF SERVING BOWLS WITH IRIDESCENT PAINT

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
INTERIOR ONLY	00.0	100.0	97.7	94.2	72.4	84.0	90.3
EXTERIOR ONLY	0.0	0.0	0.0	4.7	7.9	6.2	3.5
BOTH SURFACES	0.0	0.0	2.3	1.2	19.7	9.9	6.3
ON RED INTERIOR	11.8	0.0	25.0	5.8	1.3	3.7	10.4
ON INTERIOR, WITH RED EXTERIOR	70.6	61.9	80.7	43.0	13.2	29.0	49.7
ON INTERIOR UNDER INCISION	0.0	0.0	1.2	0.0	0.0	0.0	0.3
ON INTERIOR WITH APPLIQUÉ	0.0	0.0	0.0	1.2	0.0	0.6	0.3

Table 31. RED-PAINTED SERVING BOWLS

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
INTERIOR RED SPOTS	0(1)	1(6)	3(7)	0(3)	0(0)	0(3)	4(17)
INTERIOR RED BANDS	0(0)	0(2)	6(5)	1(0)	0(0)	1(0)	7(7)
EXTERIOR RED BANDS	0(0)	0(0)	2(0)	2(0)	0(0)	2(0)	4(0)
TOTAL	0(1)	1(8)	11(12)	3(3)	0(0)	3(3)	15(24)

Note: figures in brackets represent body sherds.

Table 32A. RED SLIP AND FINISH ON SERVING BOWLS: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
EXTERIOR RED SLIP ONLY	57	64	161	77	25	102	384
INTERIOR RED SLIP ONLY	12	8	51	23	12	35	106
INTERIOR AND EXTERIOR RED SLIP	11	6	51	20	10	30	98
UNPOLISHED EXTERIOR, POLISHED INTERIOR	2	1	4	27	51	78	85
UNPOLISHED BOTH SIDES	1	1	8	7	1	8	18

Table 32B. RED SLIP AND FINISH ON SERVING BOWLS: AS PERCENTAGE OF  
ALL SERVING BOWLS

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
EXTERIOR RED SLIP ONLY	57.0	57.1	65.4	40.7	21.2	33.2	50.2
INTERIOR RED SLIP ONLY	12.0	7.1	20.7	12.2	10.2	11.4	13.9
INTERIOR AND EXTERIOR RED SLIP	11.0	5.4	20.7	10.6	8.5	9.8	12.8
UNPOLISHED EXTERIOR, POLISHED INTERIOR	2.0	0.9	1.6	14.3	43.2	25.4	11.1
UNPOLISHED BOTH SIDES	1.0	0.9	3.3	3.7	0.8	2.6	2.4

Table 33A. ALTERED LIPS ON SERVING BOWLS: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
WAVY LIP	1	6	18	7	2	9	34
NOTCHED LIP	2	2	12	1	0	1	17
NICKED LIP	0	3	0	4	1	5	8
LIP WITH EXTERNAL INDENT	0	0	23	26	7	33	56
TOTAL ALTERED LIPS	3	11	53	38	10	48	115

Table 33B. ALTERED LIPS ON SERVING BOWLS: AS PERCENTAGE OF ALL  
SERVING BOWLS

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
WAVY LIP	1.0	5.4	7.3	3.7	1.7	2.9	4.4
NOTCHED LIP	2.0	1.8	4.9	0.5	0.0	0.3	2.2
NICKED LIP	0.0	2.7	0.0	2.1	0.8	1.6	1.0
LIP WITH EXTERNAL INDENT	0.0	0.0	9.3	13.8	5.9	10.7	7.3
TOTAL ALTERED LIPS	3.0	9.8	21.5	20.1	8.5	15.6	15.0

Table 34. SERVING BOWLS: FINE MEDIUM, MEDIUM AND COARSE FABRICS

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
FORM SET 1	2	4	0	0	1	1	7
FORM SET 3	0	0	0	1	1	2	2
FORM SET 9	0	3	6	6	0	6	15
FORM SET 10	0	1	1	2	2	4	6
FORM SET 11	5	4	6	5	2	7	22
TOTAL	7	12	13	14	6	20	52
TOTAL AS % OF ALL SERVING BOWLS	7.0	10.7	5.3	7.4	5.1	6.5	6.8

Table 35A. DECORATION AND FINISH ON MAIN TRADITION WIDEBOWLS:  
ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
UNDECORATED	3	7	5	5	4	9	24
EXT. RIM PAINT	3	5	5	6	4	10	23
EXT. RIM AND INT. LIP PAINT	2	8	13	5	5	10	33
SMALL SPOTS	1	2	5	6	1	7	15
BANDS	0	1	0	6	9	15	16
RED SLIP	0	0	3	4	1	5	8
IRREGULAR BANDS	0	0	0	1	5	6	6
PATCHES	1	0	0	0	0	0	1
TOTAL INTERIOR DECORATED	2	3	8	17	16	33	46
EXT. RIM POLISH	8	19	28	14	2	16	71
TOTAL WIDEBOWLS	10	22	32	33	29	62	126

Table 35B. DECORATION AND FINISH ON MAIN TRADITION WIDEBOWLS:  
PERCENTAGE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
UNDECORATED	30.0	31.8	15.6	15.2	13.8	14.5	19.0
EXT. RIM PAINT	30.0	22.7	15.6	18.2	13.8	16.1	18.3
EXT. RIM AND INT. LIP PAINT	20.0	36.4	40.6	15.2	17.2	16.1	26.2
SMALL SPOTS	10.0	9.1	15.6	18.2	3.4	11.3	11.9
BANDS	0.0	4.5	0.0	18.2	31.0	24.2	12.7
RED SLIP	0.0	0.0	9.4	12.1	3.4	8.1	6.3
IRREGULAR BANDS	0.0	0.0	0.0	3.0	17.2	9.7	4.8
PATCHES	10.0	0.0	0.0	0.0	0.0	0.0	0.8
TOTAL INTERIOR DECORATED	20.0	13.6	25.0	51.5	55.2	53.2	36.5
EXT. RIM POLISH	80.0	86.4	87.5	42.4	6.9	25.8	56.3



Table 36A. JARS AND BOTTLES: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
DECORATED	22	22	44	70	80	150	238
UNDECORATED	20	22	40	33	16	49	131
TOTAL	42	44	84	103	96	199	369

Table 36B. JARS AND BOTTLES: PERCENTAGE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
DECORATED	52.4	50.0	52.4	68.0	83.3	75.4	64.5
UNDECORATED	47.6	50.0	47.6	32.0	16.7	24.6	35.5
TOTAL	100.0	100.0	100.0	100.0	100.0	100.0	100.0

Table 37A. DECORATED JARS AND BOTTLES: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
BOTTLES	0	2 <sup>1</sup>	2 <sup>2</sup>	0	3	3	7
RED SLIP	14	11	16	15	3	18	59
HORIZONTAL BANDS	2	7	15	18	7	25	49
FINGER PAINT	0	0	2	23	48	71	73
IRIDESCENT PAINT	2	0	3	3	14	17	22
UNCERTAIN PAINT	3	2	6	11	7	18	29
FINGER-PRESSED	1	0	0	0	0	0	1
POLISHED RED- ON-CREAM	0	0	0	0	1	1	1
TOTAL	22	22	44	70	80 <sup>3</sup>	150	238

<sup>1</sup> Includes 1 Machalilla double-spout-and-bridge bottle rim.

<sup>2</sup> Includes 1 Machalilla stirrup spout rim

<sup>3</sup> 3 rims from IIIL rubbish pits each carry both horizontal bands and finger paint. They are recorded separately against these decorative headings, then once only for the final totals.

Table 37B. DECORATED JARS AND BOTTLES: PERCENTAGE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
BOTTLES	0.0	9.1	4.5	0.0	3.8	2.0	2.9
RED SLIP	63.6	50.0	36.4	21.4	3.8	12.0	24.8
HORIZONTAL BANDS	9.1	31.8	34.1	25.7	8.8	16.7	20.6
FINGER PAINT	0.0	0.0	4.5	32.9	60.0	47.3	30.7
IRIDESCENT PAINT	9.1	0.0	6.8	4.3	17.6	11.3	9.2
UNCERTAIN PAINT	13.6	9.1	13.6	15.7	8.8	12.0	12.2
FINGER-PRESSED	4.5	0.0	0.0	0.0	0.0	0.0	0.4
POLISHED-RED ON-CREAM	0.0	0.0	0.0	0.0	1.3	0.7	0.4

Table 38A. RIM POLISH ON UNDECORATED JARS: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
EXTERIOR AND INTERIOR POLISH	5	13	6	1	1	2	26
INT. POLISH ONLY	6	6	14	1	3	4	30
TOTAL POLISHED	11	19	20	2	4	6	56
NO POLISH	9	3	20	31	12	43	75
TOTAL	20	22	40	33	16	49	131

Table 38B. RIM POLISH ON UNDECORATED JARS: PERCENTAGE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
EXTERIOR AND INTERIOR POLISH	25.0	59.1	15.0	3.0	6.3	4.1	19.8
INT. POLISH ONLY	30.0	27.3	35.0	3.0	18.8	8.2	22.9
TOTAL POLISHED	55.0	86.4	50.0	6.1	25.0	12.2	42.7
NO POLISH	45.0	13.6	50.0	93.9	75.0	87.8	57.3

Table 39A. COOKING AND SERVING JARS AND BOTTLES: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
COOKING JARS	25	33	73	97	73	170	300
SERVING JARS <sup>1</sup>	17	11	11	6	23	29	69
TOTAL	42	44	84	103	96	199	369

<sup>1</sup> Includes all bottles.

Table 39B. COOKING AND SERVING JARS AND BOTTLES: PERCENTAGE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
COOKING JARS	59.5	75.0	87.0	94.2	76.0	85.4	81.3
SERVING JARS	40.5	25.0	13.1	5.8	24.0	14.6	17.7

Table 40A. COOKING AND SERVING VESSELS: ABSOLUTE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
COOKING JARS	25	33	73	97	73	170	300
COOKING BOWLS	11	23	32	33	29	62	128
SERVING JARS <sup>1</sup>	17	11	11	6	23	29	69
SERVING BOWLS	100	112	246	189	118	307	765
TOTAL VESSELS	162	200	372	340	246	586	1320

<sup>1</sup> Includes all bottles.

Table 40B. COOKING AND SERVING VESSELS: PERCENTAGE FREQUENCIES

PHASE	I	II	IIIE	IIIL(L)	IIIL(R)	IIIL(T)	TOTAL
COOKING JARS	15.4	16.5	19.6	28.5	29.7	29.0	22.7
COOKING BOWLS	6.8	11.5	8.6	9.7	11.8	10.6	9.7
SERVING JARS	10.5	5.5	3.0	1.8	9.3	4.9	5.2
SERVING BOWLS	61.8	56.0	66.1	55.6	48.0	52.4	58.0

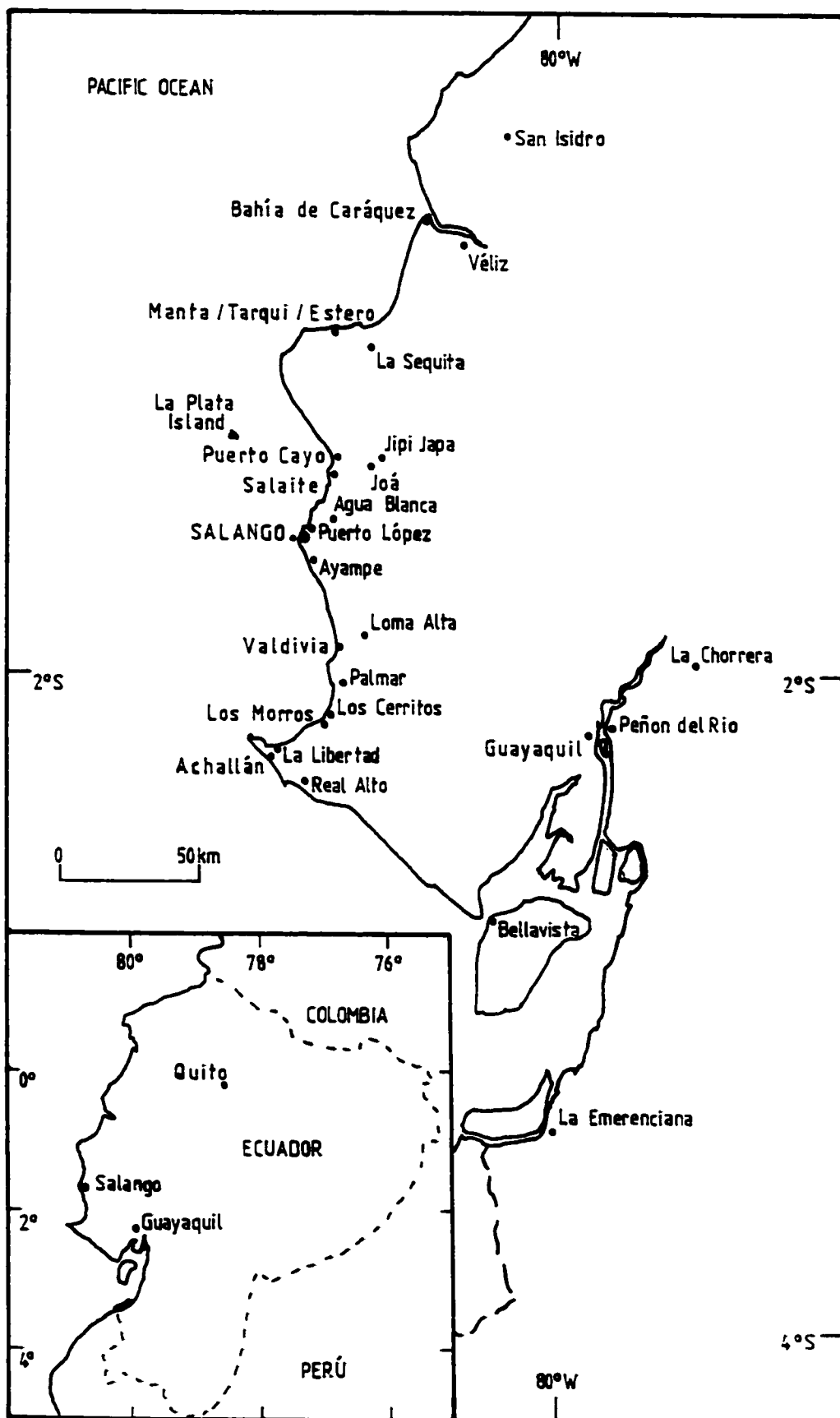


Figure 1. The Ecuadorian coast, with sites mentioned in the text.

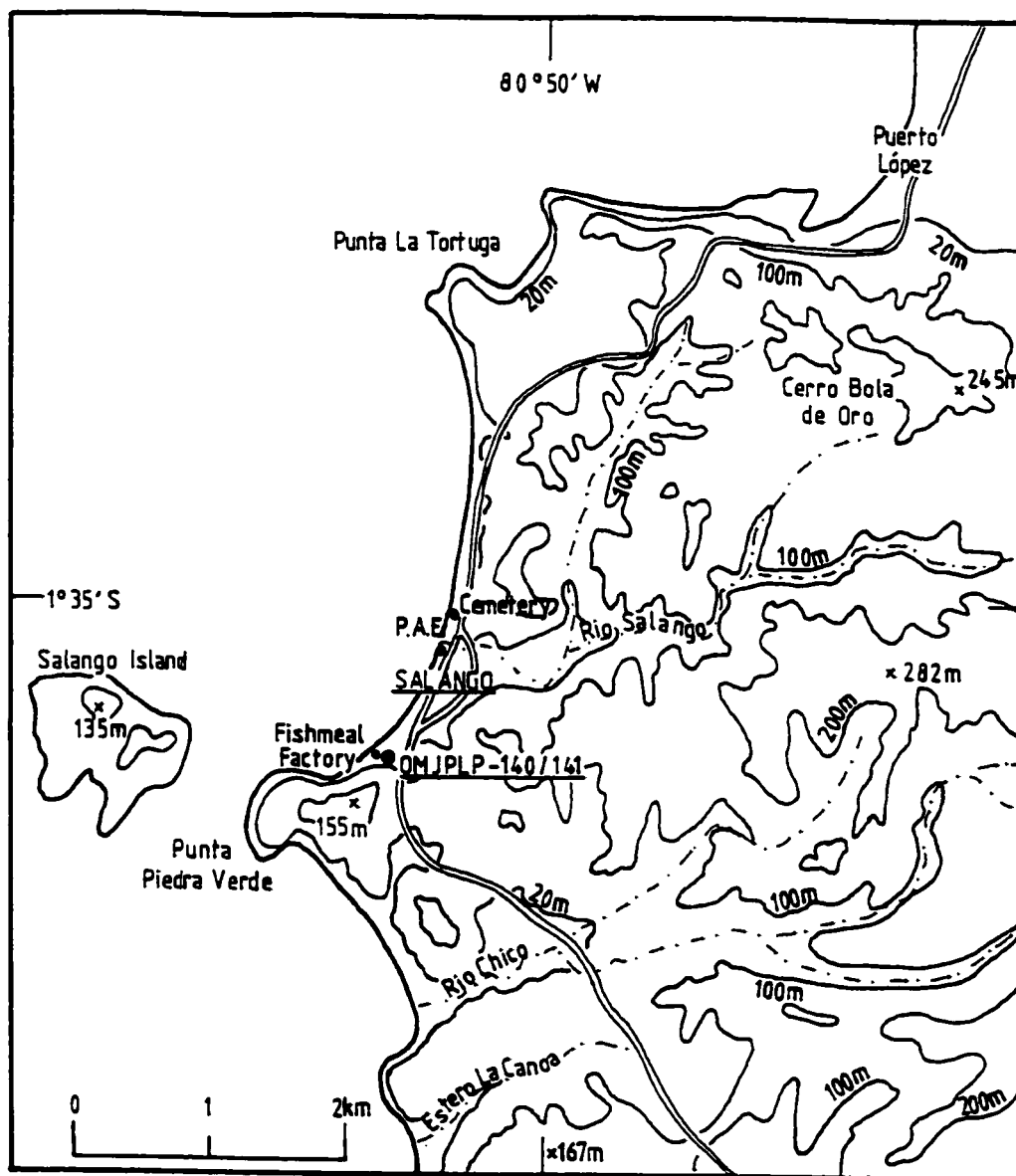


Figure 2. Salango and the surrounding area.

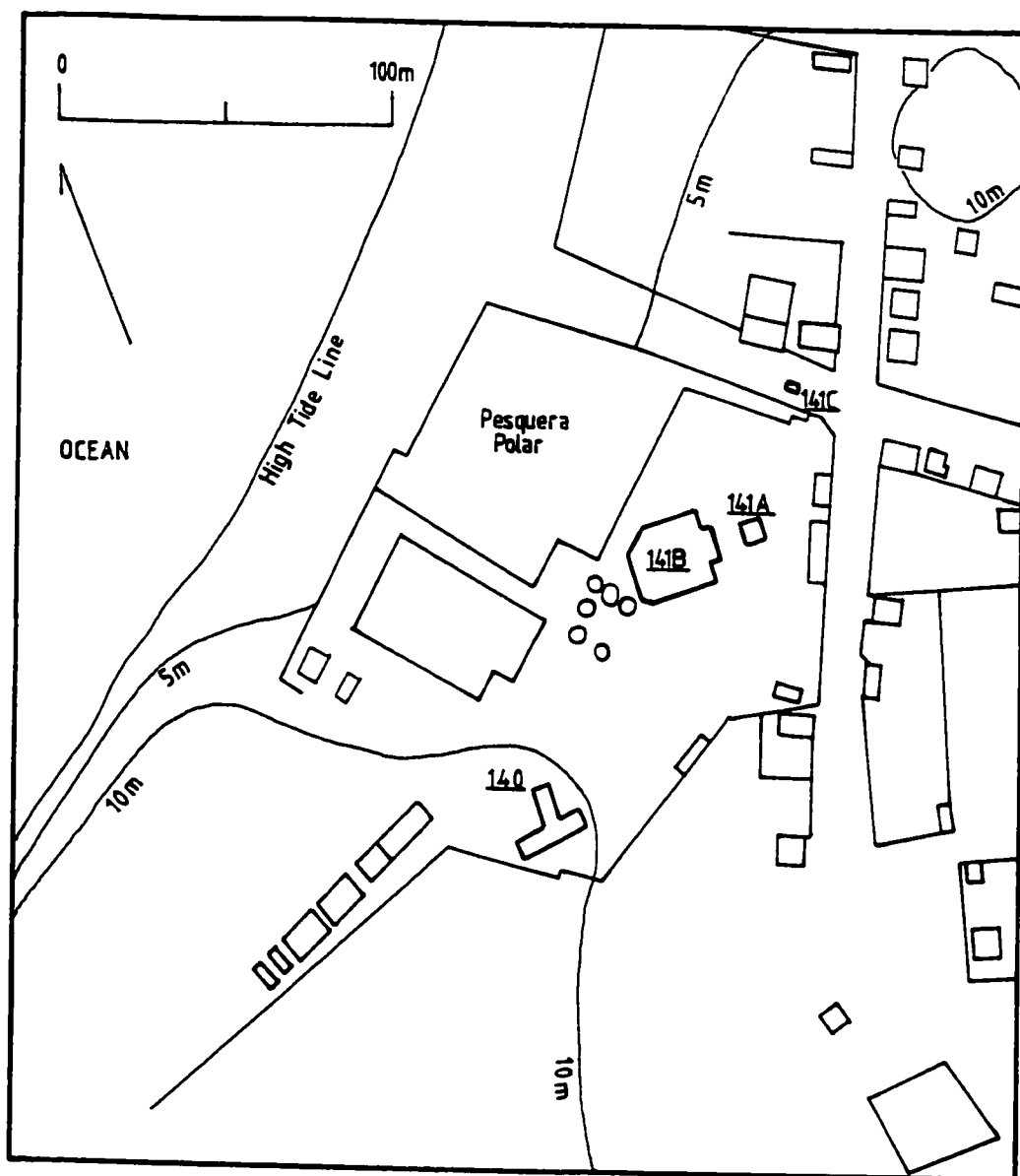


Figure 3. Location of Sites OMJPLP-140, 141A, 141B and 141C at Salango. After a plan of the village by Nic Appleton and a contour map by Aurelio Iturralde and Franklin Ordoñez.

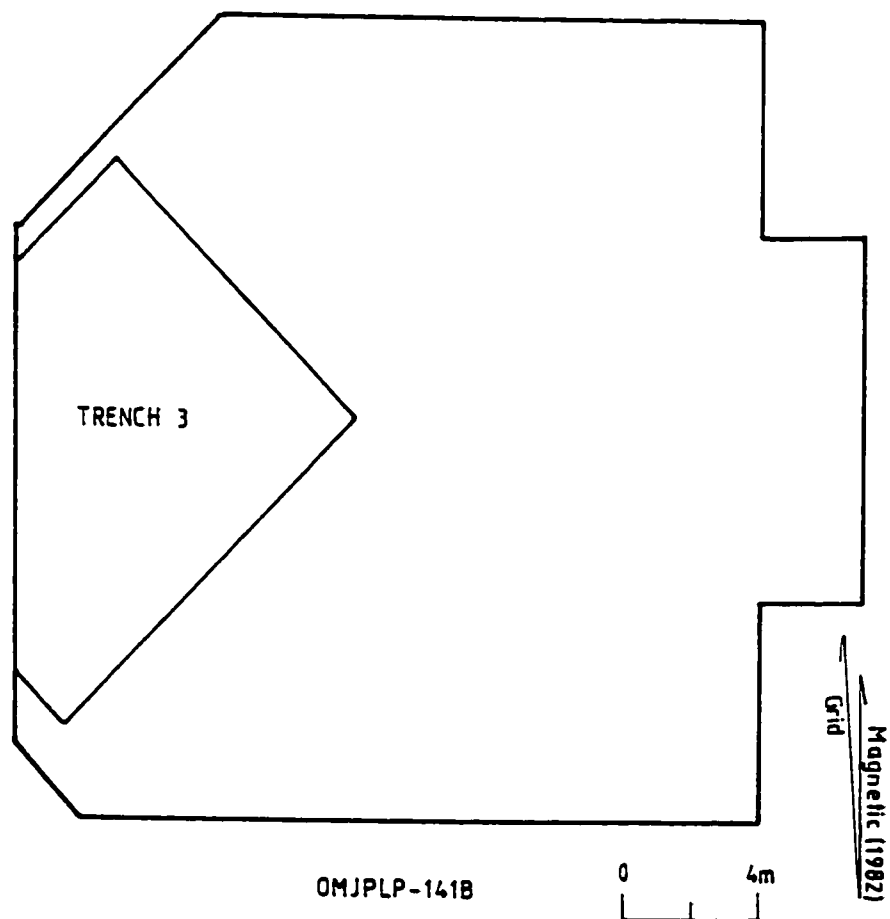


Figure 4. Trench 3 in relation to OMJPLP-141B.

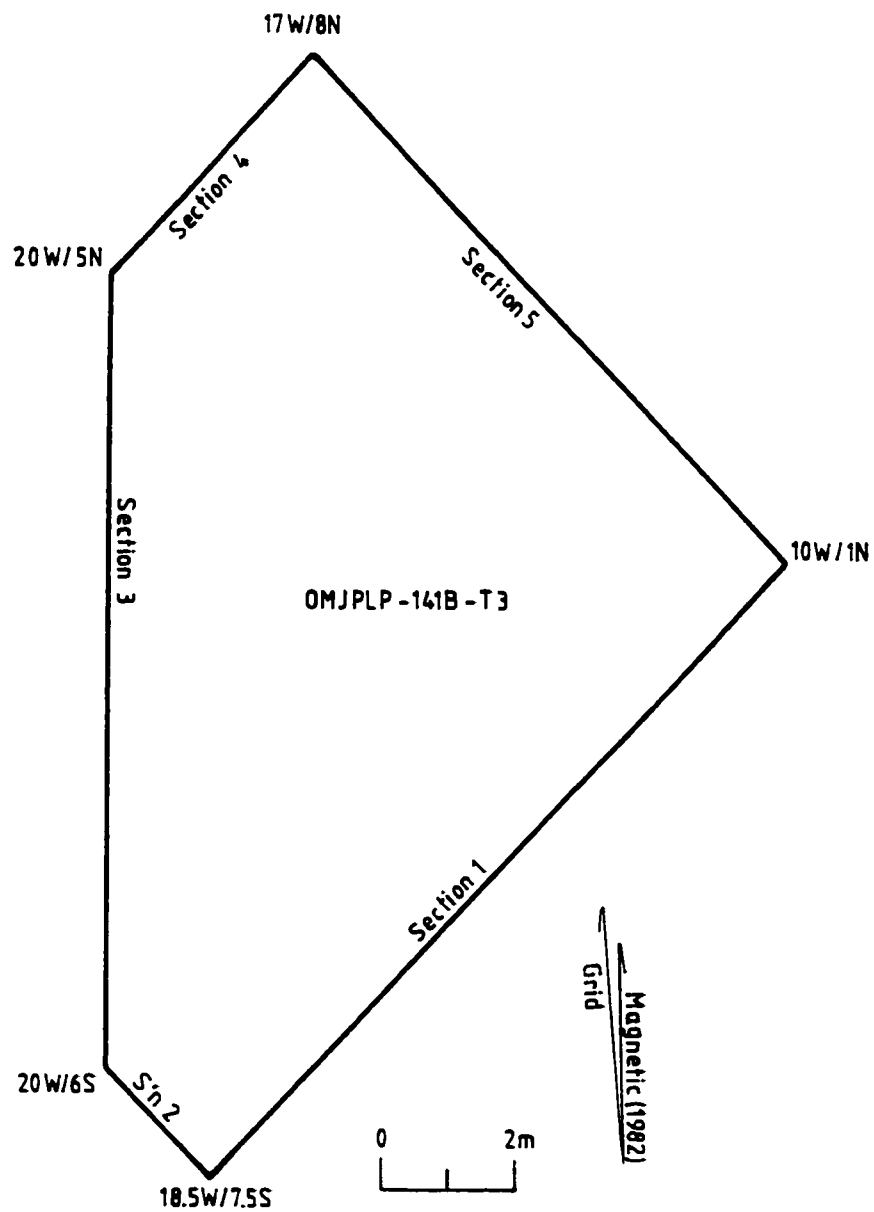


Figure 5. Plan of Site OMJPLP-141B-T3, Salango.



SITIO		NOMBRE DEL SITIO		PROVINCIA:MANABI CANTON :JIPIJAPA PARROQUIA:PUERTO LOPEZ		
CONTEXTO		CLASE DE CONTEXTO		UBICACION		NIVEL DESDE DATUM
LONGITUD		ANCHURA		PROFUNDIDAD		
DESCRIPCION						
METODO DE EXCAVAR						
RELACIONES ESTRATIGRAFICAS						
INTERPRETACION						
HALLAZGOS: BOLSAS 1,2,3,4,5,6,7,8,9..						
CER:	CON:	HUE:	ESP:	C.T.	LIT:	MET:
SEM:	MAD:	OTR:				
OBSERVACIONES						
MUESTRAS:TAMIZ		FLOTACION		C.14	POLEN	OTRO
FOTOGRAFIAS: ANTES DE                      DURANTE                      DESPUES DE EXCAVAR						
CL						
ByN						
PLANOS				SECCIONES		
EXCAVADO POR REGISTRADO POR				FECHA APROBADO POR		

Figure 6. Context sheet used at OMJPLP-141B-T3.







AP	Ash Pit
CP	Circular Pit
D	Dog Burial
F	Fire Pit
FL	Floor
FD	Figurine Deposition
G	Human Burial
H	Heron Burial
LF	Linear Feature
MF	Melting Furnace
OH	Open hearth
PC	Platform Cap
PH	Post-hole
PH?	Possible Post-hole
PM	Post-mould
PS	Clay Prepared Surface
R	Rubbish Pit
RP	Rectangular Pit
SD	Structured Artefact Deposition
T	Tigrillo Burial
W	Wall
?	Uninterpreted Feature
	Edge of context
	Context edge cut by later feature
	Buried context edge
	Post-hole
	Slope
	Orientation of burial

Figure 7. Key to site plans.

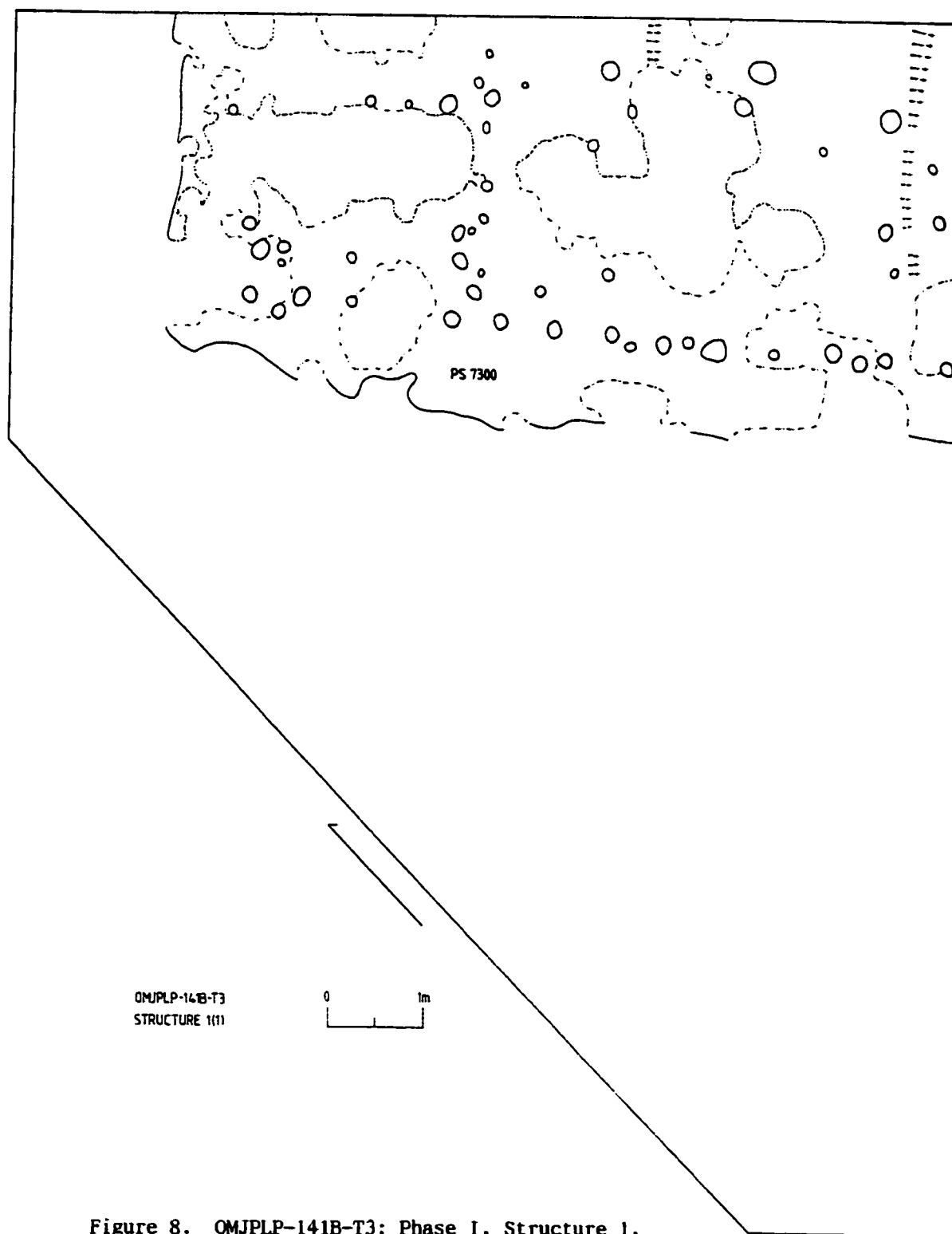


Figure 8. OMJPLP-141B-T3: Phase I. Structure 1. sub-phase 1. Plan of main components. After Lunniss and Mudd 1987. Figure 8.

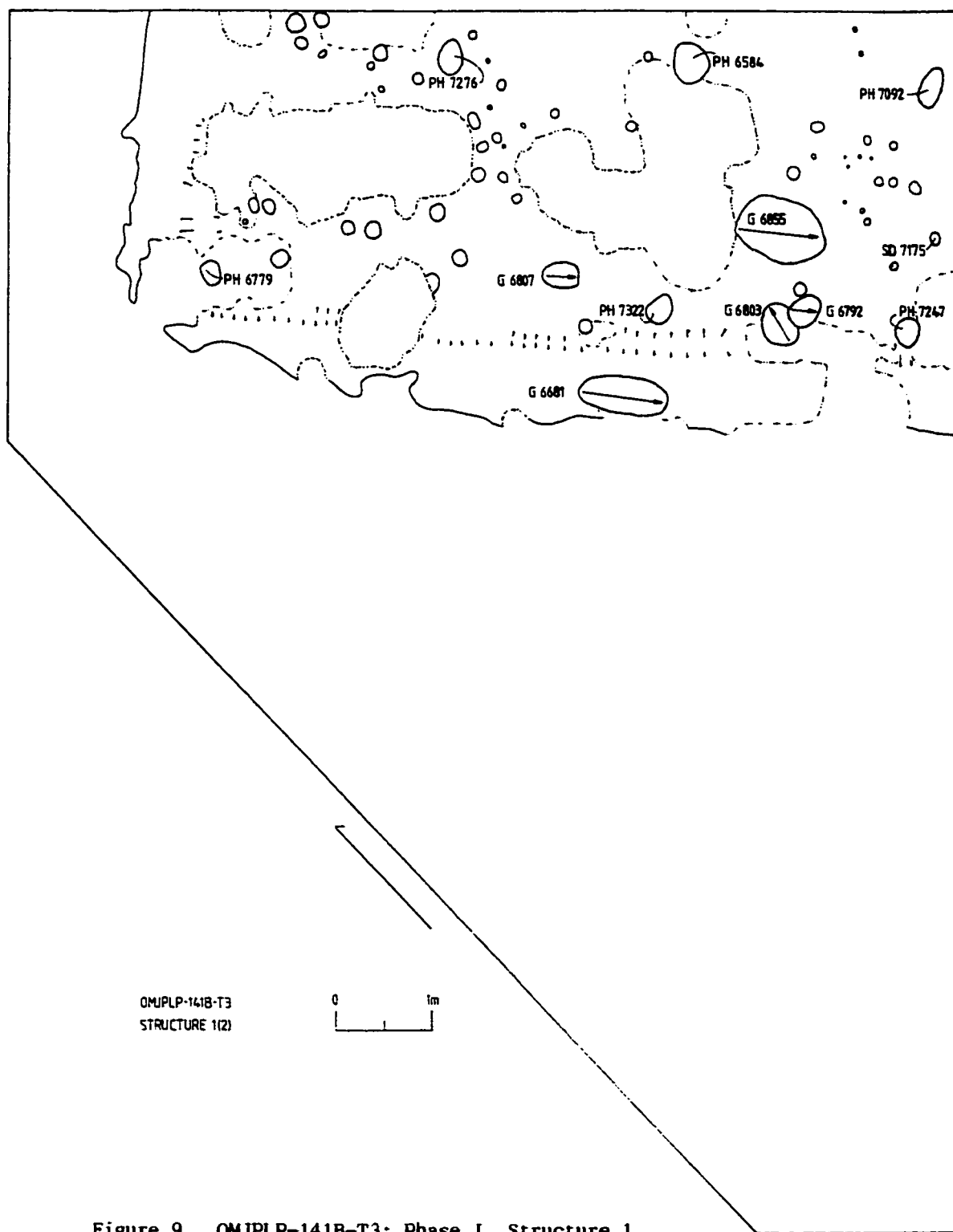


Figure 9. OMJPLP-141B-T3: Phase I. Structure 1. sub-phase 2. Plan of main components. After Lunniss and Mudd 1987, Figure 9.

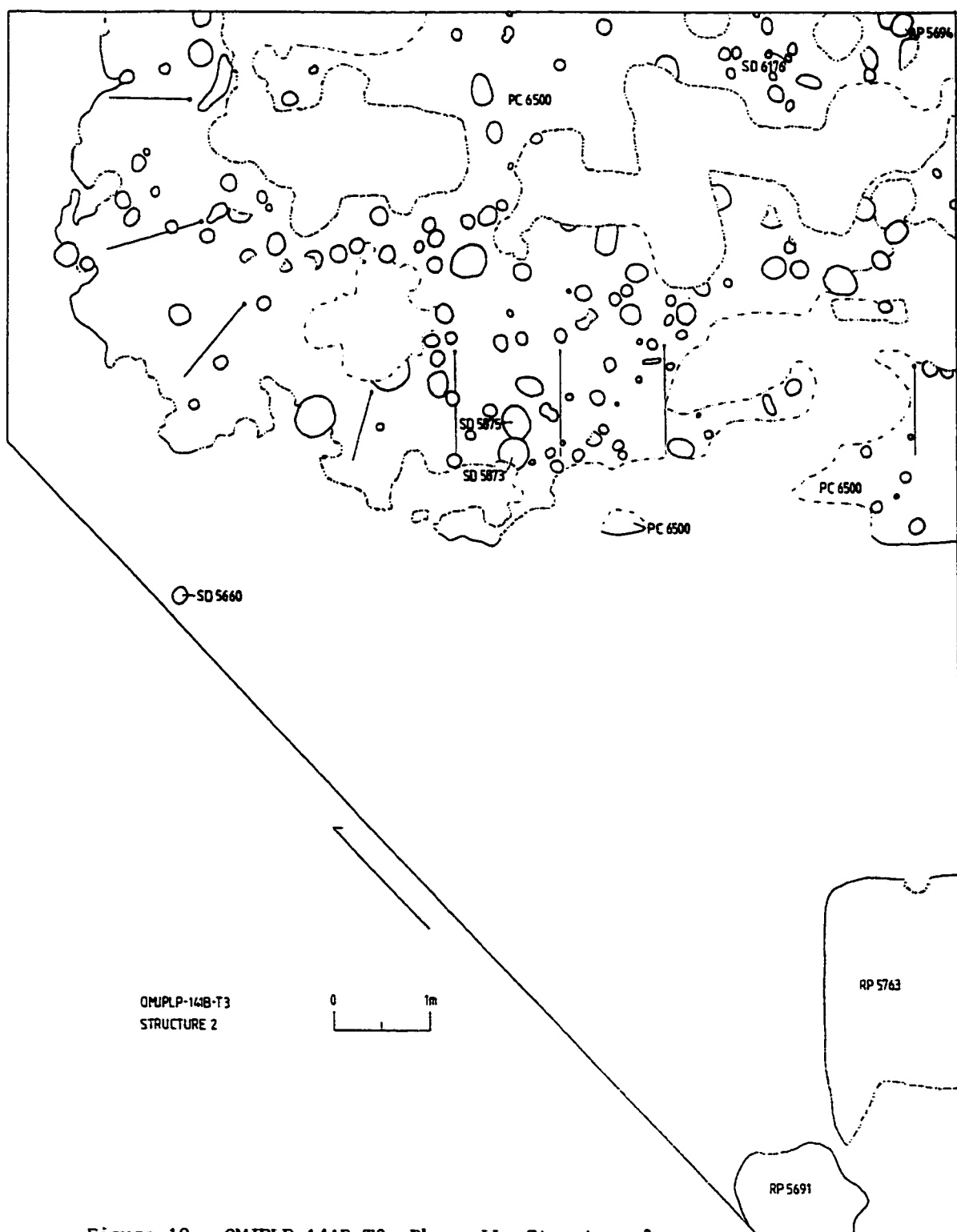


Figure 10. OMJPLP-141B-T3: Phase II. Structure 2.  
Plan of main components.

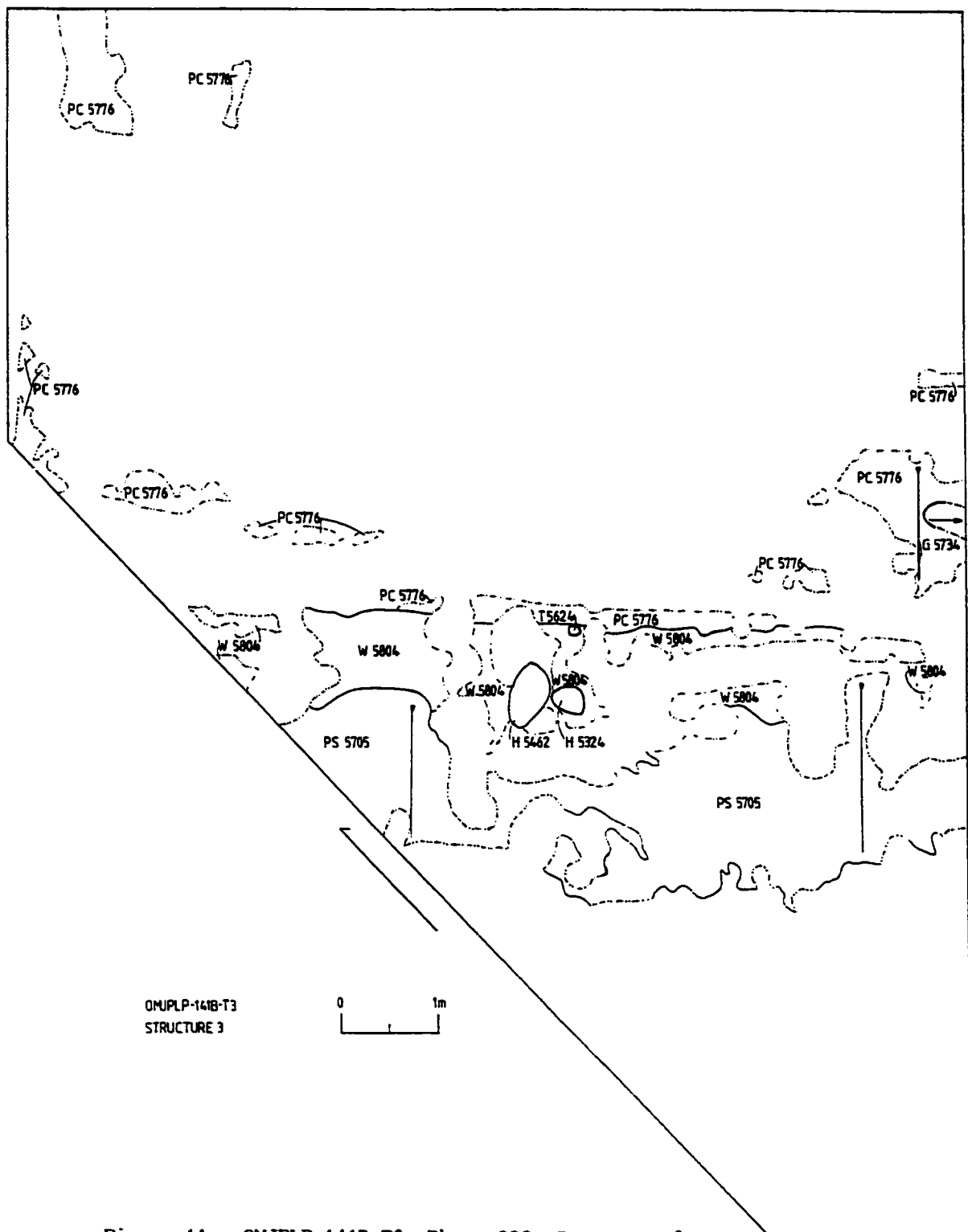


Figure 11. OMJPLP-141B-T3: Phase III. Structure 3.  
Plan of main components.

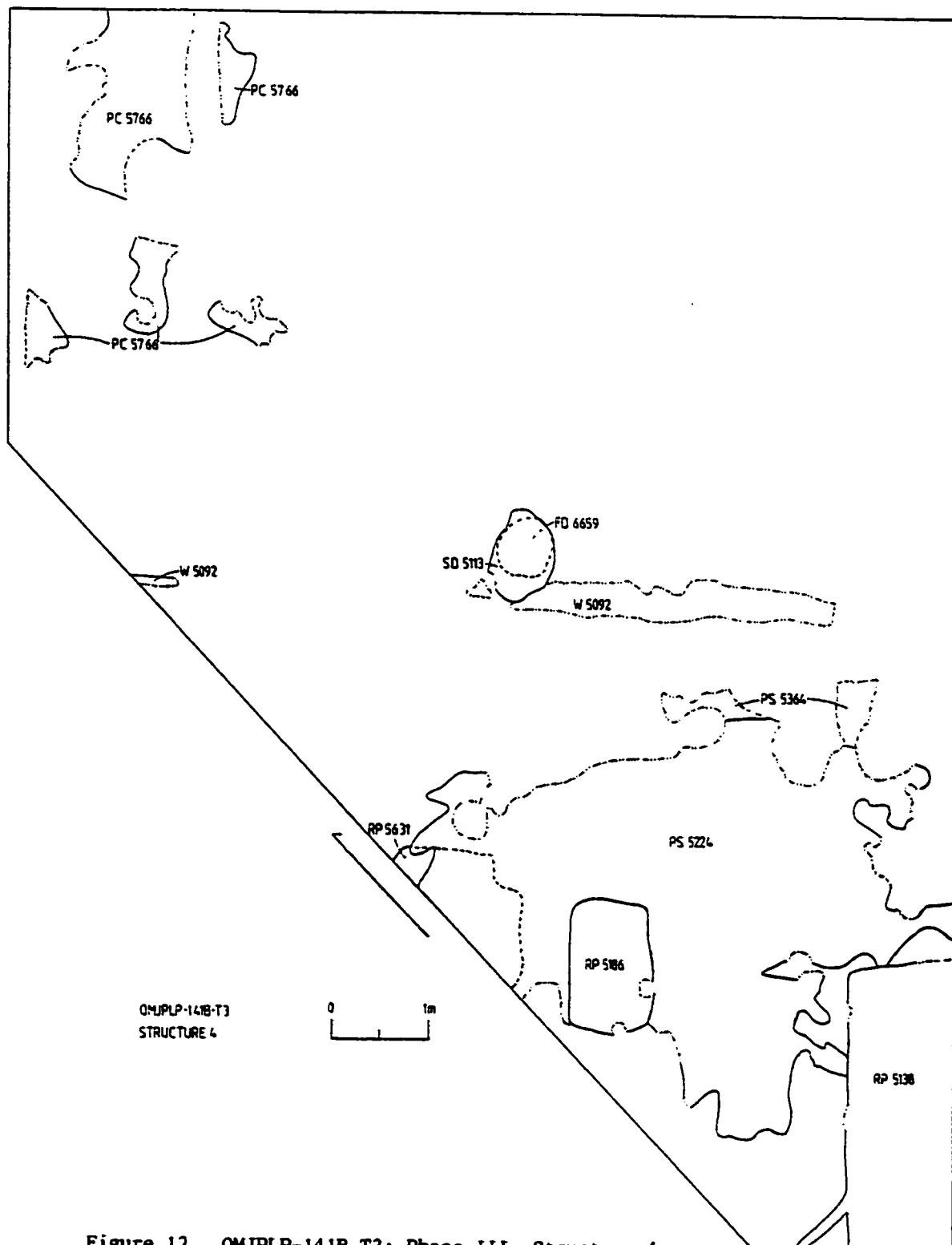


Figure 12. OMJPLP-141B-T3: Phase III. Structure 4. Plan of main components.

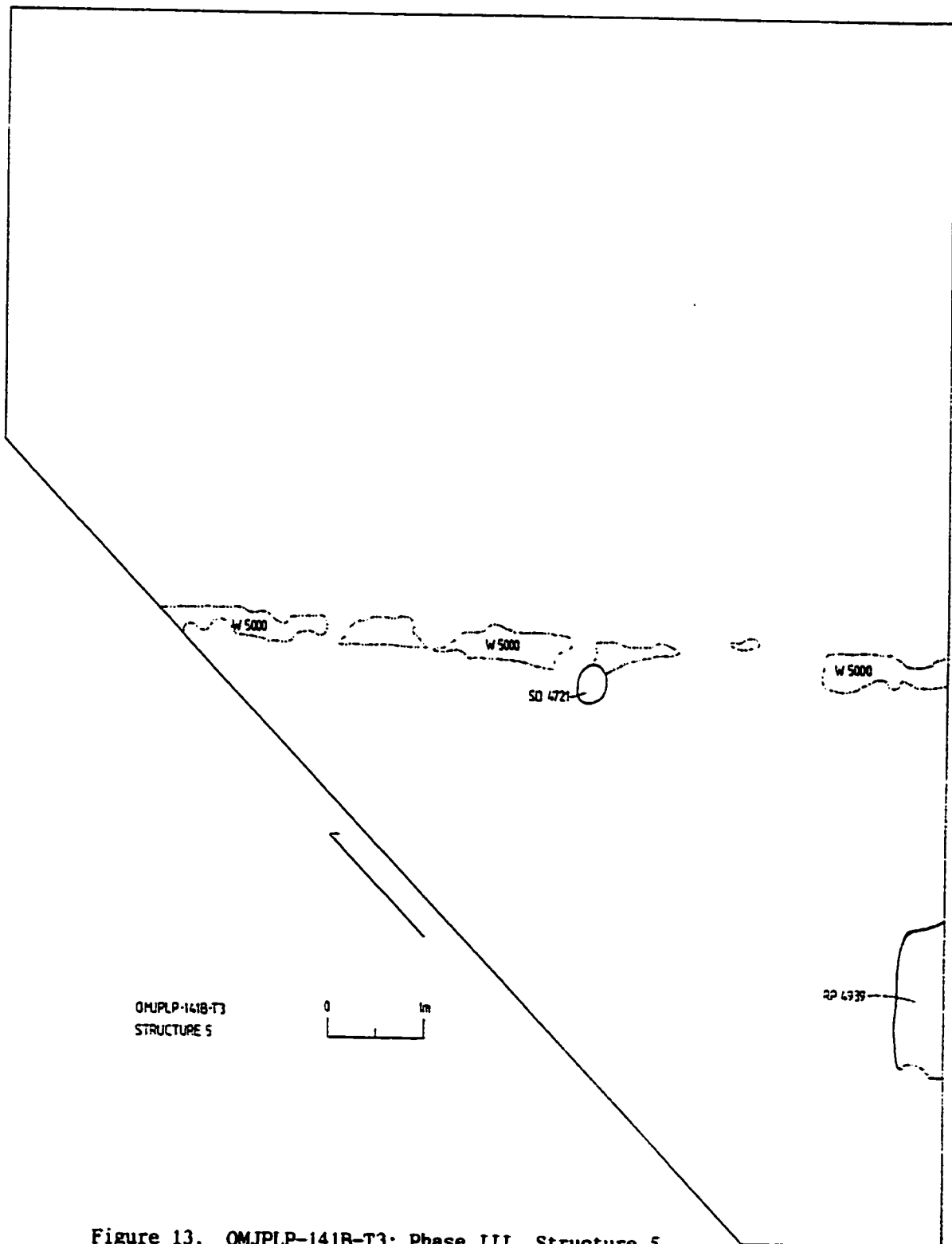


Figure 13. OMJPLP-141B-T3: Phase III. Structure 5.  
Plan of main components.



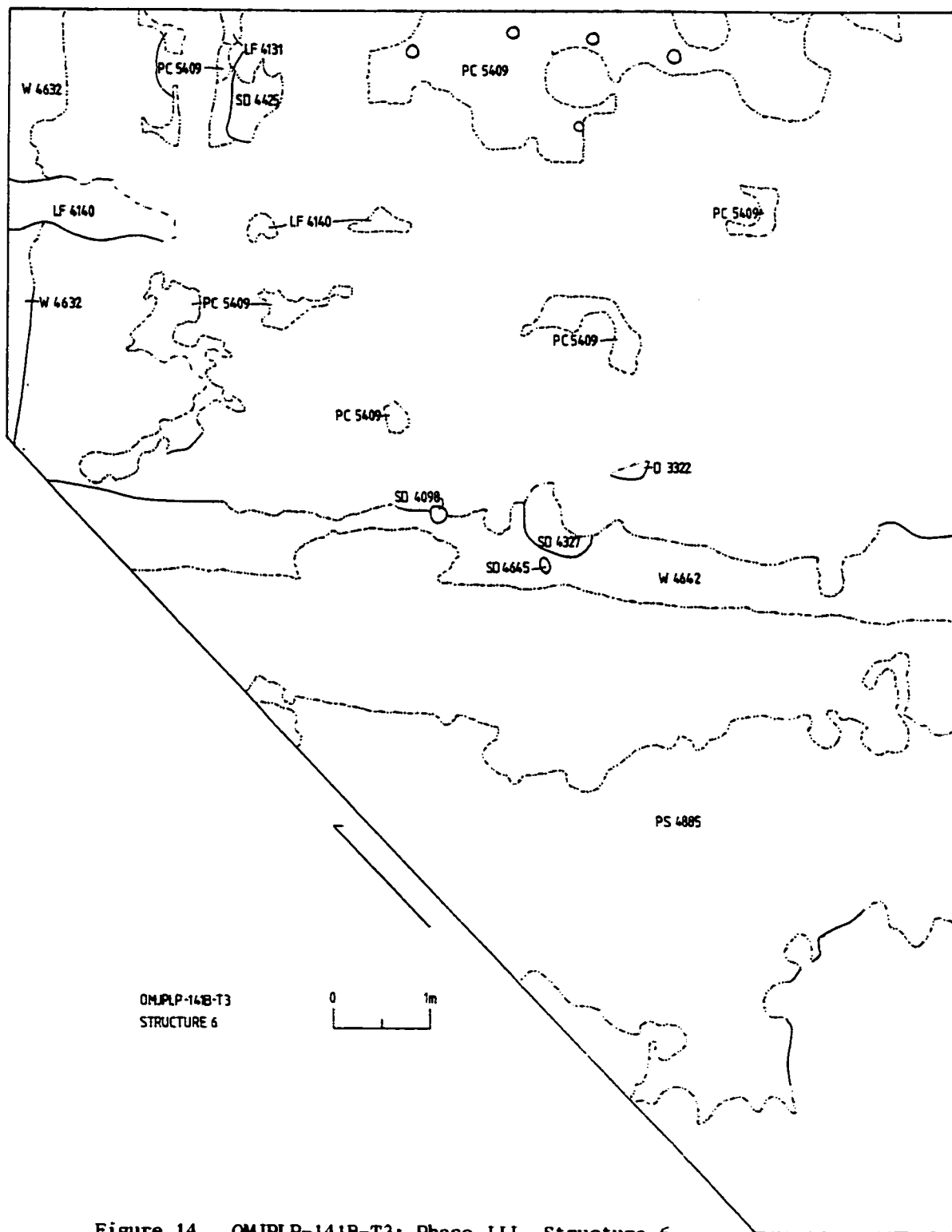


Figure 14. OMJPLP-141B-T3: Phase III. Structure 6.  
Plan of main components.

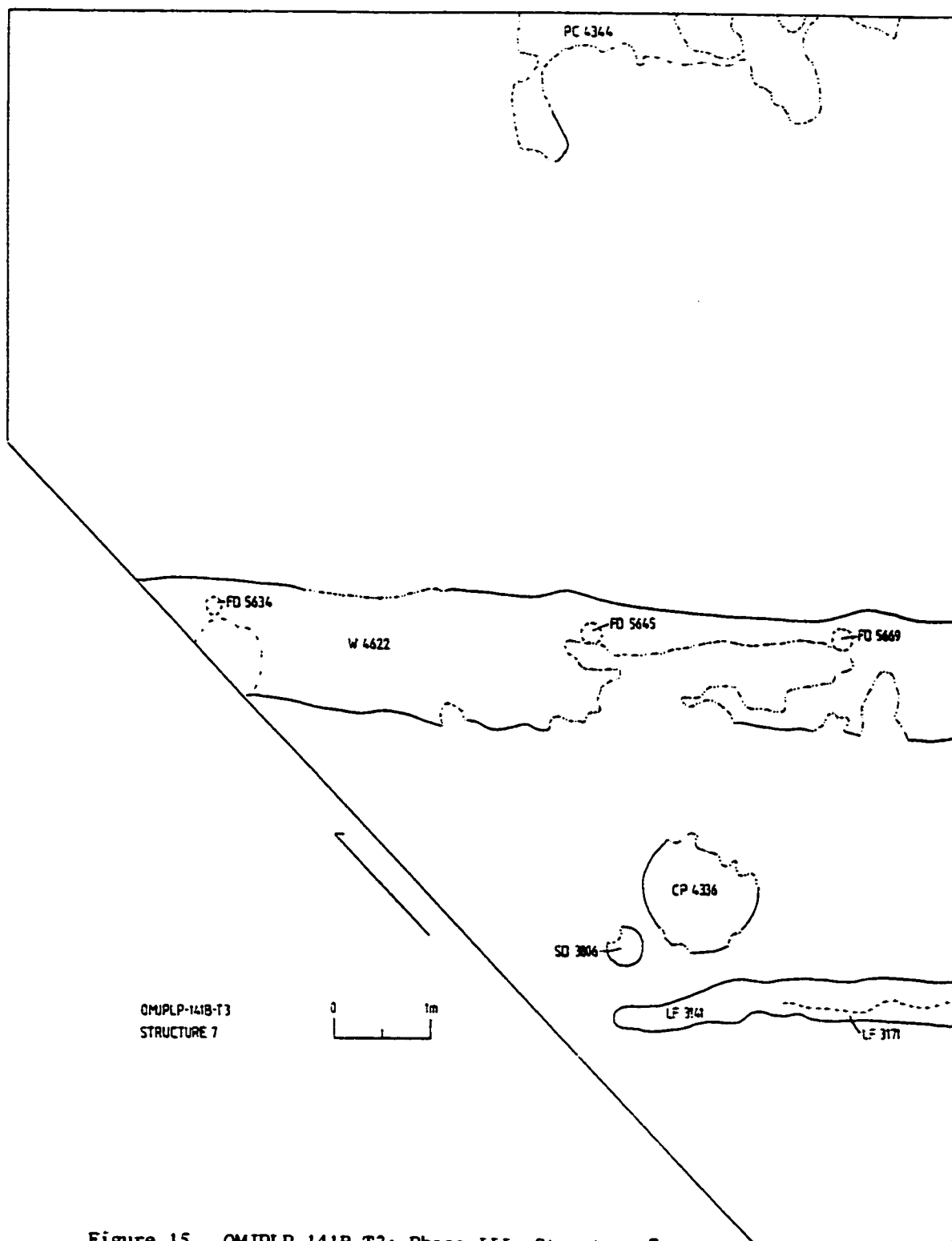
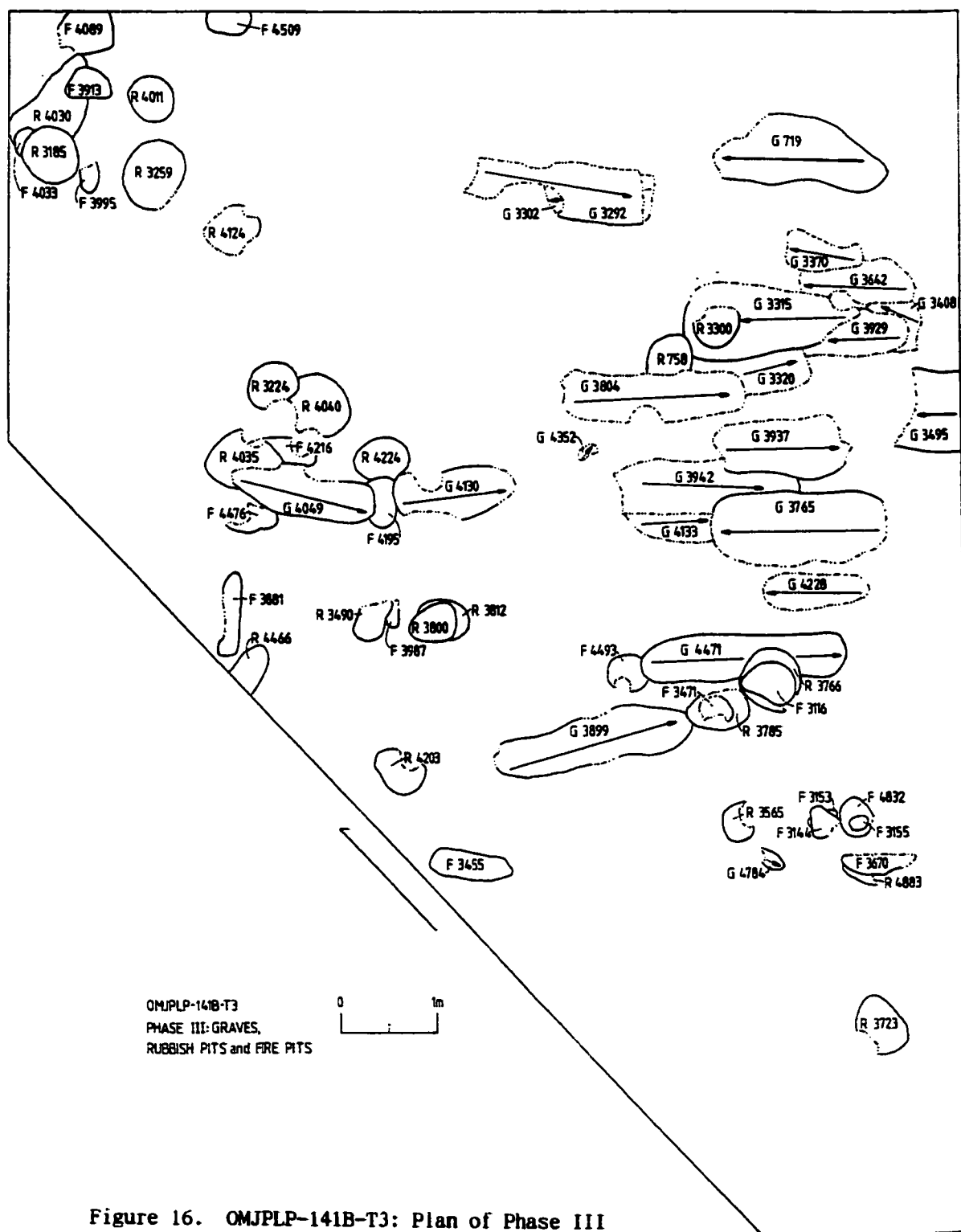


Figure 15. OMJPLP-141B-T3: Phase III, Structure 7.  
Plan of main components.



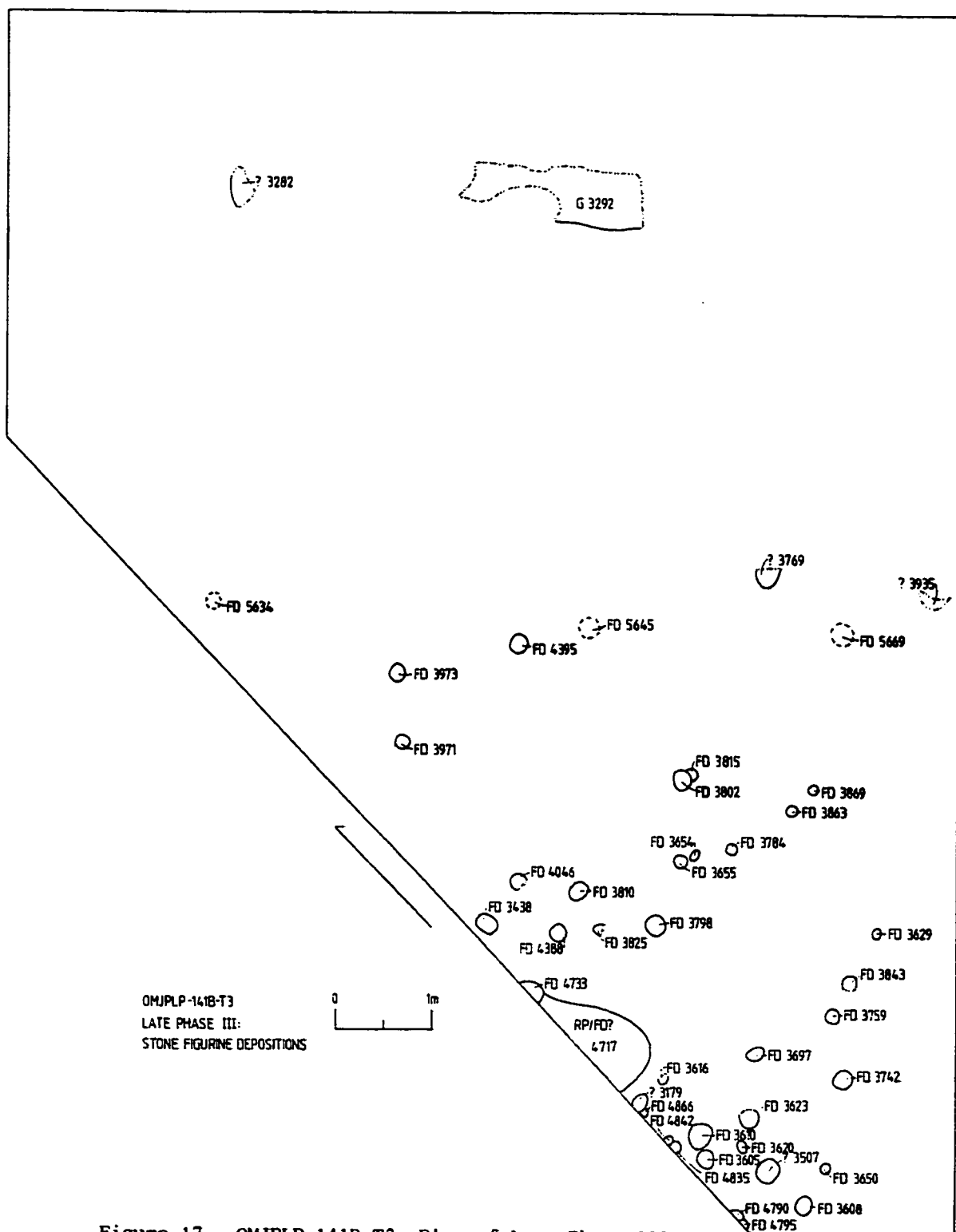


Figure 17. OMJPLP-141B-T3: Plan of Late Phase III stone figurine depositions.

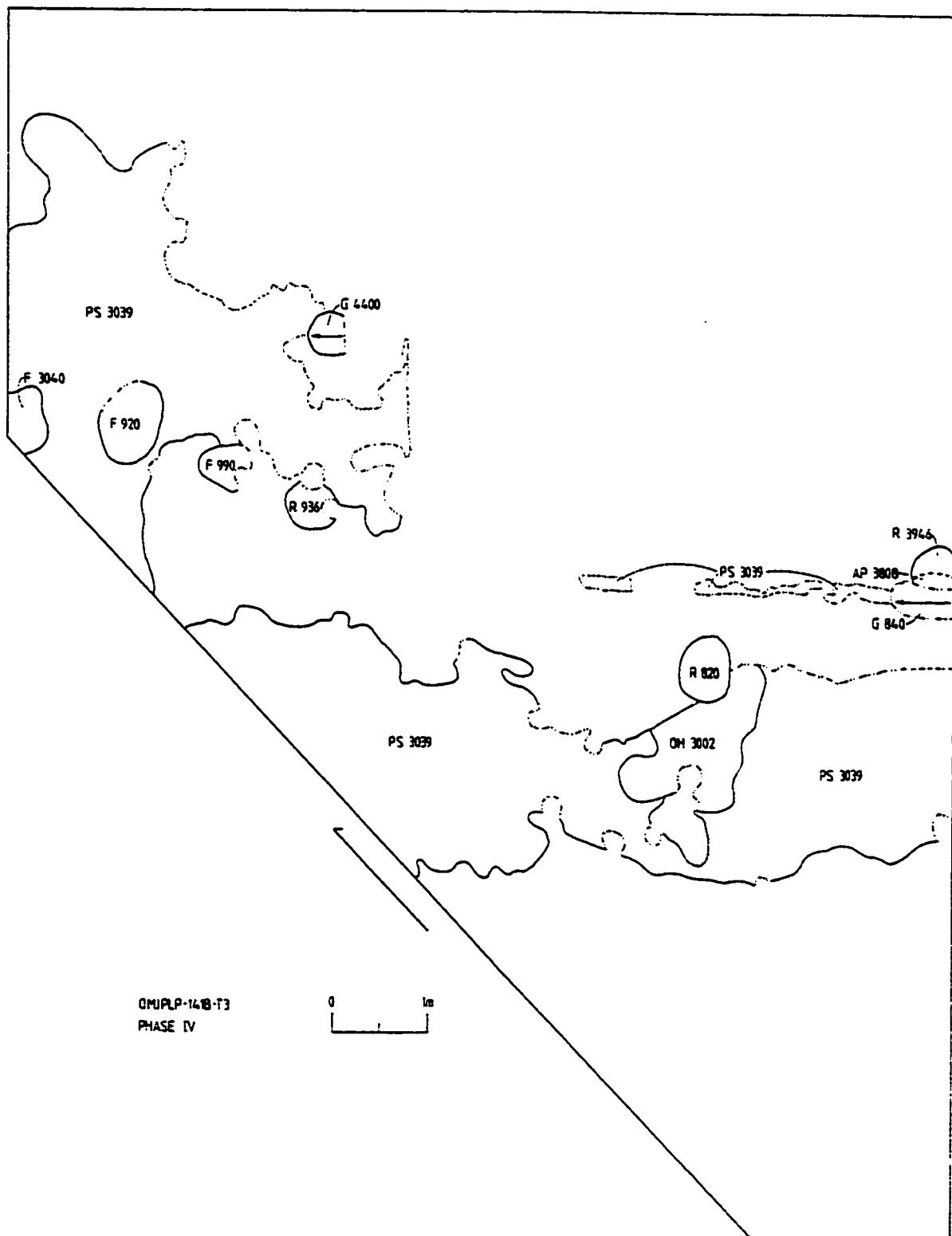


Figure 18. OMJPLP-141B-T3: Phase IV. Plan of main components.



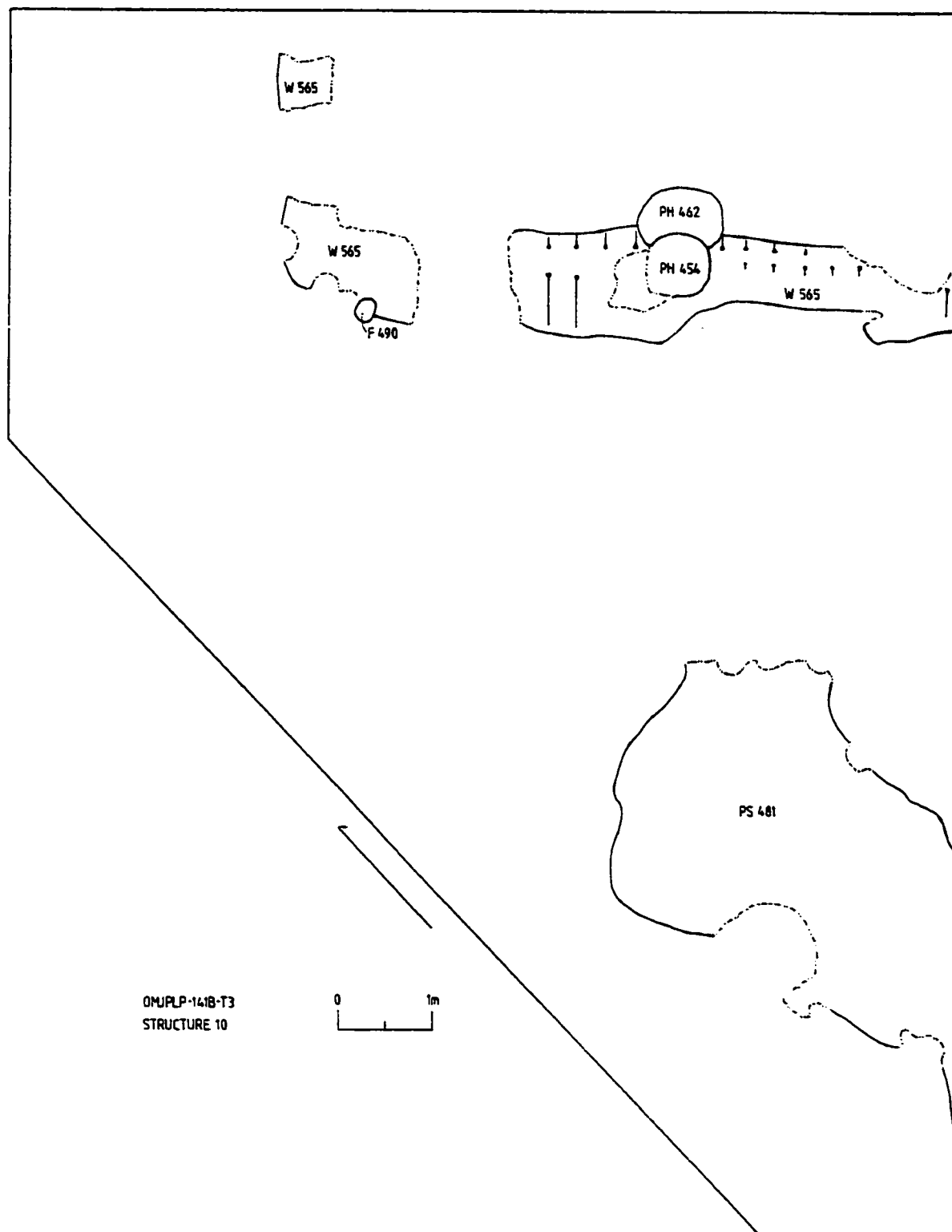


Figure 20. OMJPLP-141B-T3: Phase V. Structure 10.  
Plan of main components.

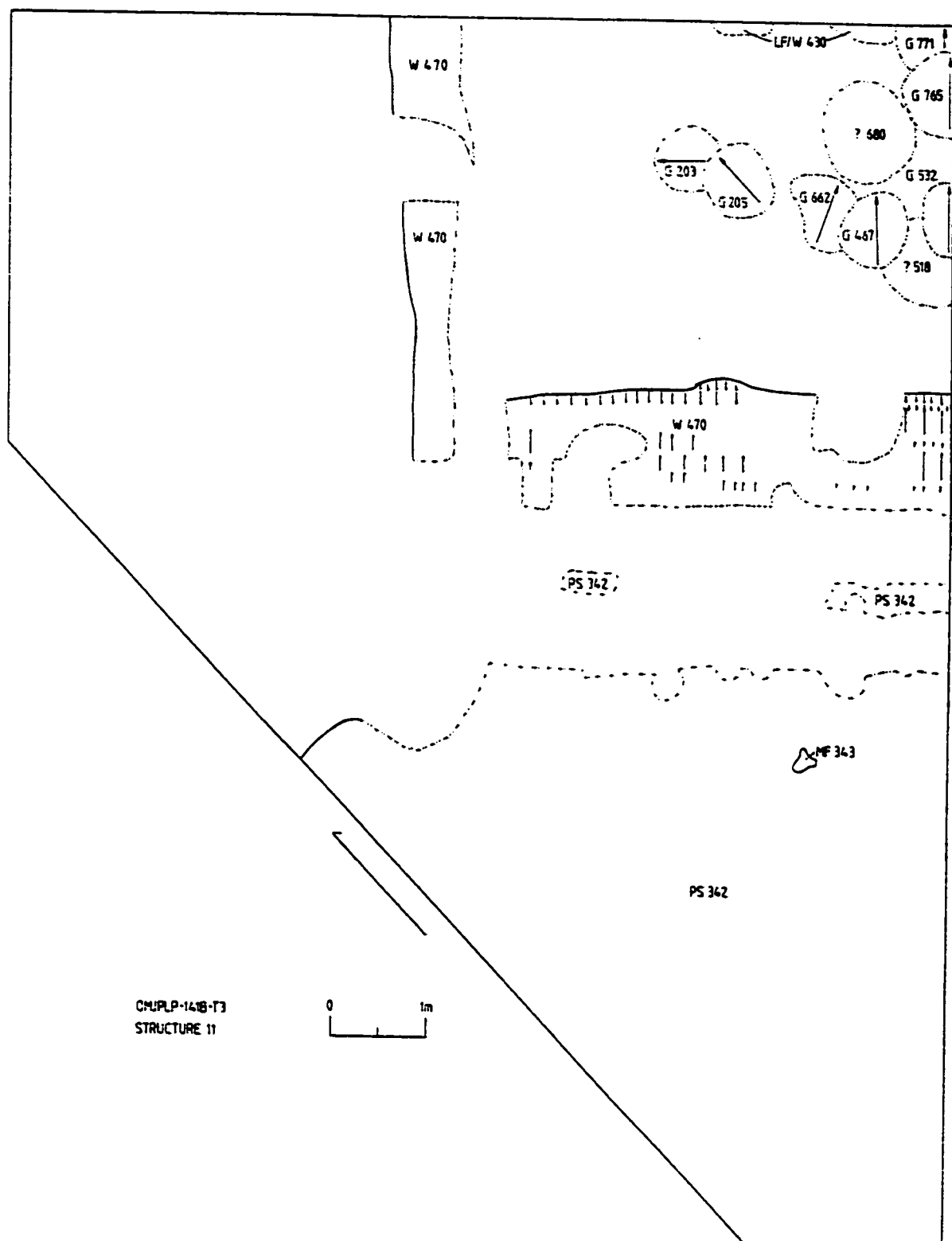


Figure 21. OMJPLP-141B-T3: Phase V. Structure 11.  
Plan of main components.



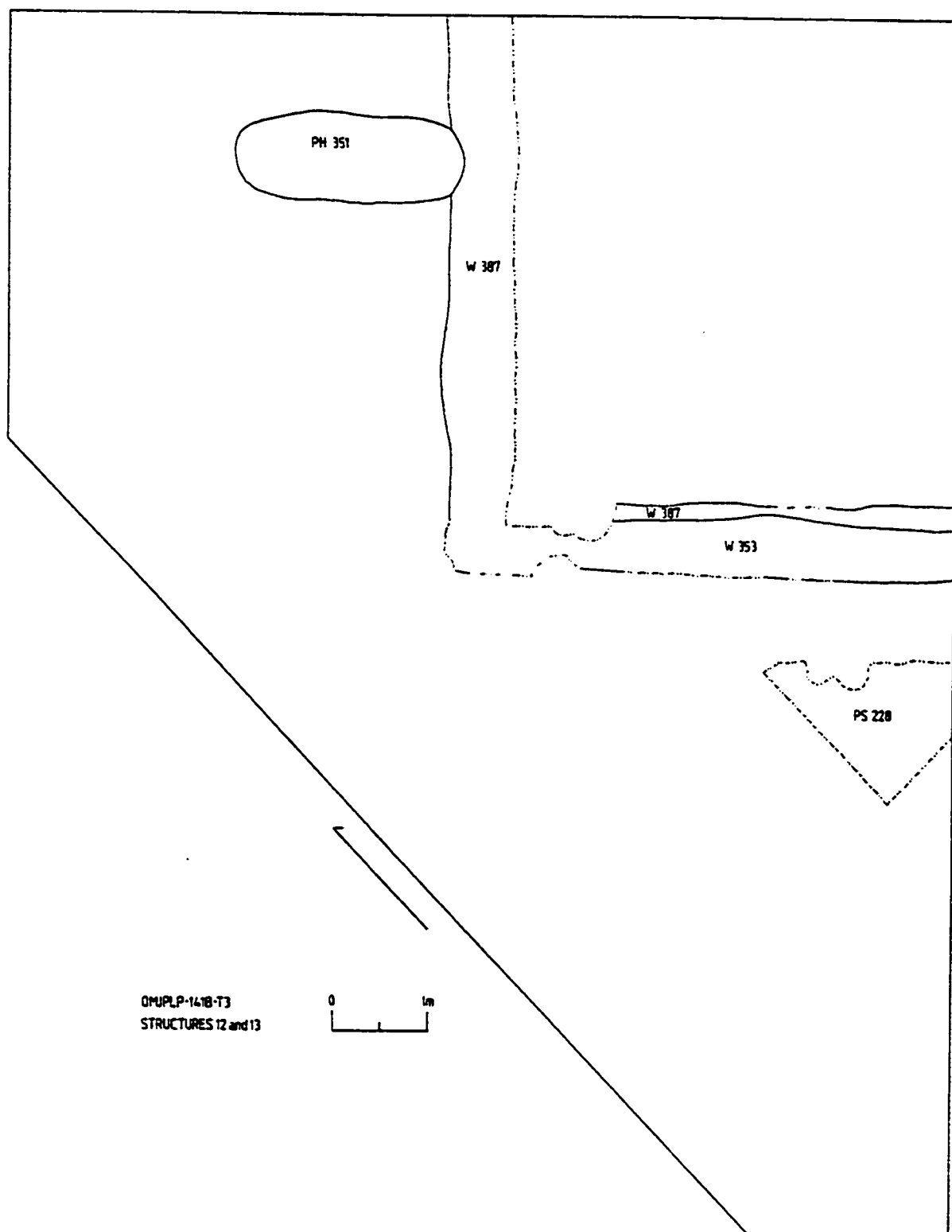


Figure 22. OMJPLP-141B-T3: Phase V. Structures 12 & 13.  
Plan of main components.

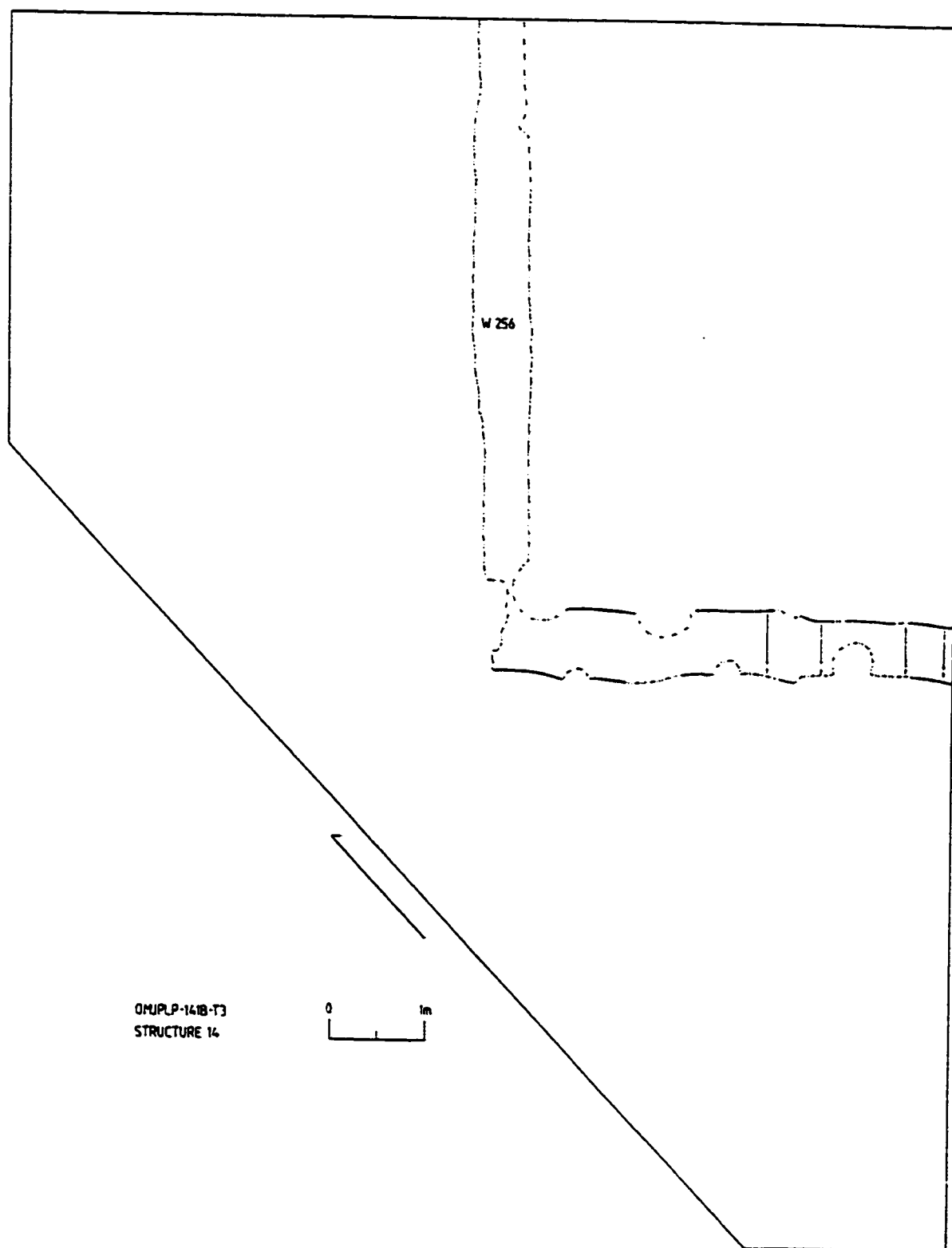


Figure 23. OMJPLP-141B-T3: Phase V. Structure 14.  
Plan of main components.

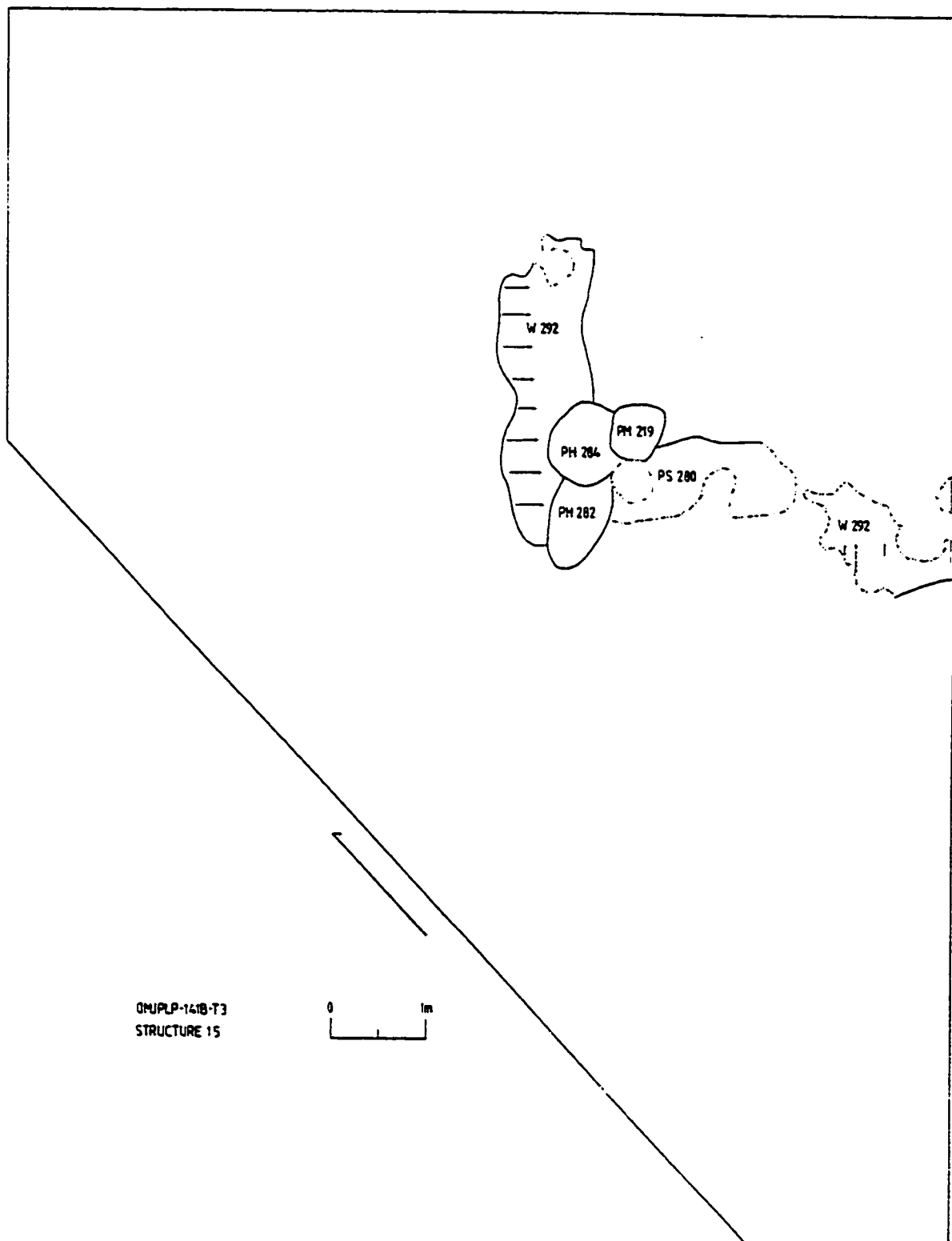


Figure 24. OMJPLP-141B-T3: Phase VI. Structure 15.  
Plan of main components.

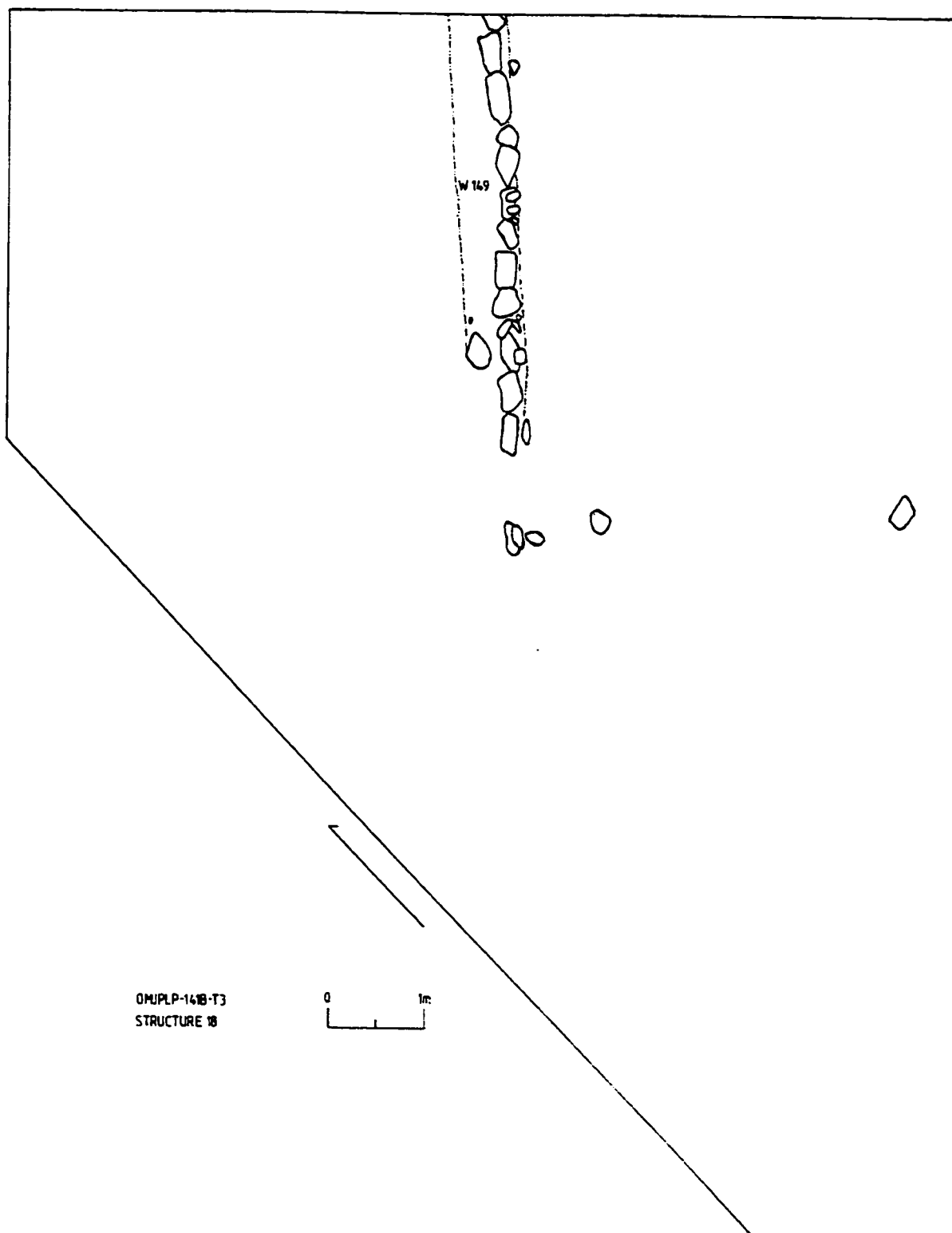


Figure 25. OMJPLP-141B-T3: Phase VII. Structure 18.  
Plan of main components.

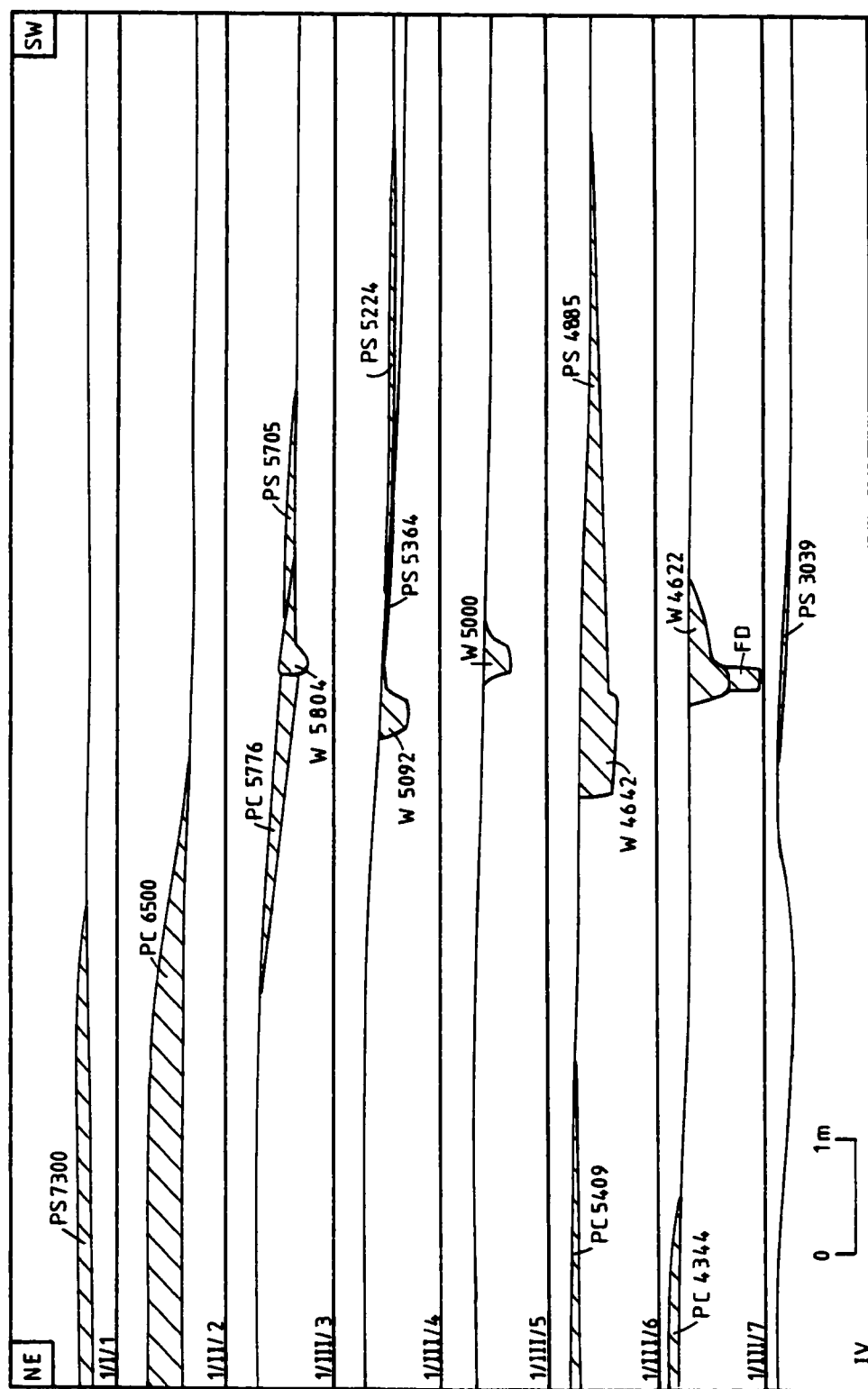


Figure 26. OMJLP-141B-T3: Reconstructed profiles: Period I. Phases I-III (Structures 1-7), and Phase IV. Shown are the main clay layers and walls of successive structural episodes along a NE-SW axis.

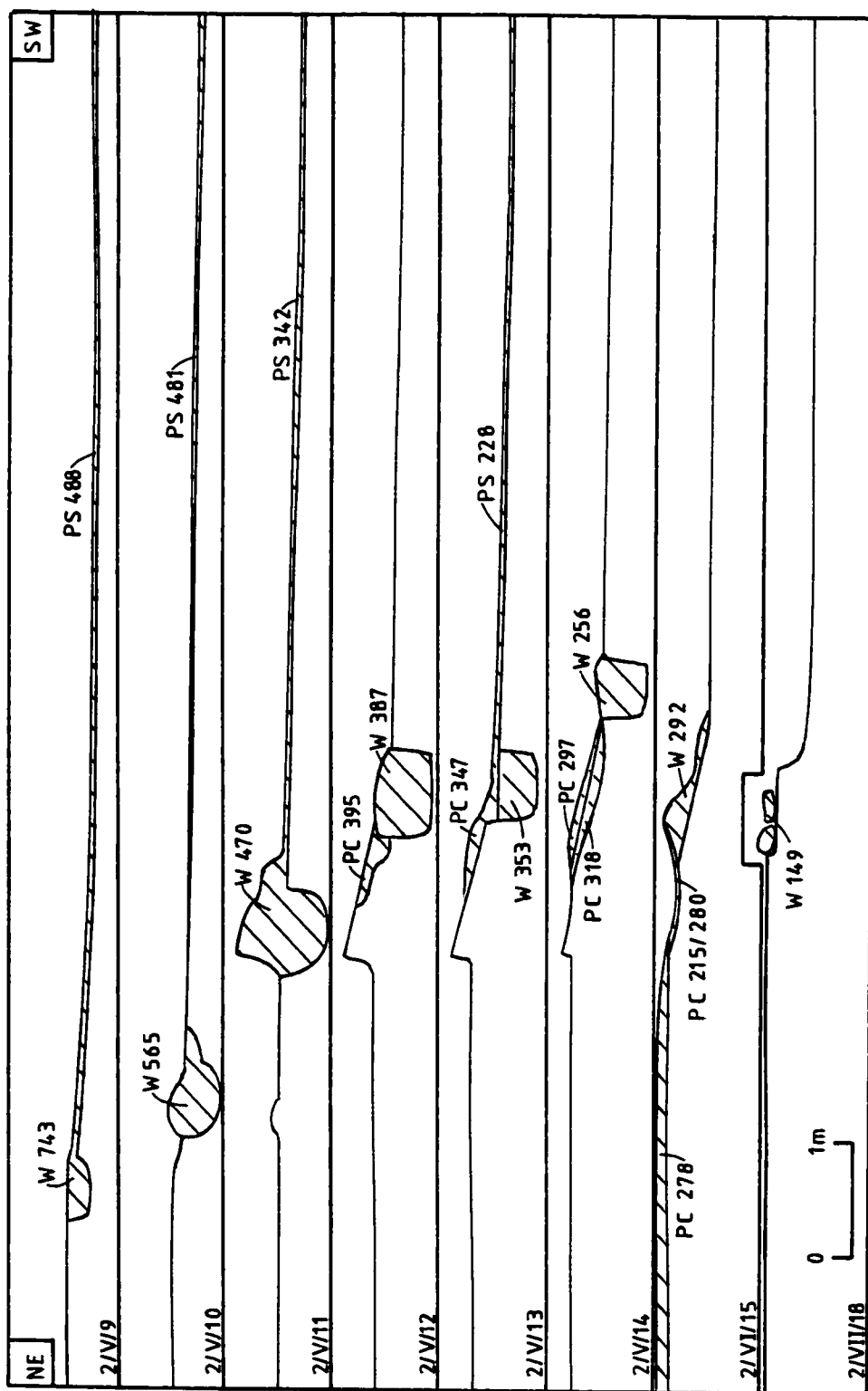


Figure 27. OMJPLP-141B-T3: Reconstructed profiles: Period 2. Phases V-VII: Structures 9-18. Shown are the main clay layers and walls of successive structural episodes along a NE-SW axis.

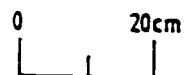
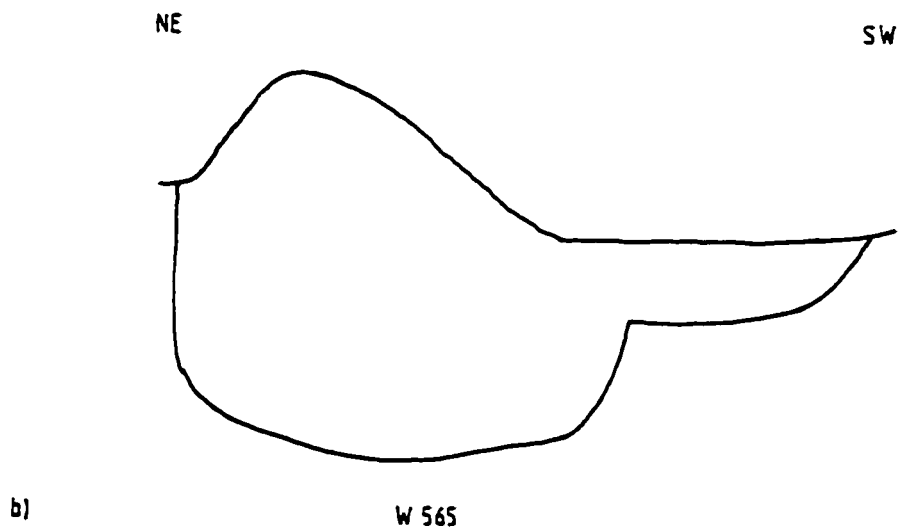
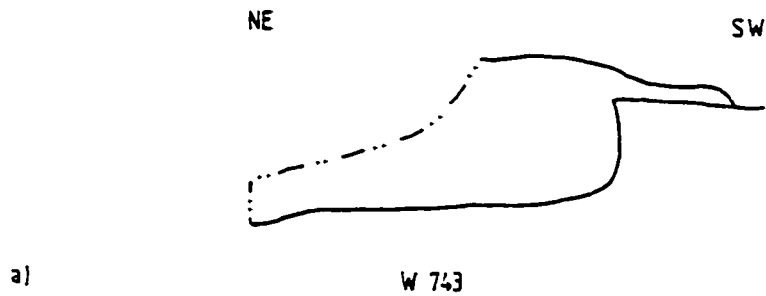


Figure 28. Profiles of clay walls 743 and 565 (SW arm).

- 1 Bowl
- 2 Shell beads

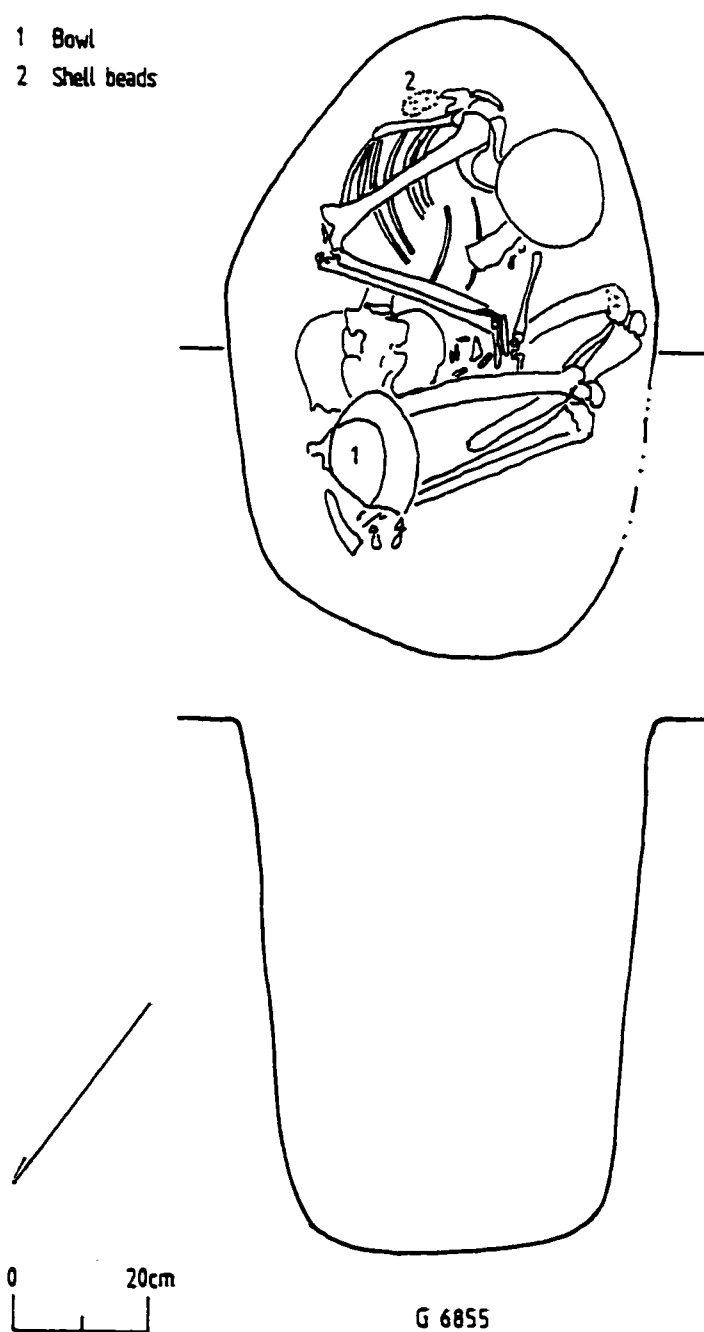


Figure 29. Phase I flexed burial: Grave 6855.



- 1 Bottle
- 2 Green stone bead
- 3 Shell baton
- 4 Spondylus calcifer
- 5 Lyropectens subnudosus

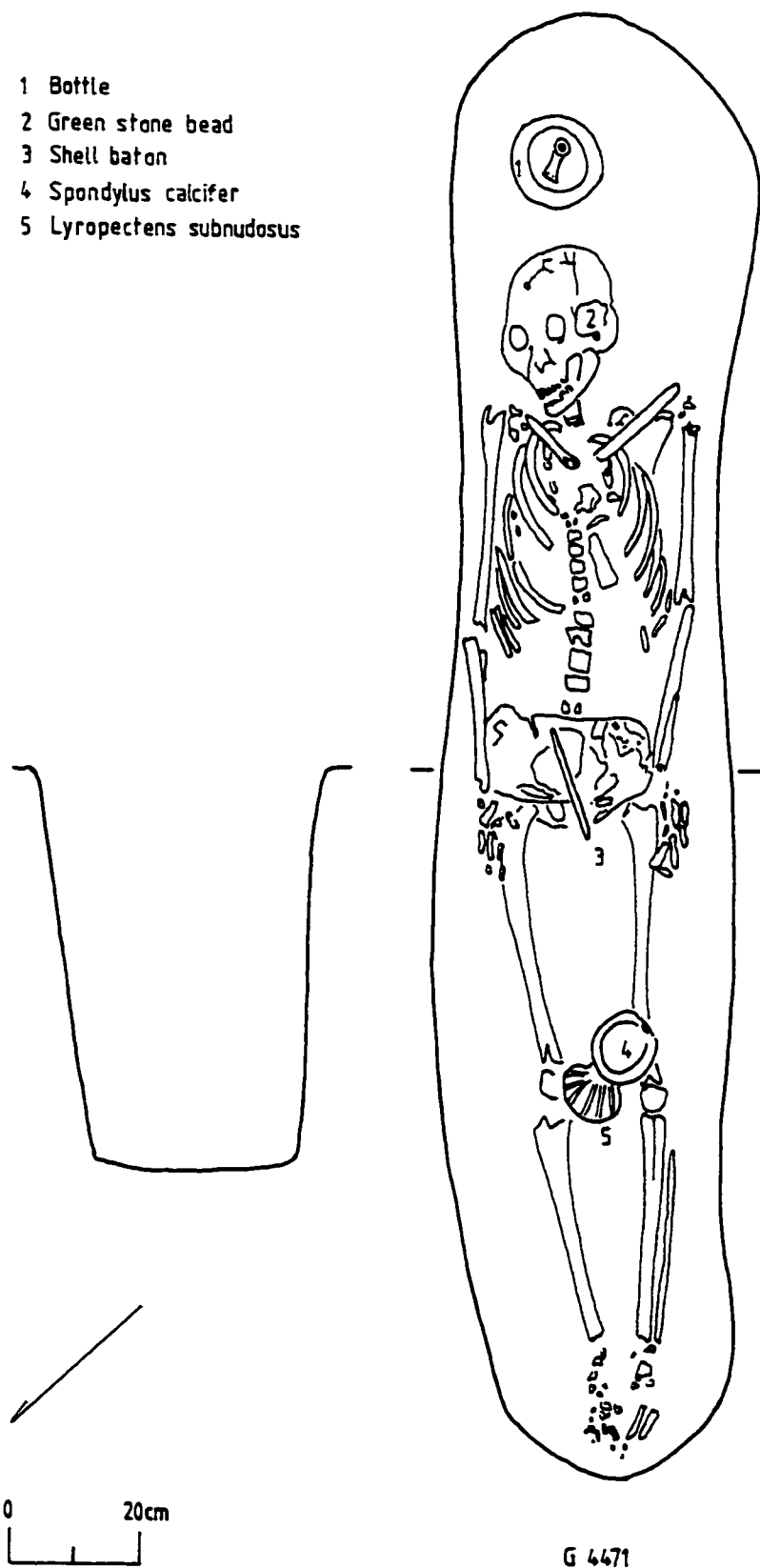


Figure 30. Phase III extended burial: Grave 4471.

- 1 Dog bottle
- 2 Bone baton
- 3 Green stone bead
- 4 Deer skull container



Figure 31. Phase III flexed burial: Grave 3302.

- 1 Double pedestalled bowl
- 2 Bowl
- 3 Jar
- 4 Jar

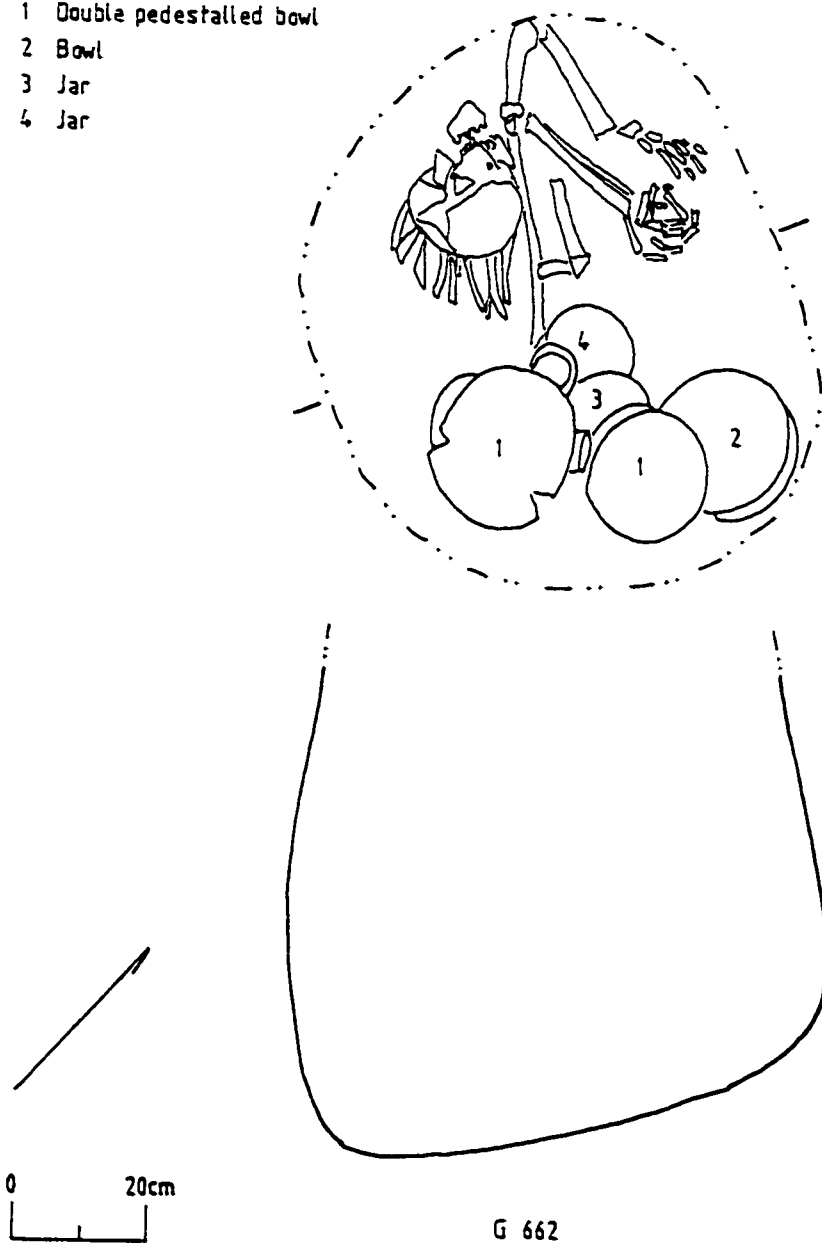


Figure 32. Phase V burial, seated and flexed: Grave 662.

- 1 Half of double pedestalled bowl  
2 Jar

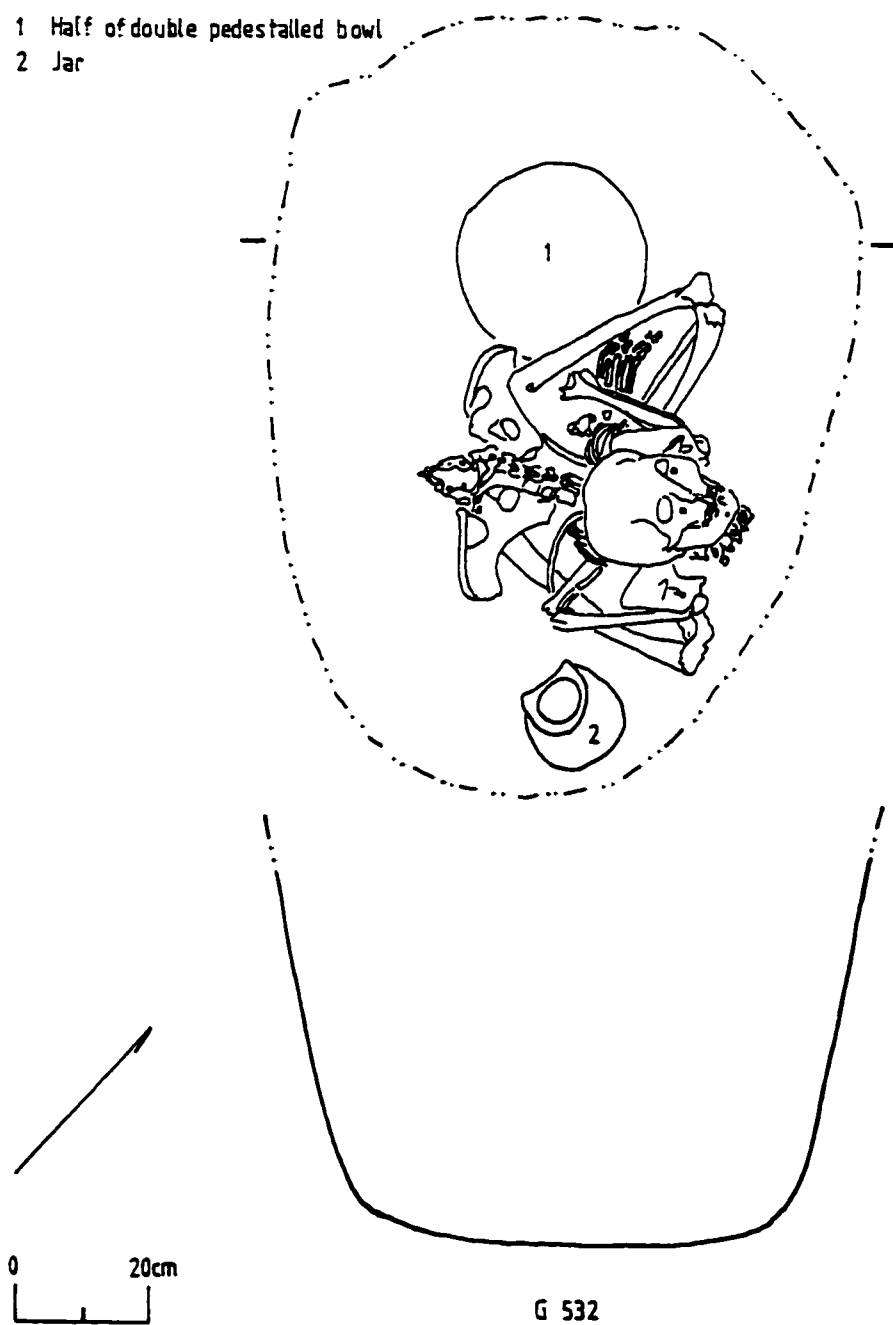


Figure 33. Phase V burial, seated and cross-legged: Grave 532.

- 1 Pedestalled bowl
- 2 Jar
- 3 Bowl

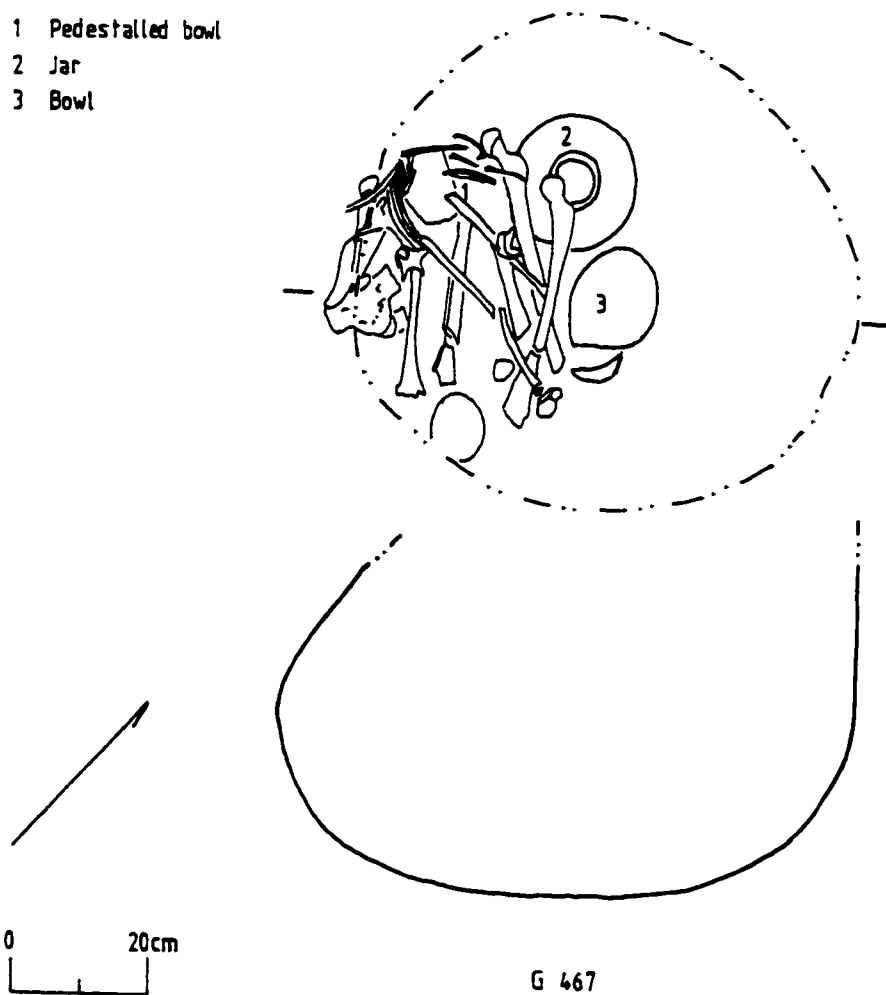


Figure 34. Phase V secondary bundle burial: Grave 467.

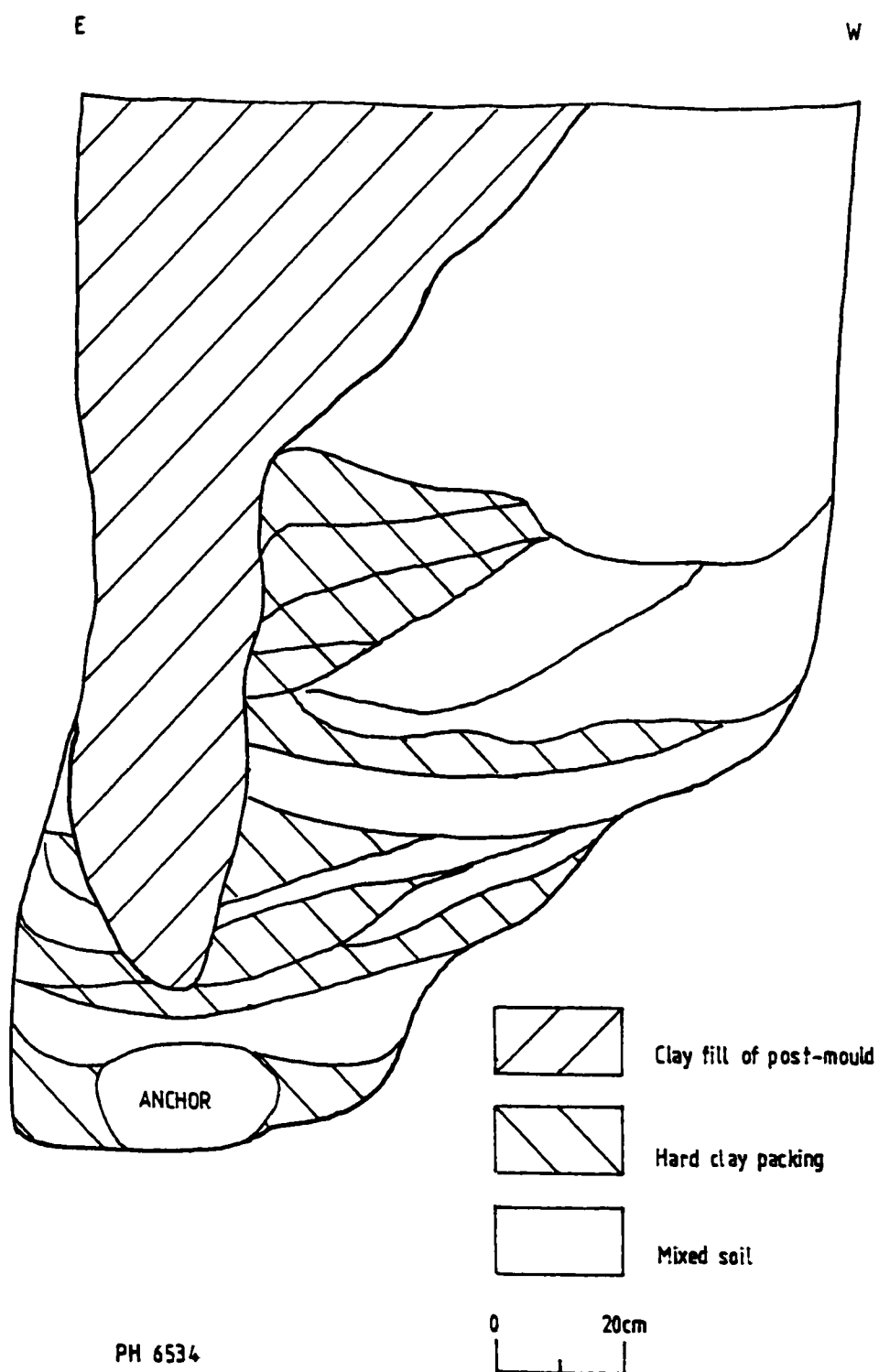


Figure 35. Post-hole 6534 with stone anchor deposition. E-W profile.

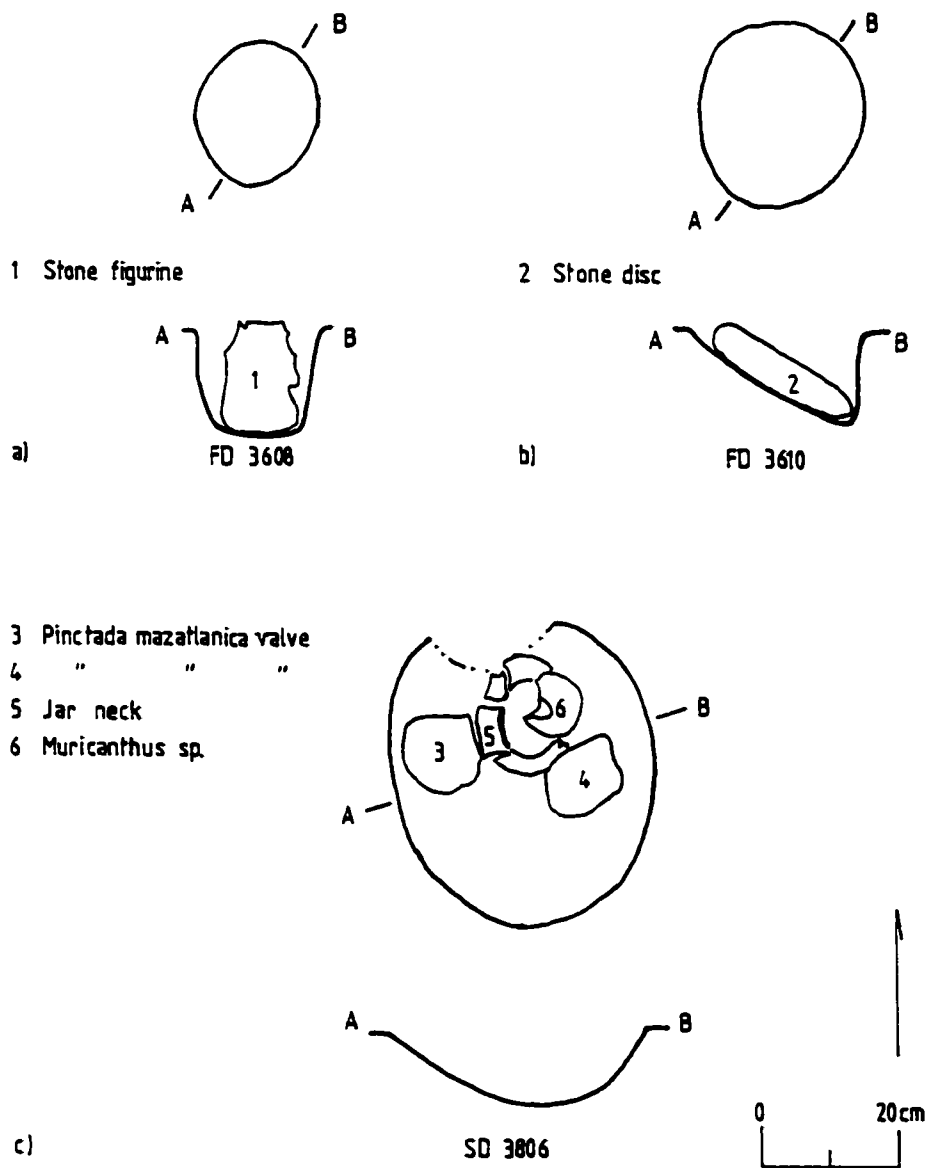


Figure 36. Stone figurine depositions 3608 and 3610 and structured artefact deposition 3806. Plans and profiles.

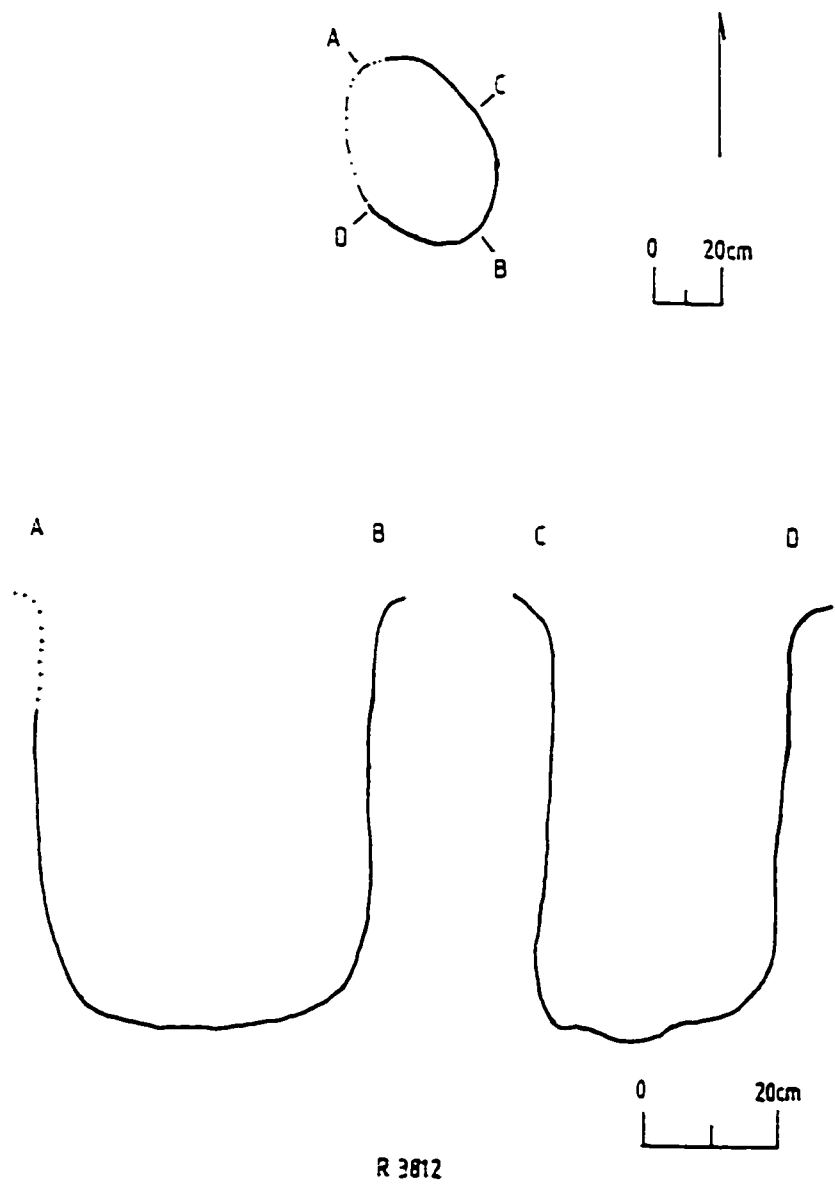


Figure 37. Rubbish pit 3812. Plan and profiles.



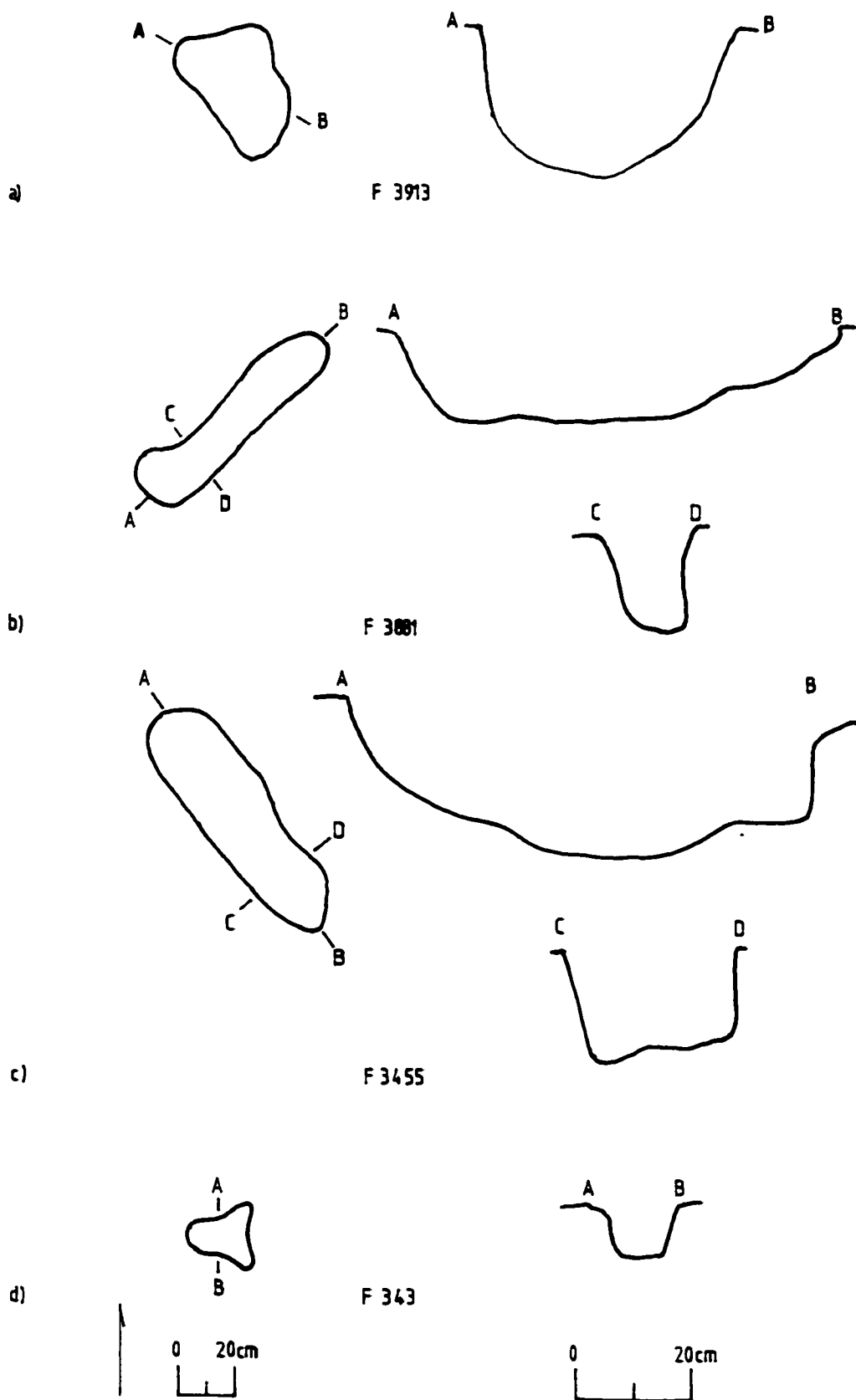
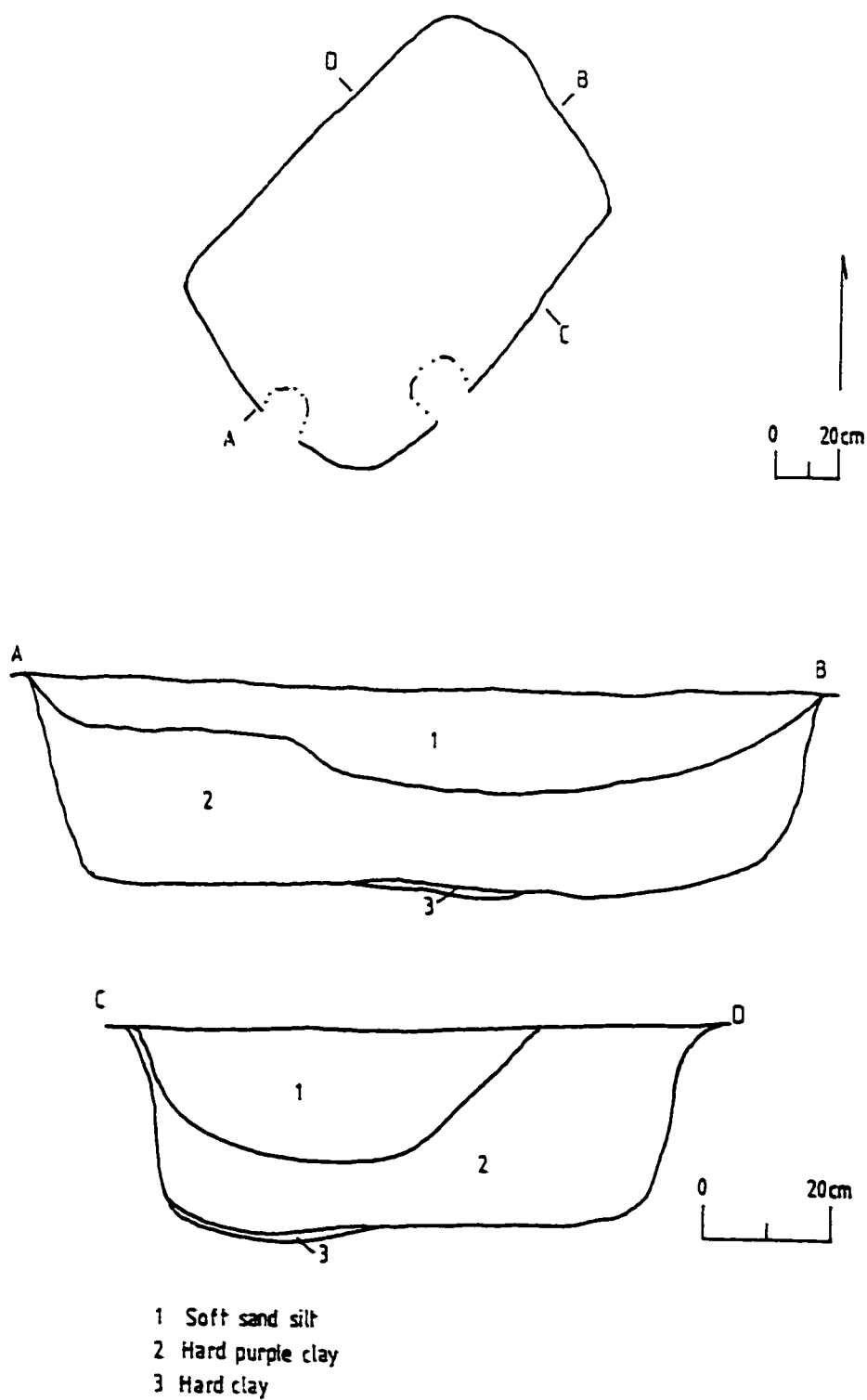
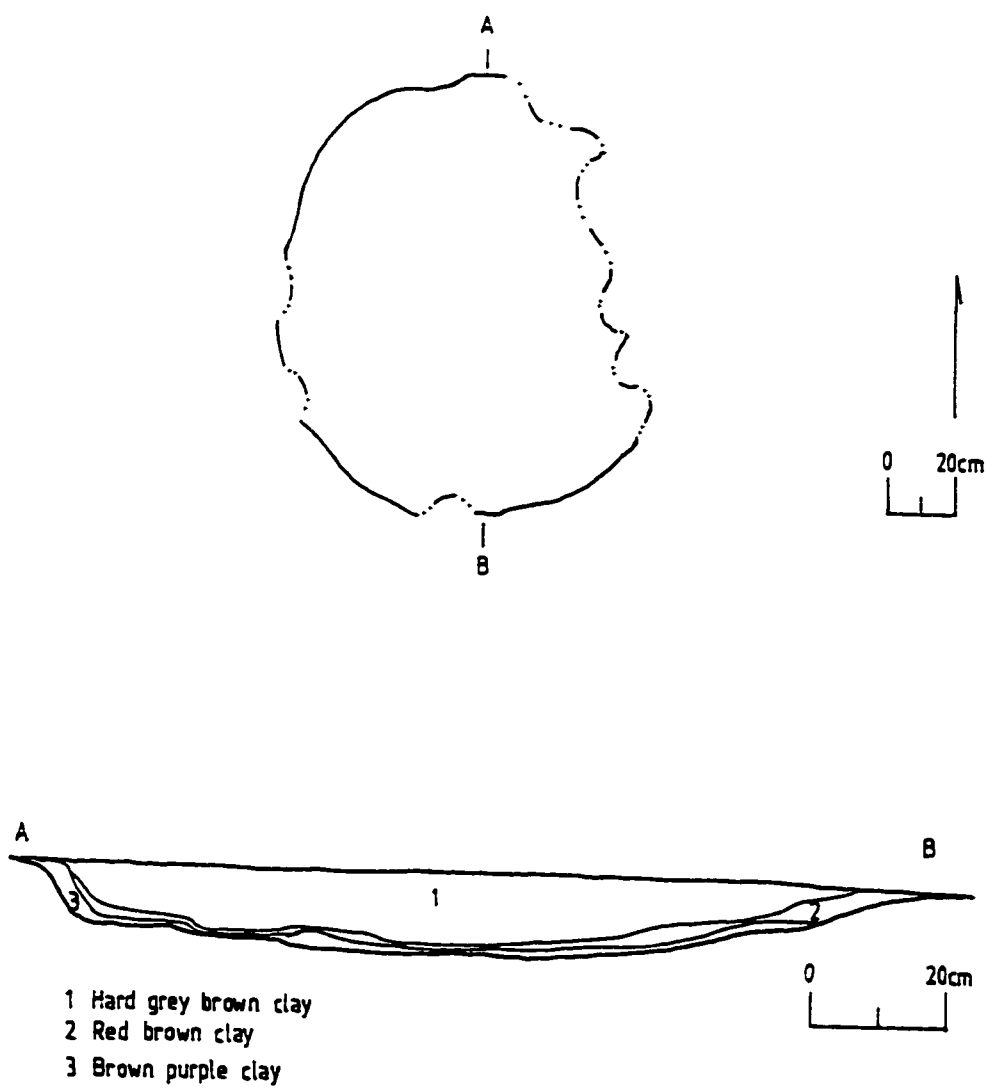


Figure 38. Fire pits 3913, 3881, 3455 and 343. Plans and profiles.



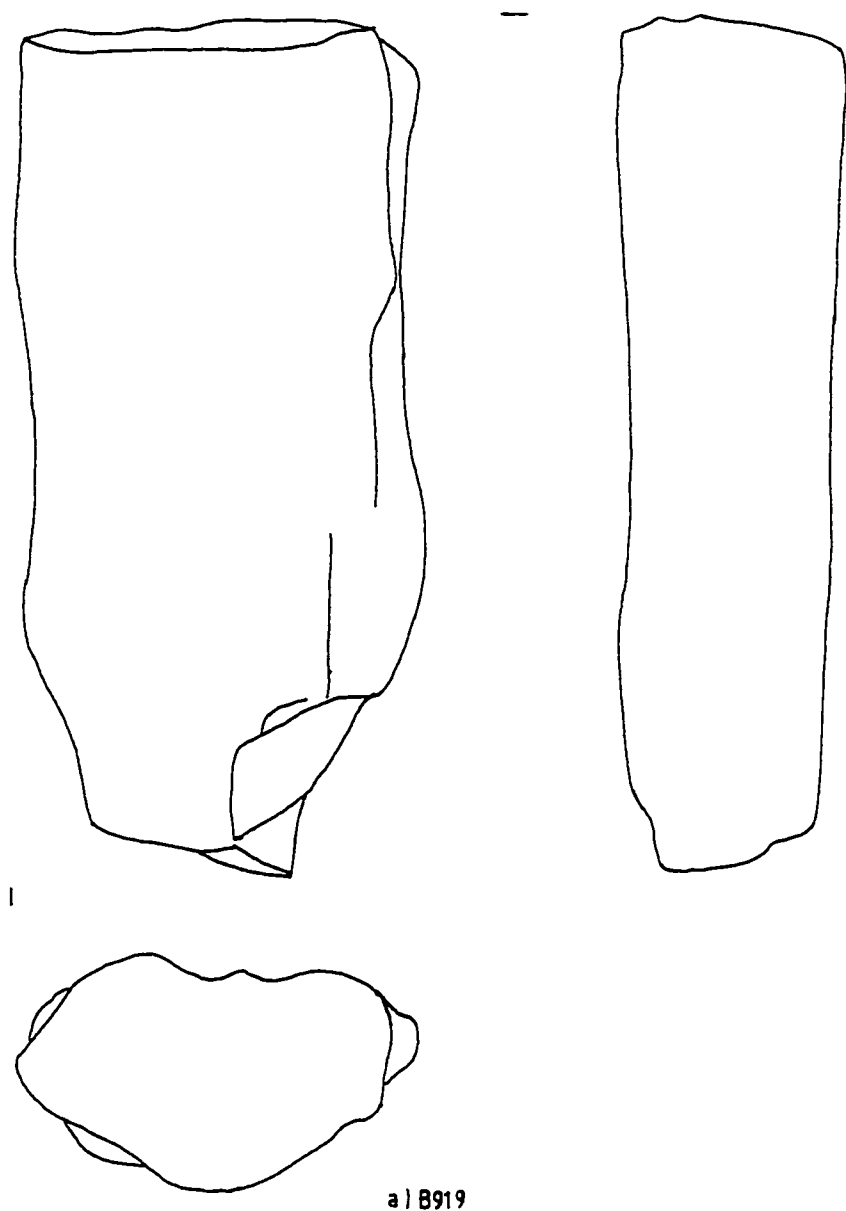
RP 5186

Figure 39. Rectangular pit 5186. Plan and profiles.

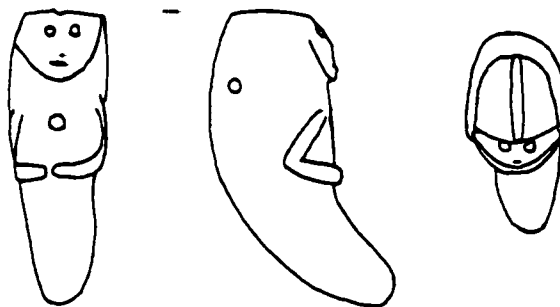


CP 4336

Figure 40. Circular pit 4336. Plan and profile.



a | B919



b | B933



Figure 41. Fossil wood block (a) and sea-lion tooth pendant (b) of structured deposition 6659, which also contained a bar of malachite (Figure 70b) and two green stone beads (Figure 72k,l).

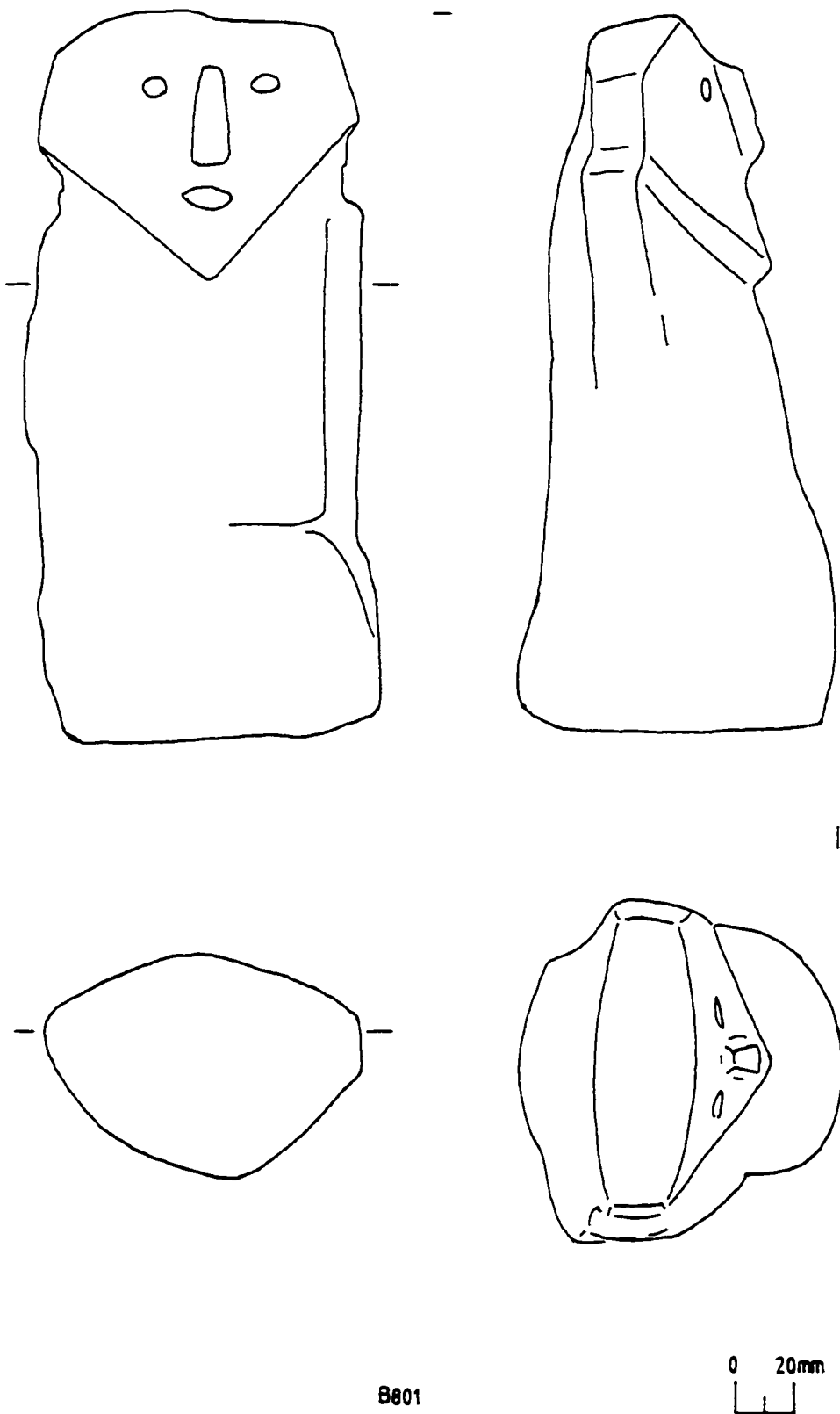


Figure 42. Large stone figurine from beneath clay wall of Structure 7.

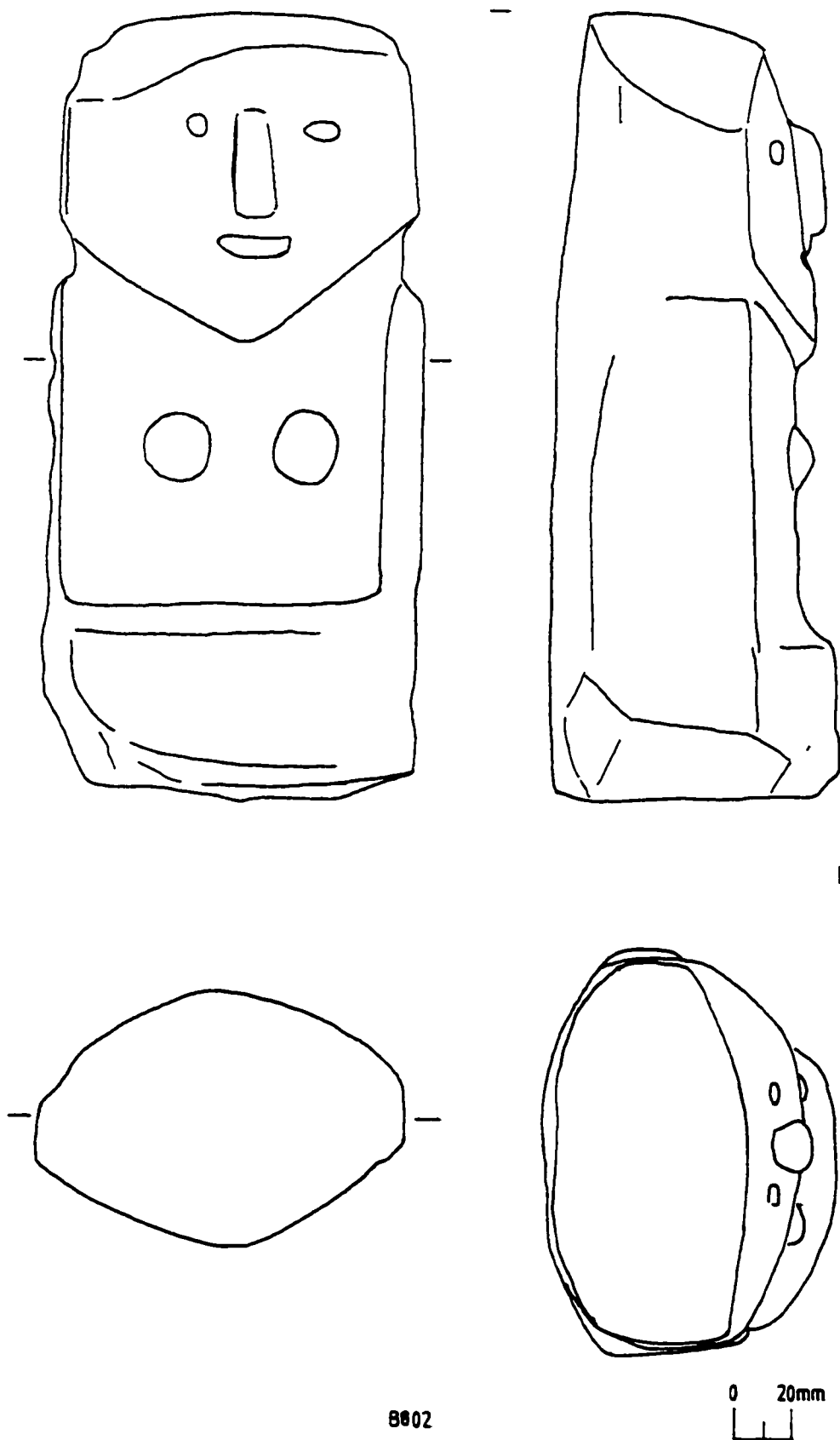
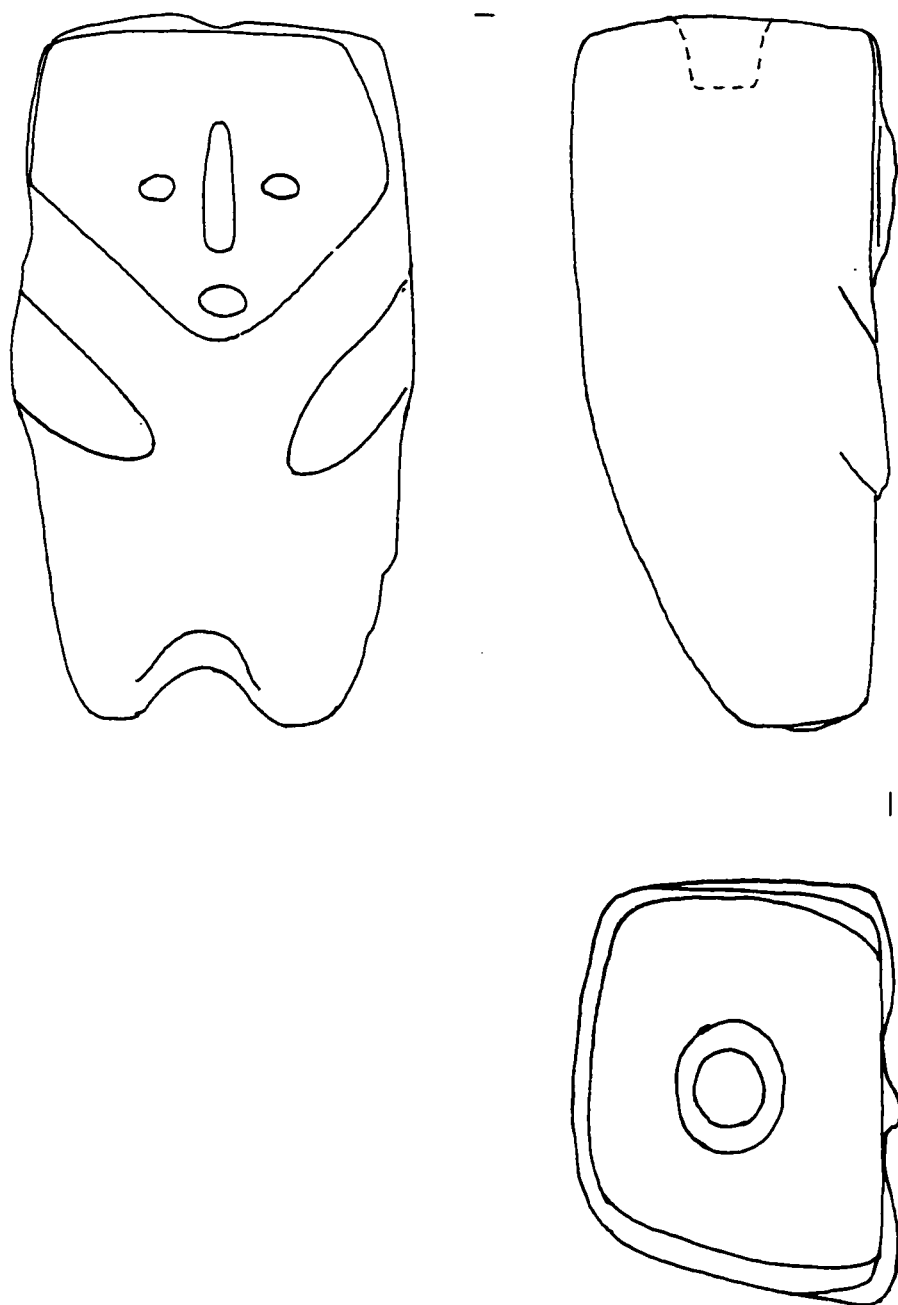


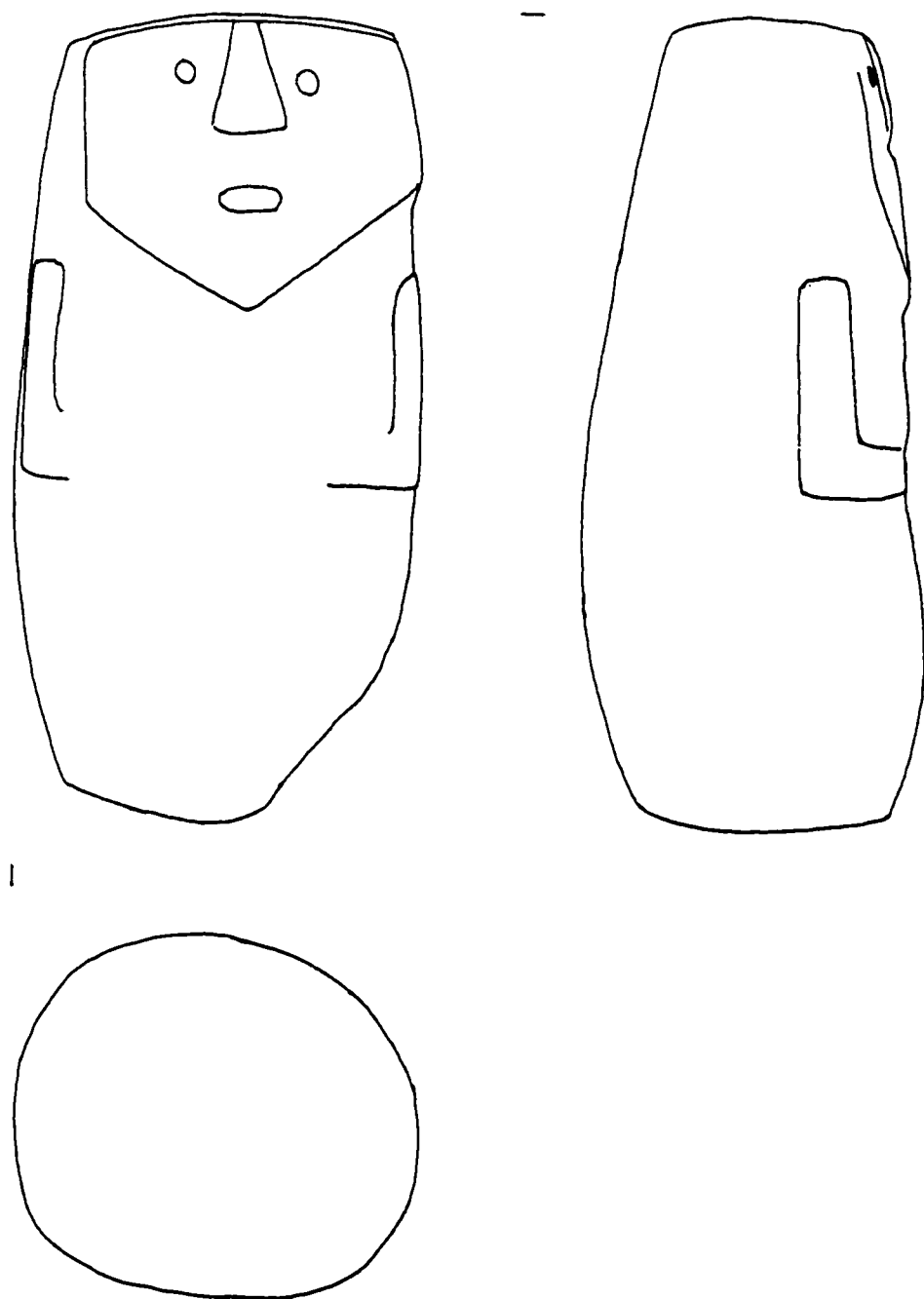
Figure 43. Large stone figurine from beneath clay wall of Structure 7.



8003

0 20mm

Figure 44. Large green-painted stone figurine from beneath clay wall of Structure 7. It stood over a green-painted stone disc (Figure 79f.)



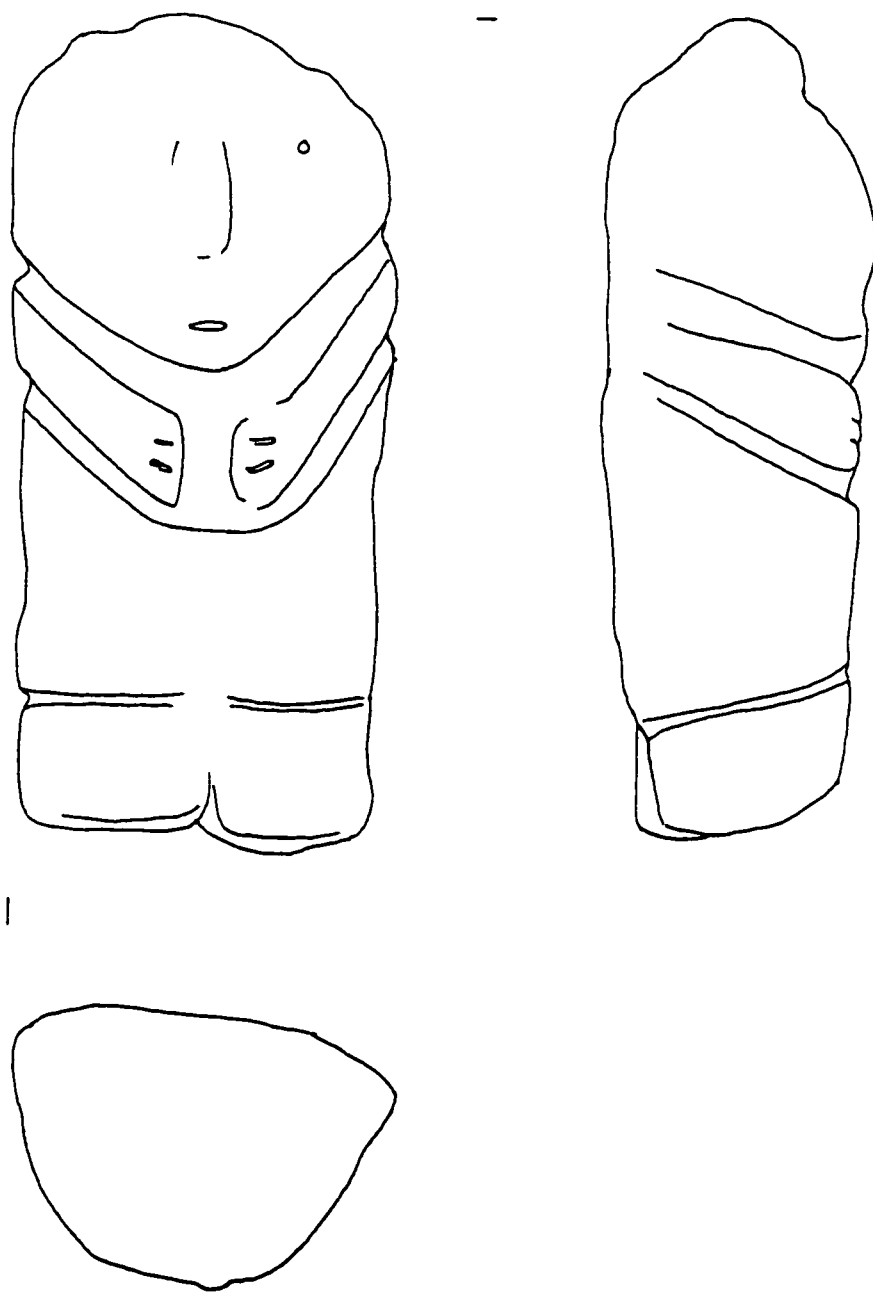
1

B665

0 20mm  
└─┘

Figure 45. Large stone figurine from secondary or disturbed deposition 4717.





B634

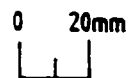
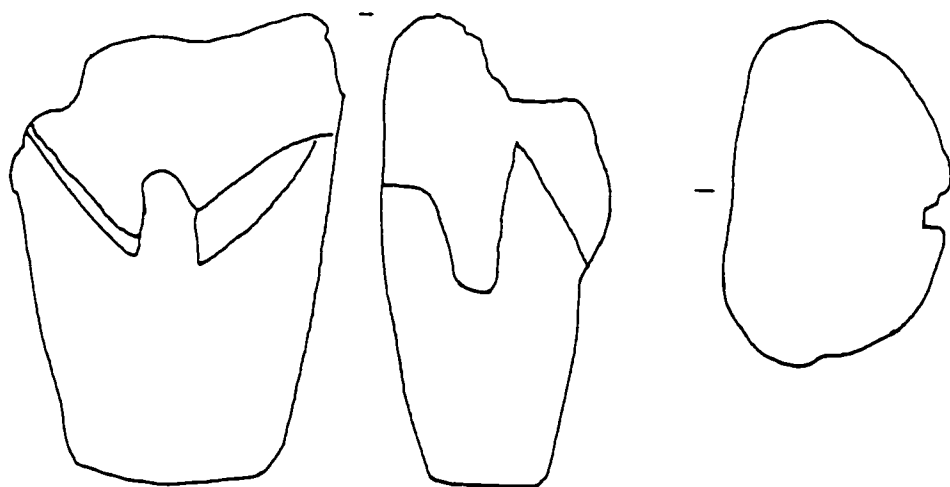
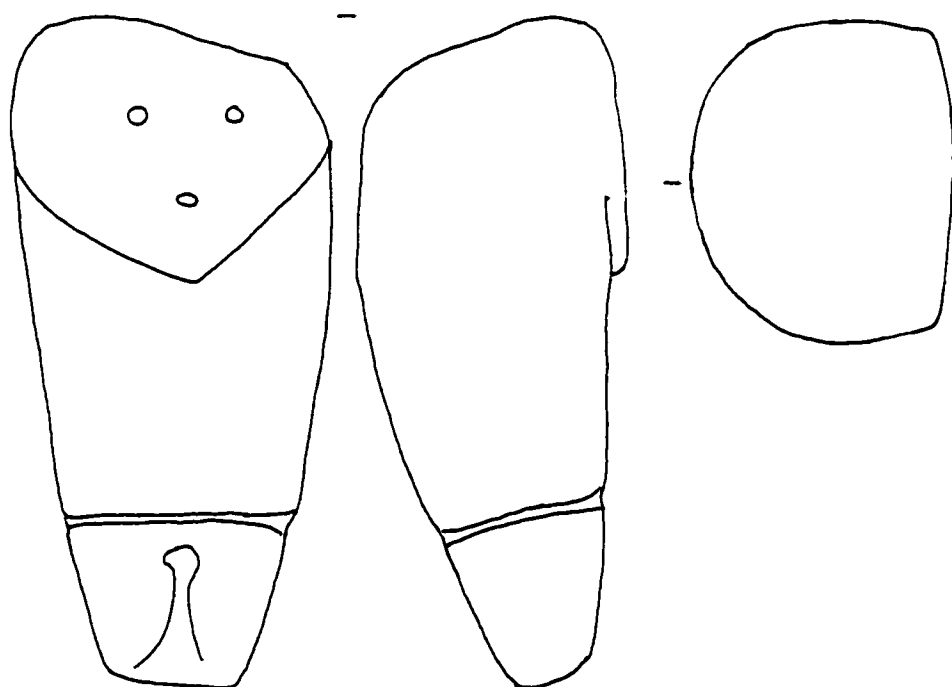


Figure 46. Large stone figurine from deposition 3971.



a) B703



b) B635

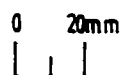
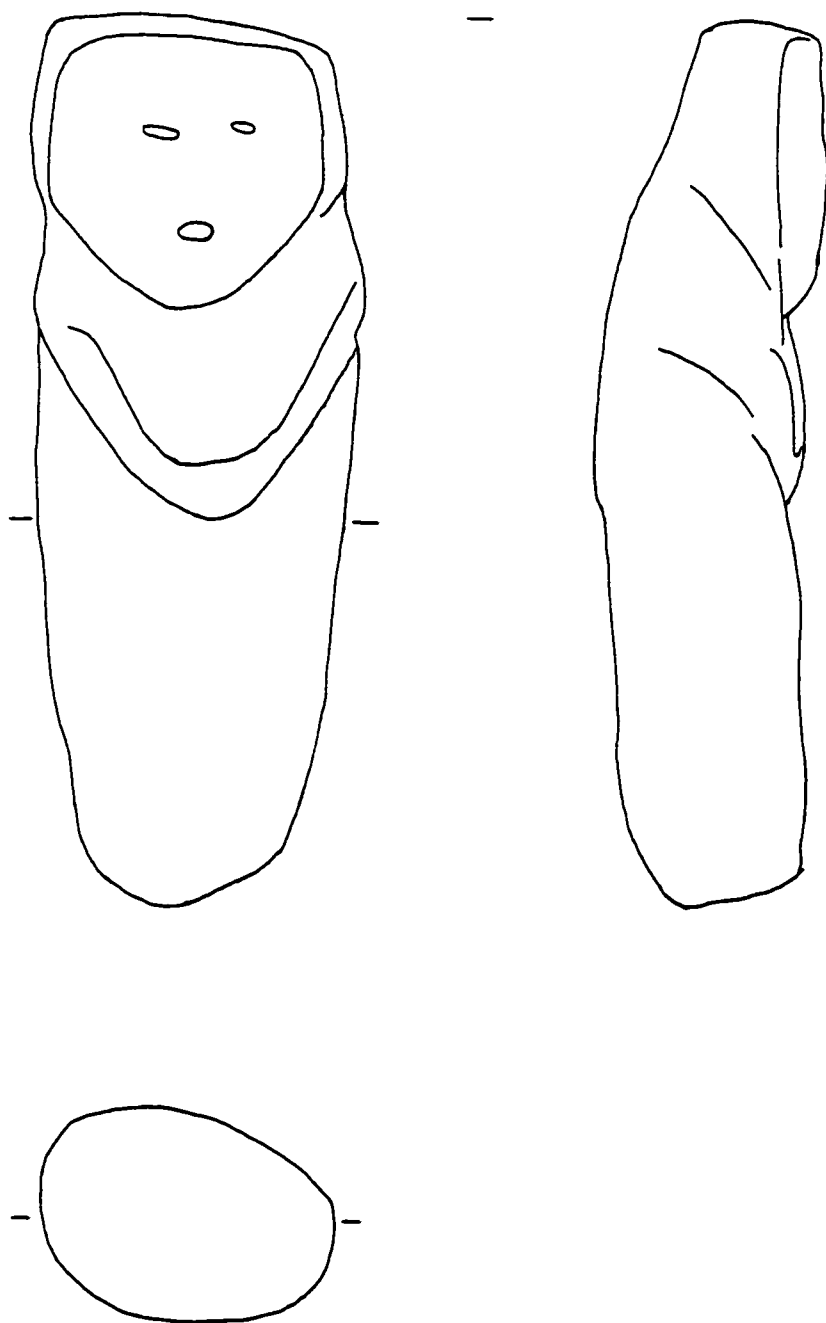


Figure 47. Intermediate size stone figurines from single depositions 4835 (a) and 3973 (b).



B667

0 20mm  
└─┘

Figure 48. Intermediate size stone figurine from paired deposition 4733. See Figure 49 also.

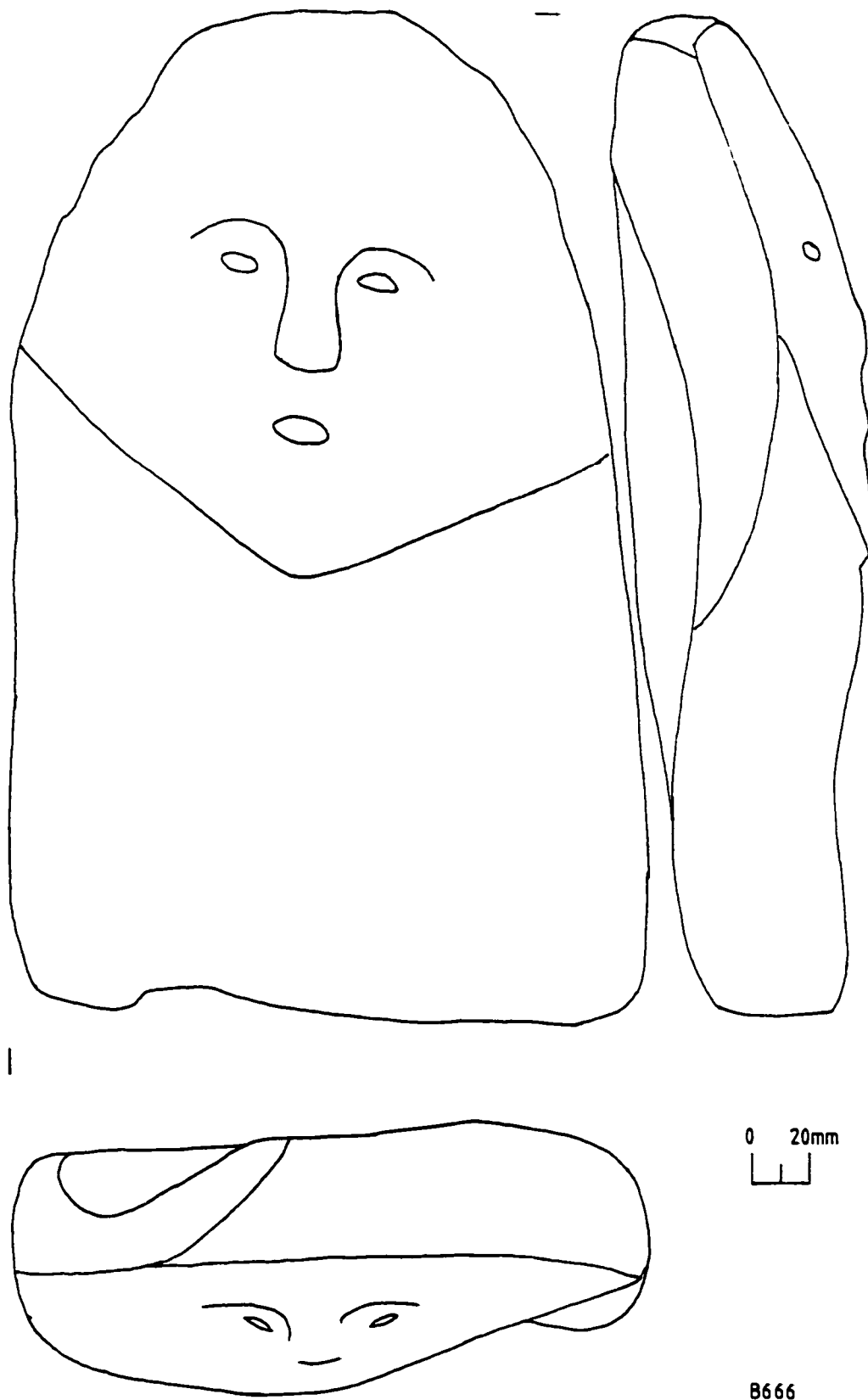


Figure 49. Large stone figurine from paired deposition 4733. This stood behind figurine B667 (Figure 48).

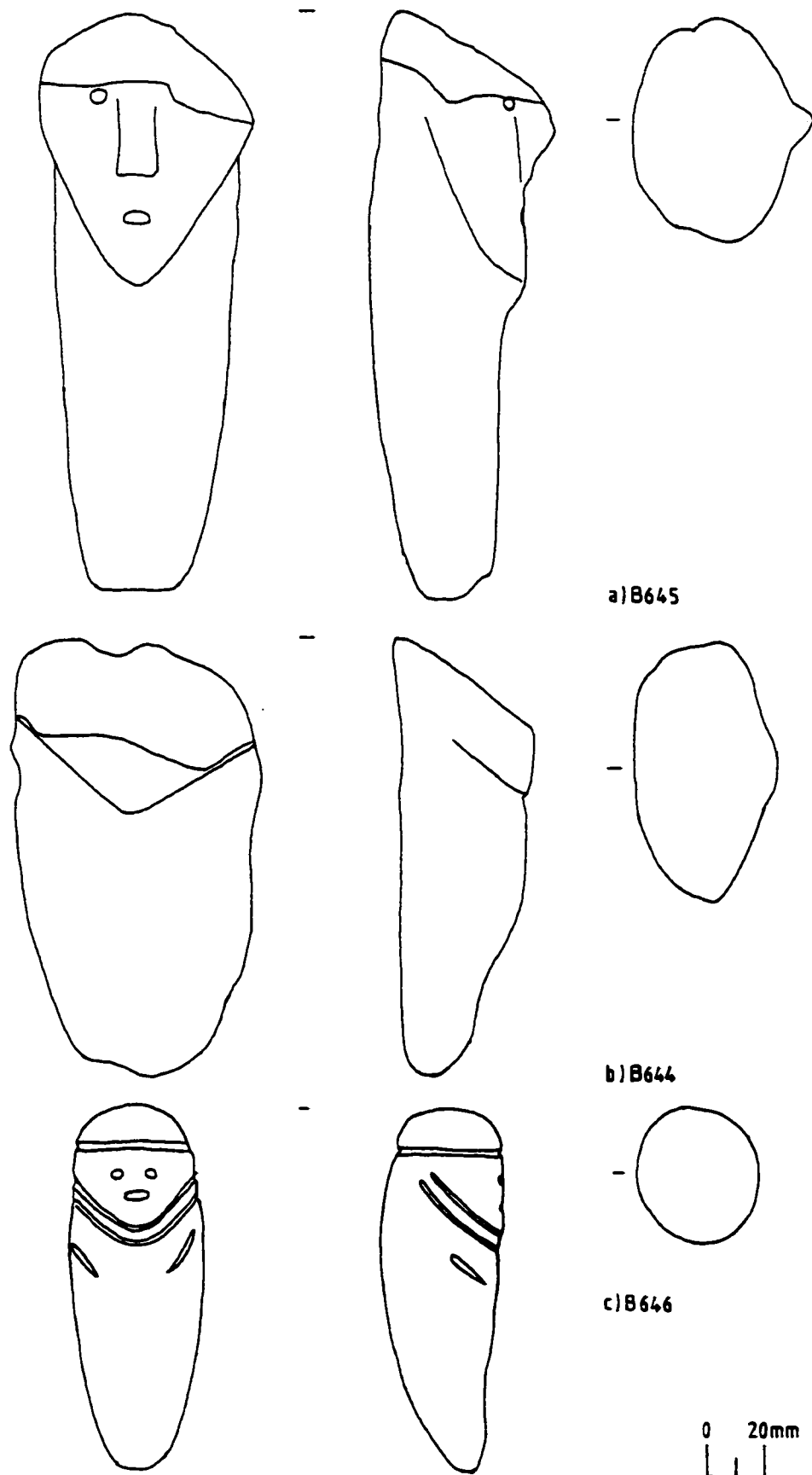


Figure 50. Stone figurines from multiple deposition 4388. B646 (c) was painted green.

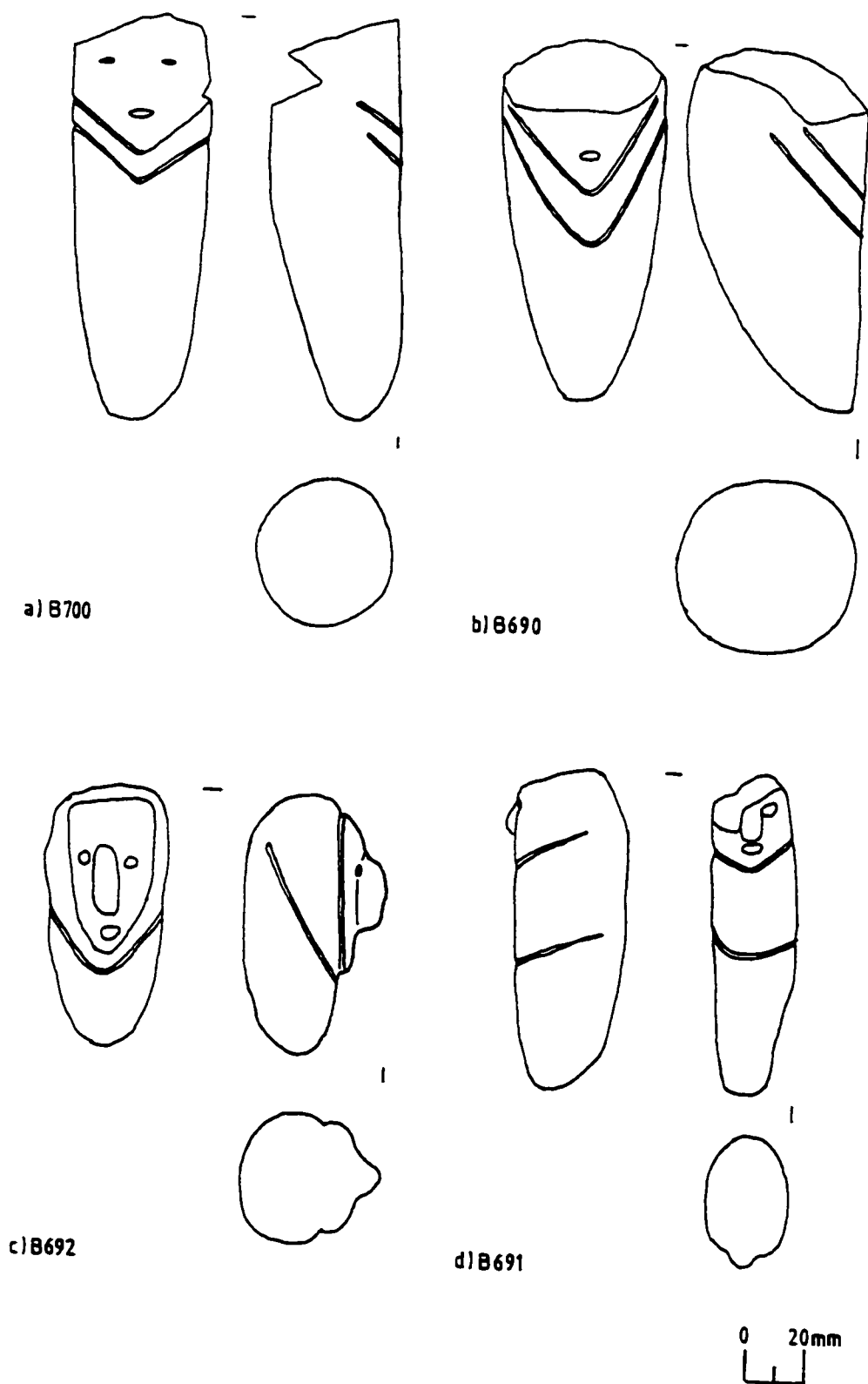


Figure 51. Stone figurines from multiple deposition 4795.  
See next two figures also.

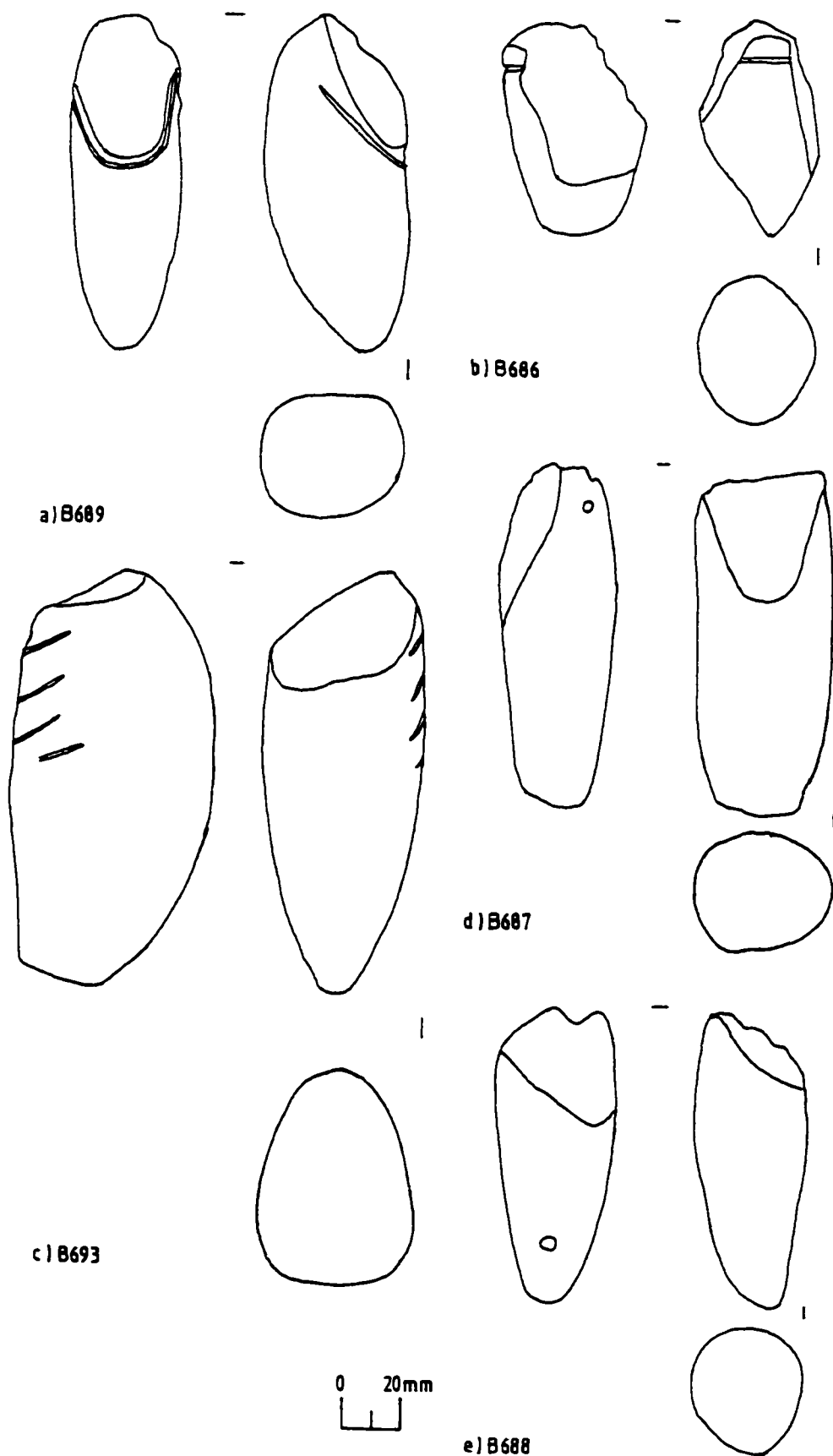


Figure 52. Stone figurines from multiple deposition 4795.

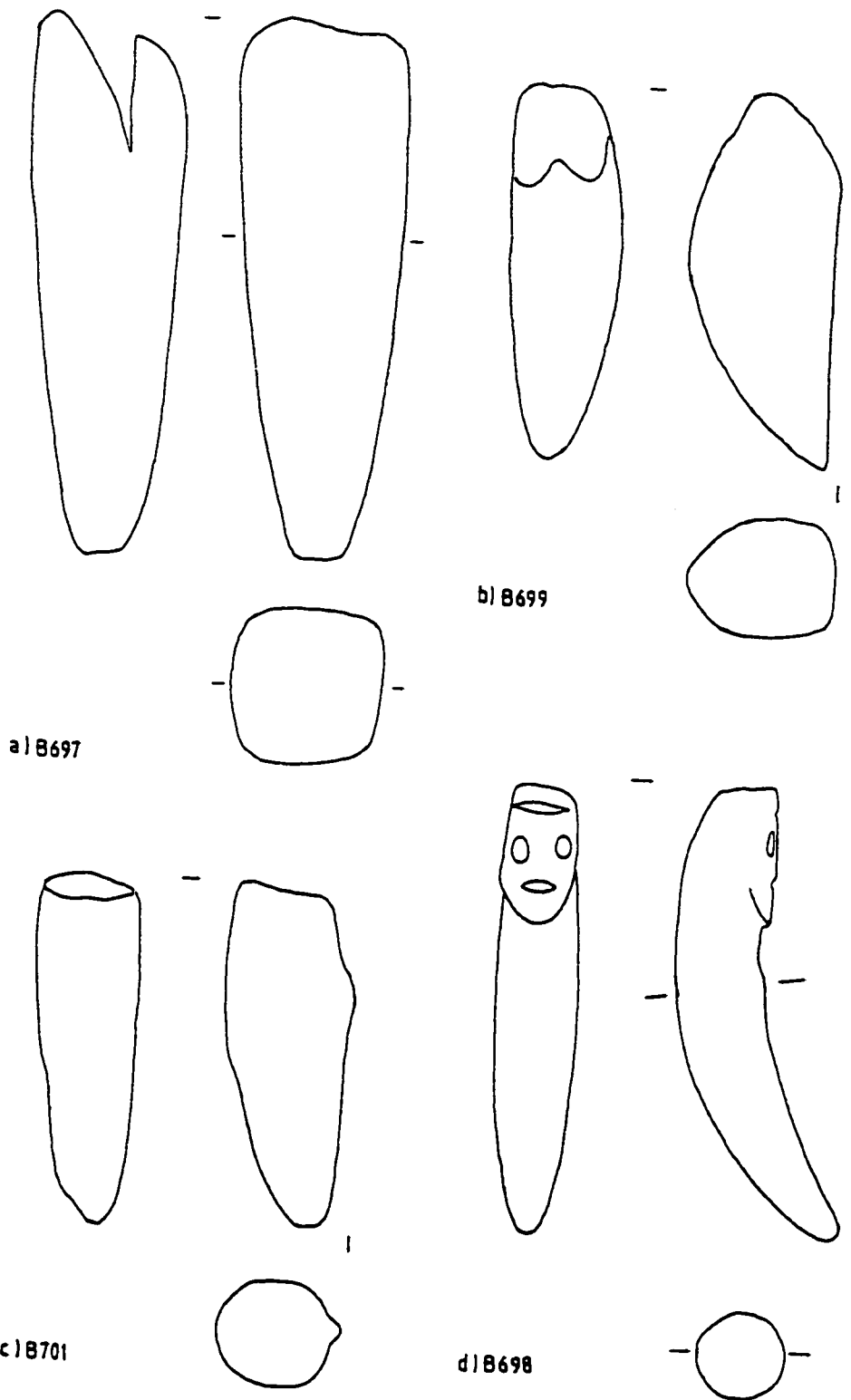


Figure 53. Stone figurines from multiple deposition 4795. B701 (c) was painted green. B698 (d) was of coral.



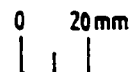
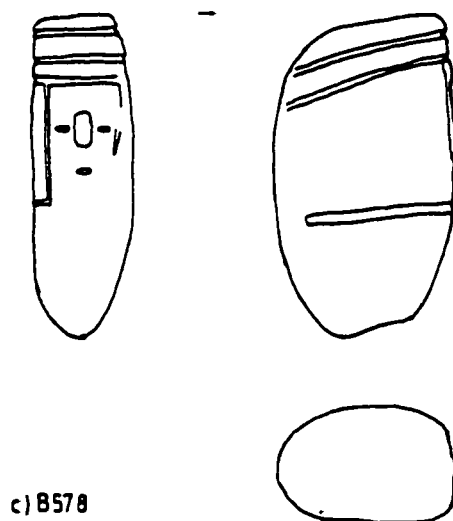
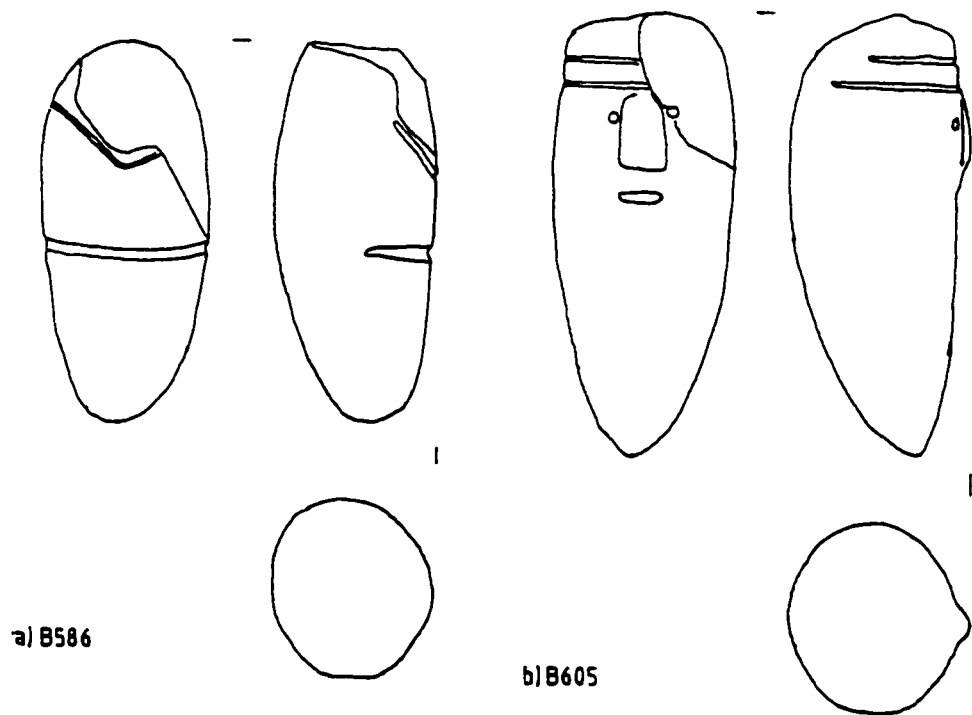


Figure 54. Stone figurines from single depositions 3616 (a), 3825 (b) and 3629 (c). B605 (b) was painted green.

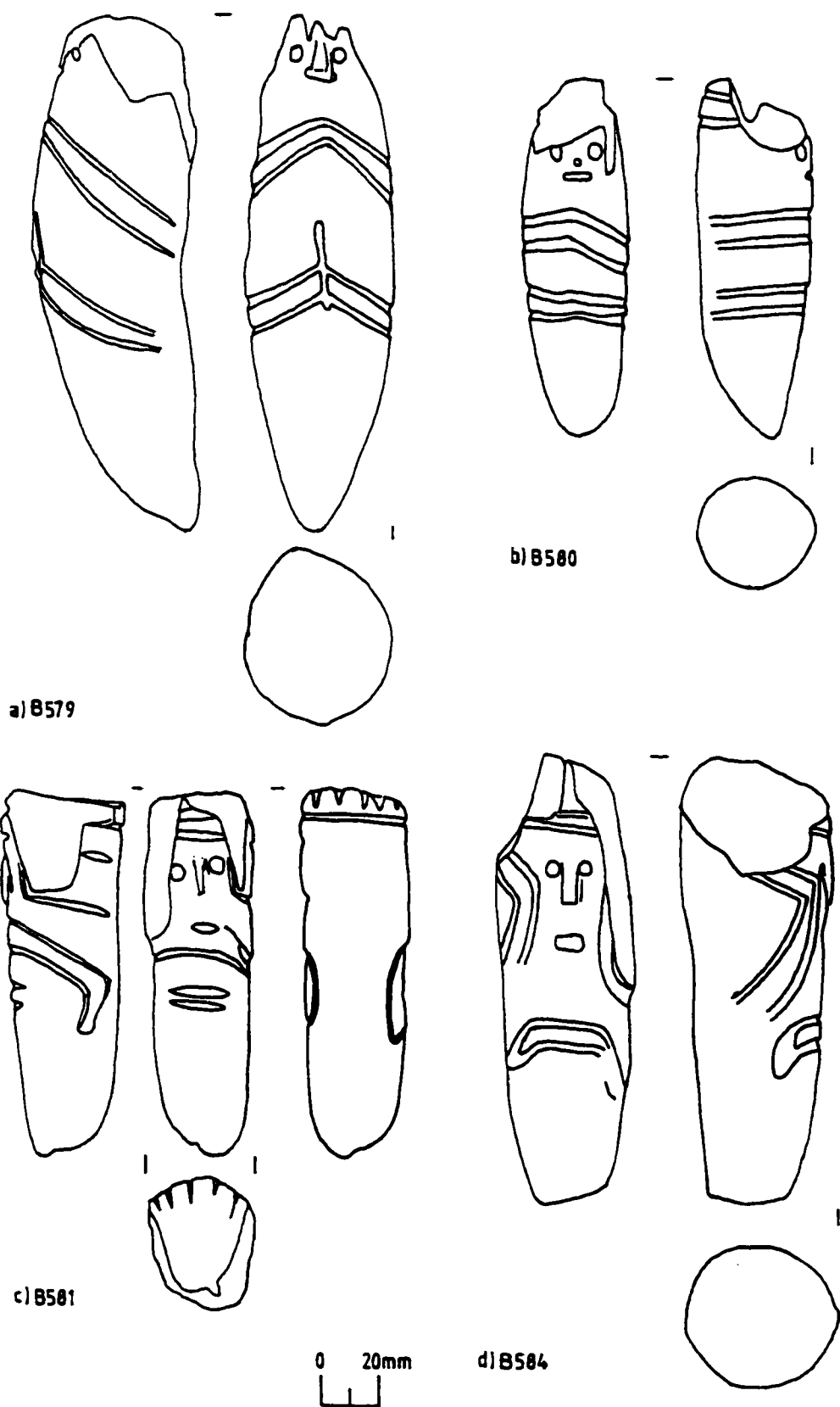


Figure 55. Stone figurines from multiple deposition 3623.

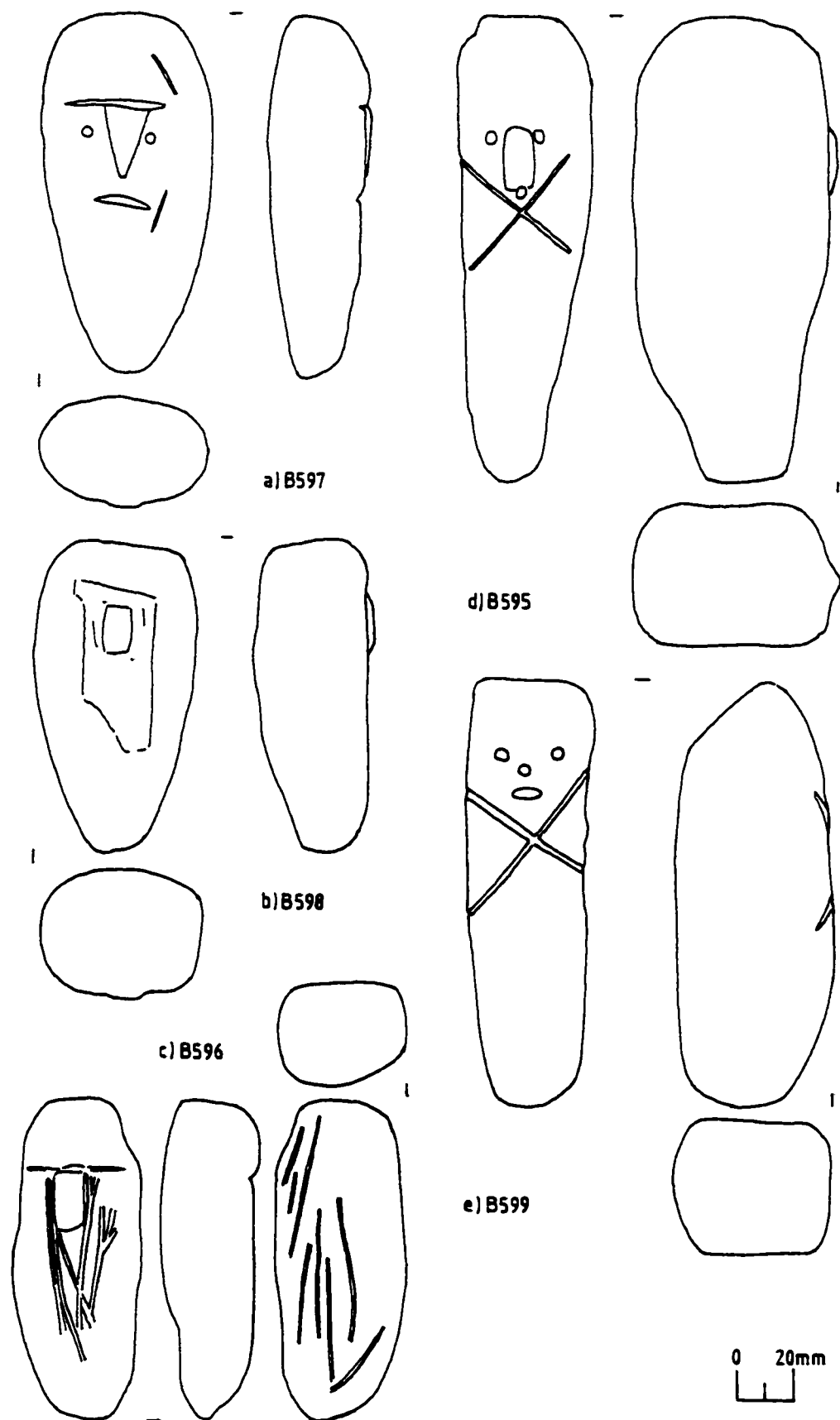


Figure 56. Stone figurines from multiple deposition 3798.

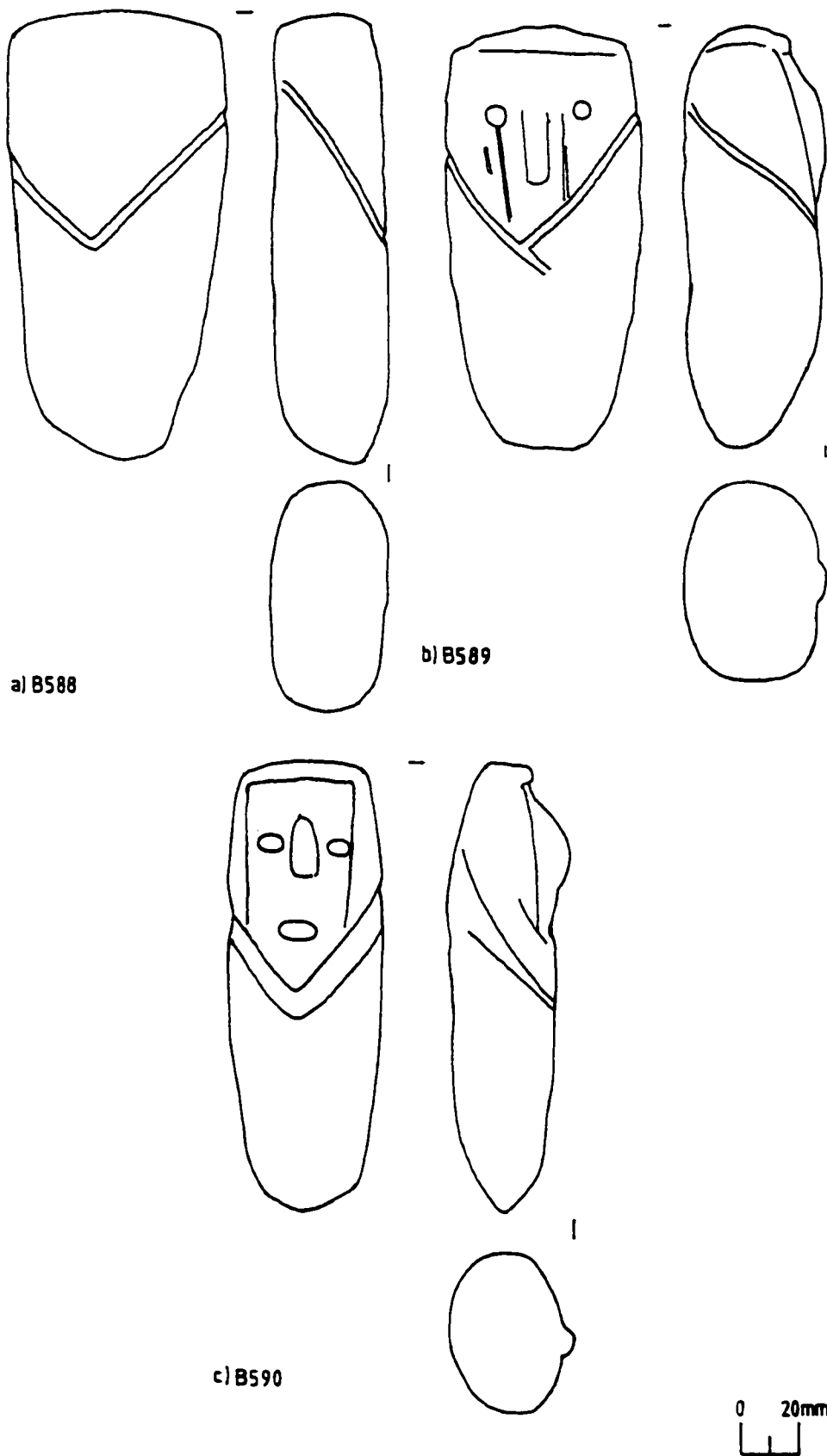


Figure 57. Stone figurines from multiple deposition 3697.

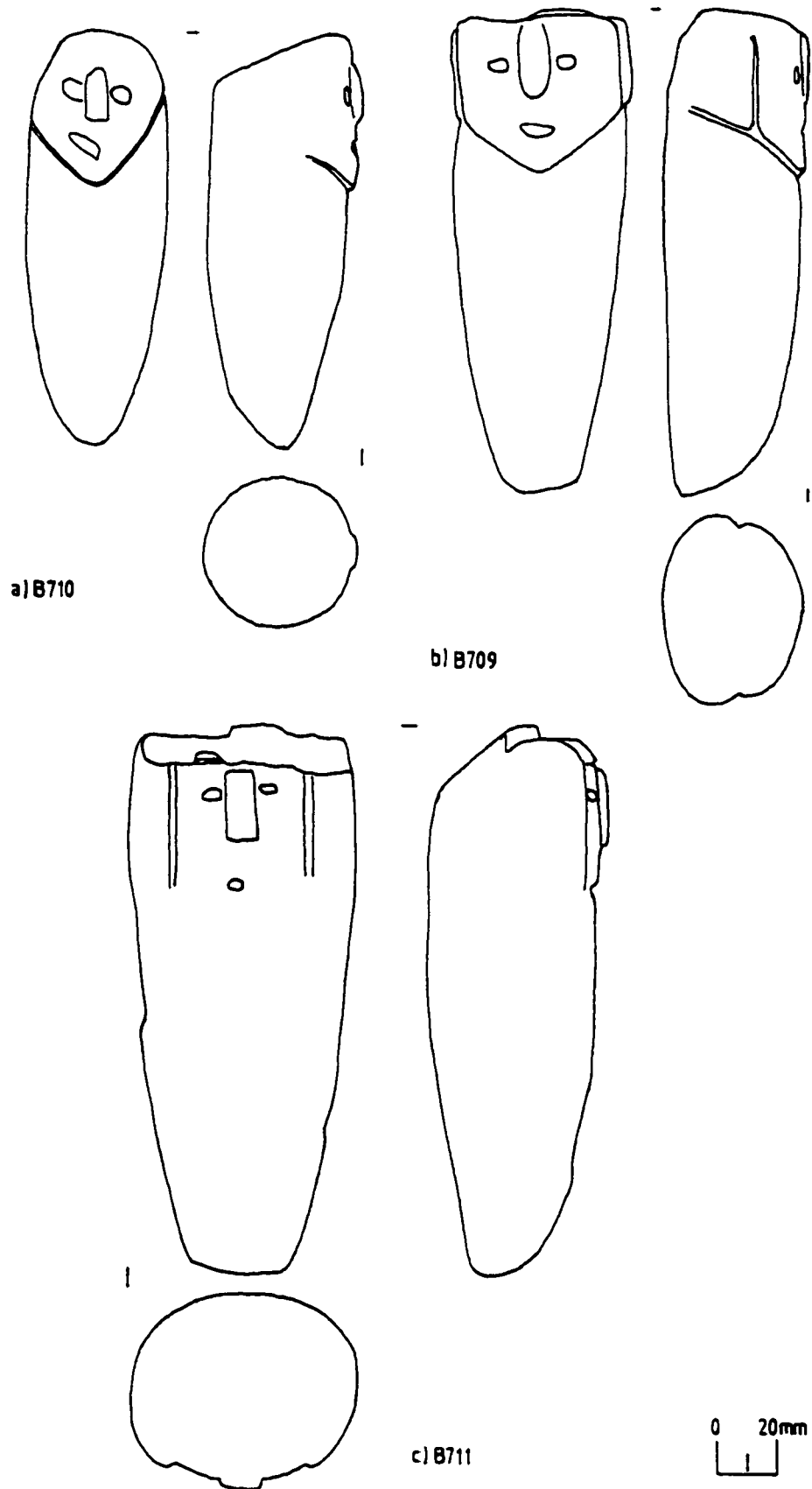
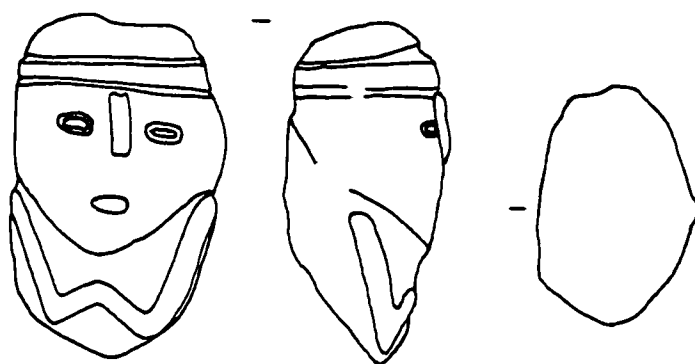


Figure 58. Stone figurines from multiple deposition 4866.



a) 8538



b) 8539

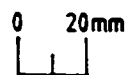
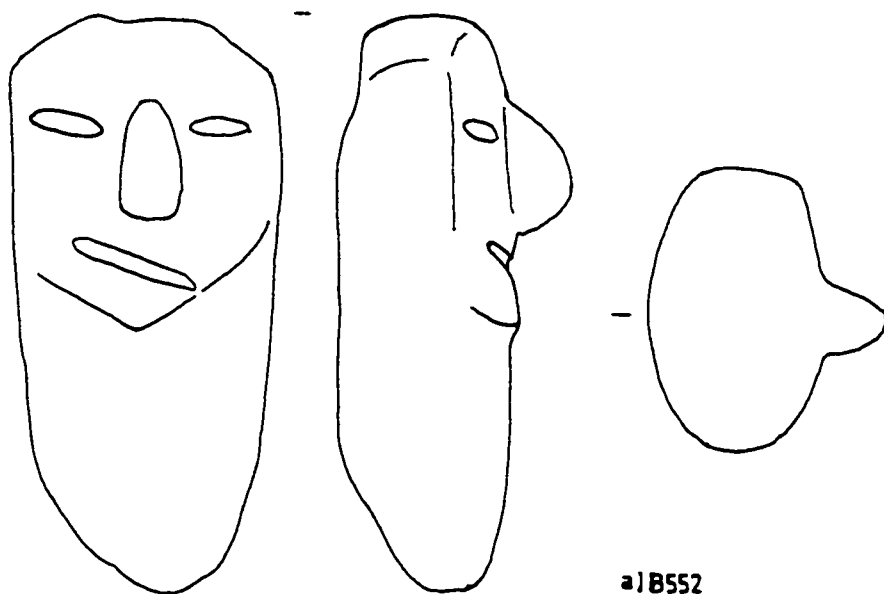
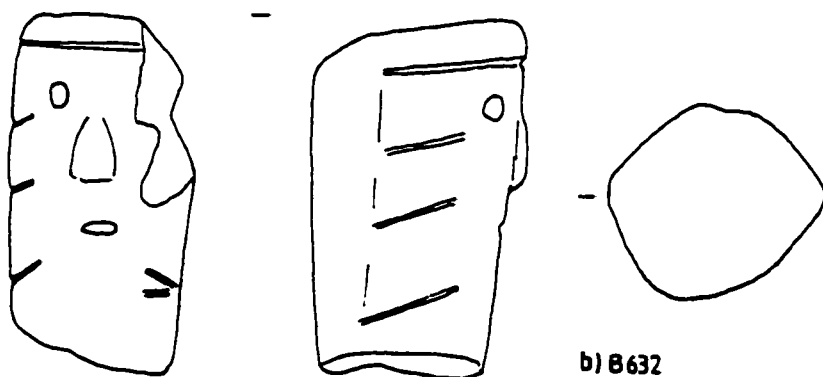


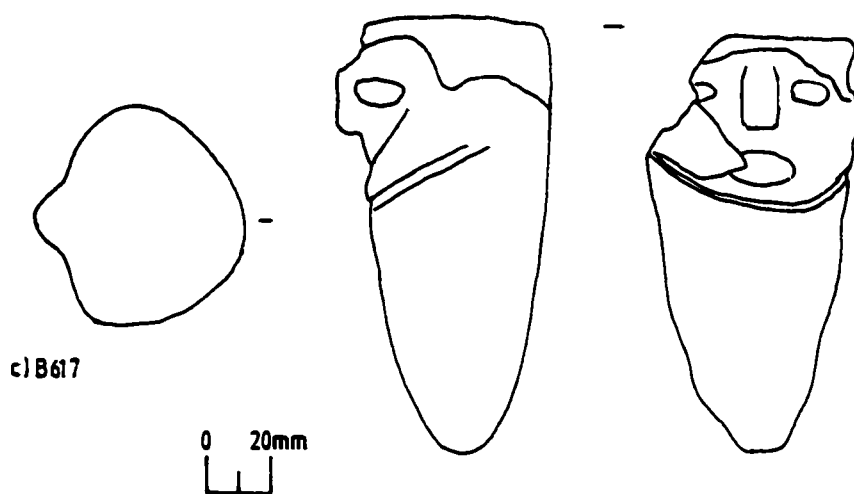
Figure 59. Multilated stone figurines from grave 3292.



a) B552



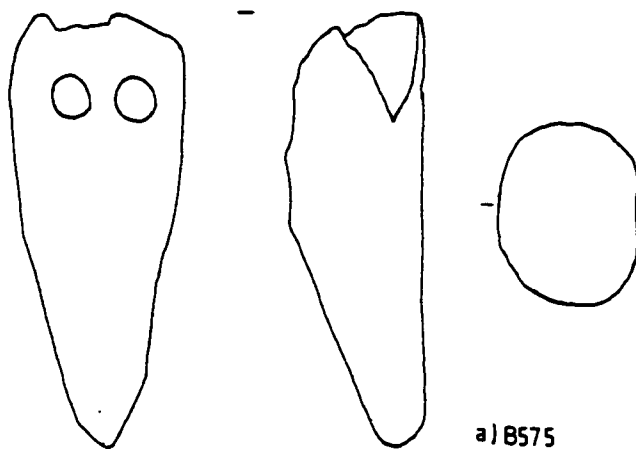
b) B632



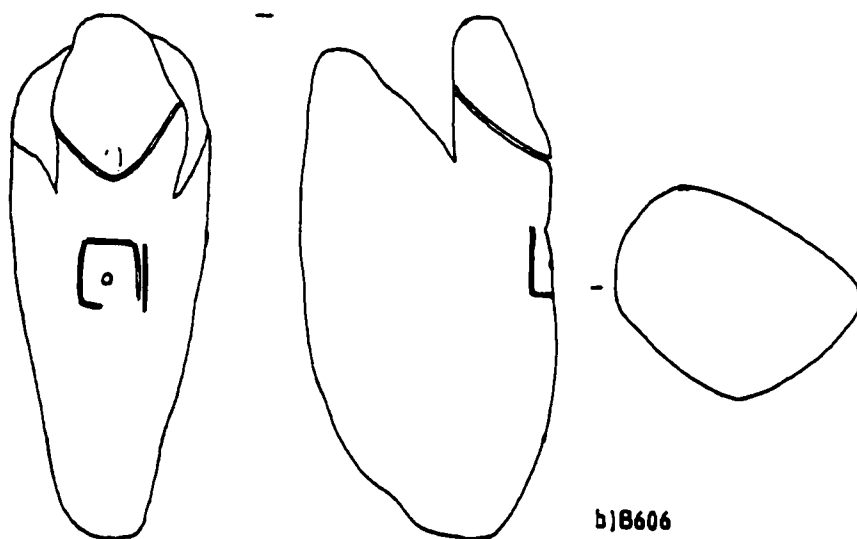
c) B617



Figure 60. Stone figurines from single deposition 3438 (a), secondary or disturbed deposition 3769 (b), and single deposition 3742 (c).



a) B575



b) B606



c) B585



Figure 61. Stone figurines from single depositions 3620 (a), 3815 (b), and 3654 (c).



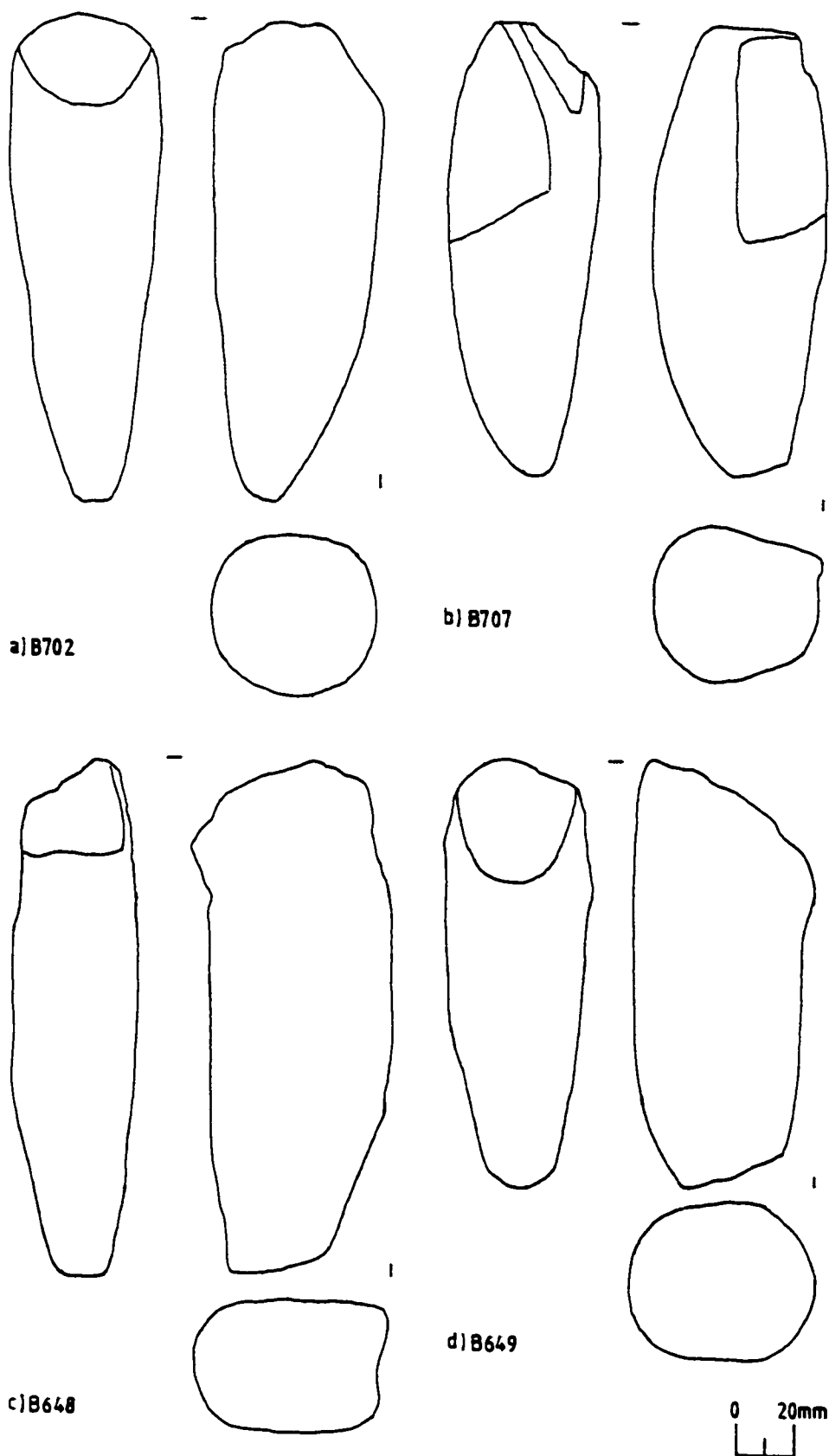


Figure 62. Stone figurines from single deposition 4842 (a), disturbed or secondary deposition 3507 (b), and paired deposition 4395 (c and d).

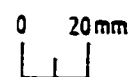
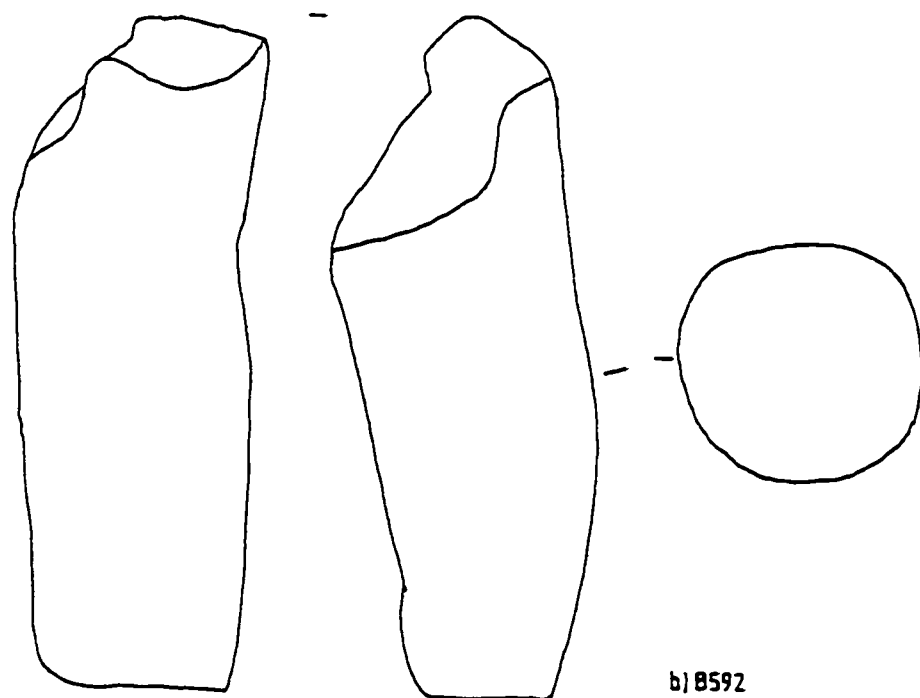
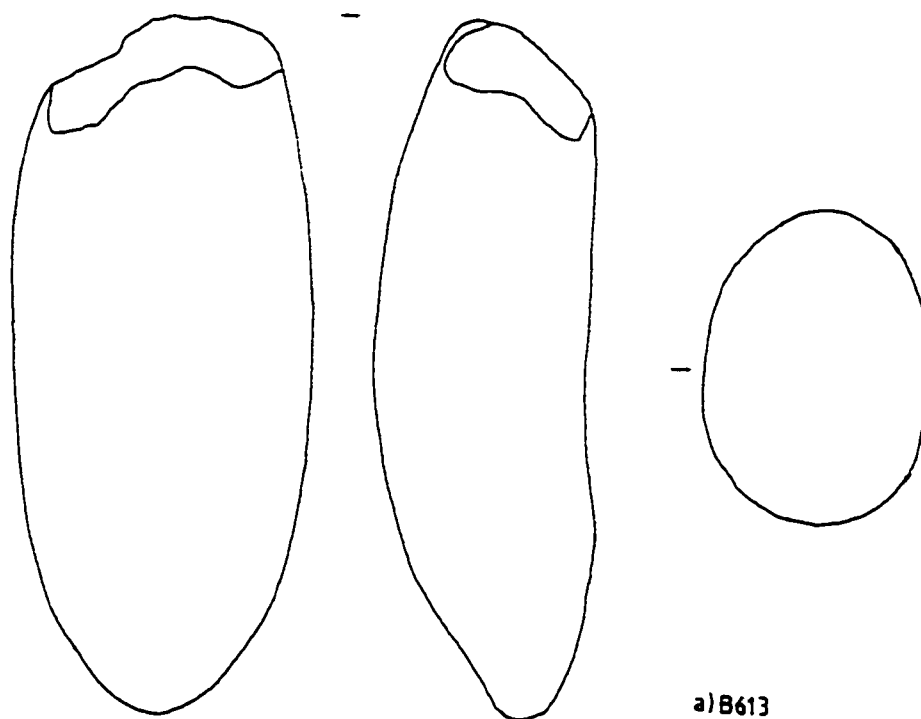


Figure 63. Stone figurines from single depositions 4046 (a) and 3605 (b).

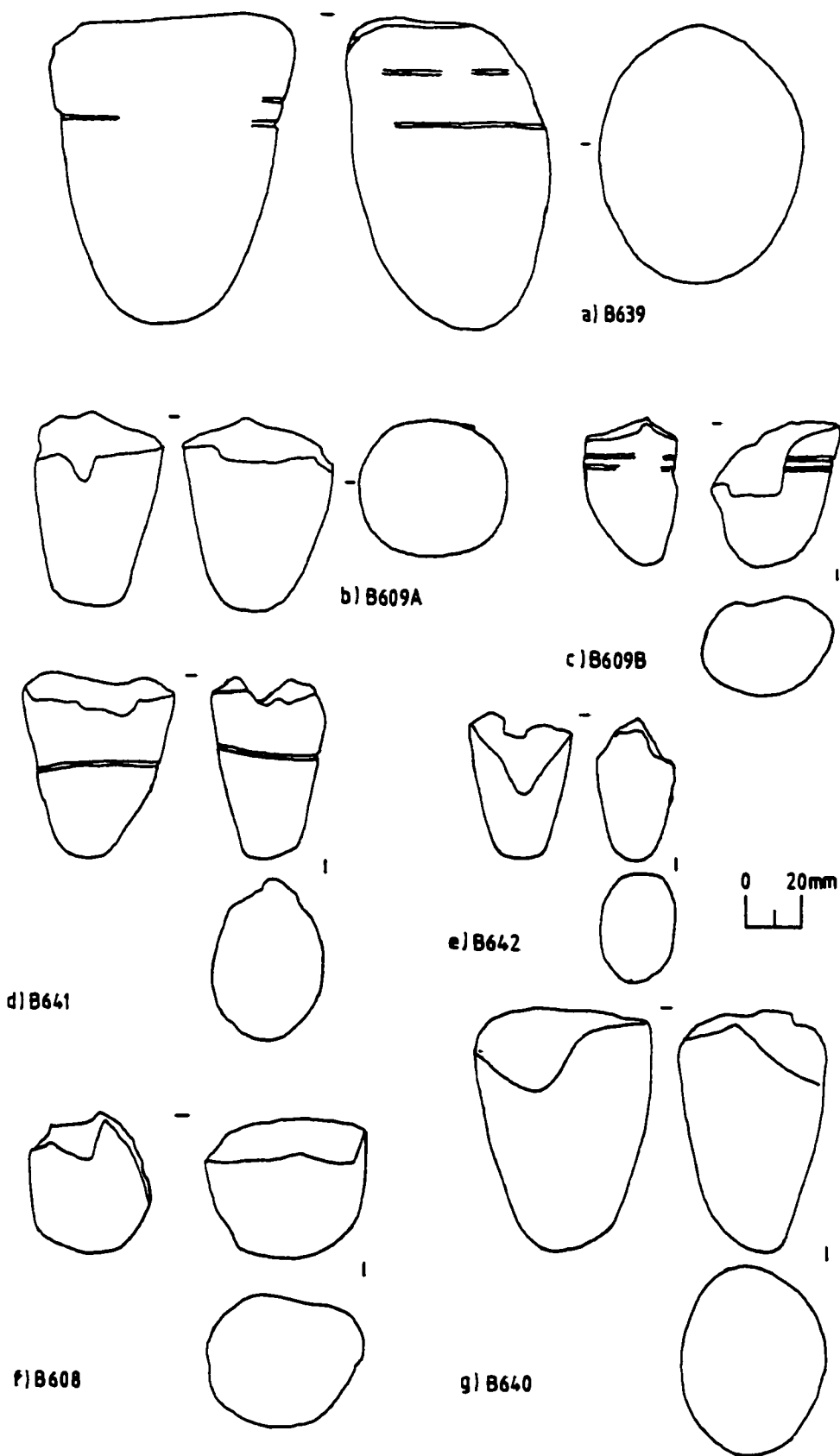


Figure 64. Bottom halves of stone figurines from disturbed deposition 3232 (a), paired depositions 3843 (b, c) and 3759 (d, e), and single depositions 3863 (f) and 3869 (g).

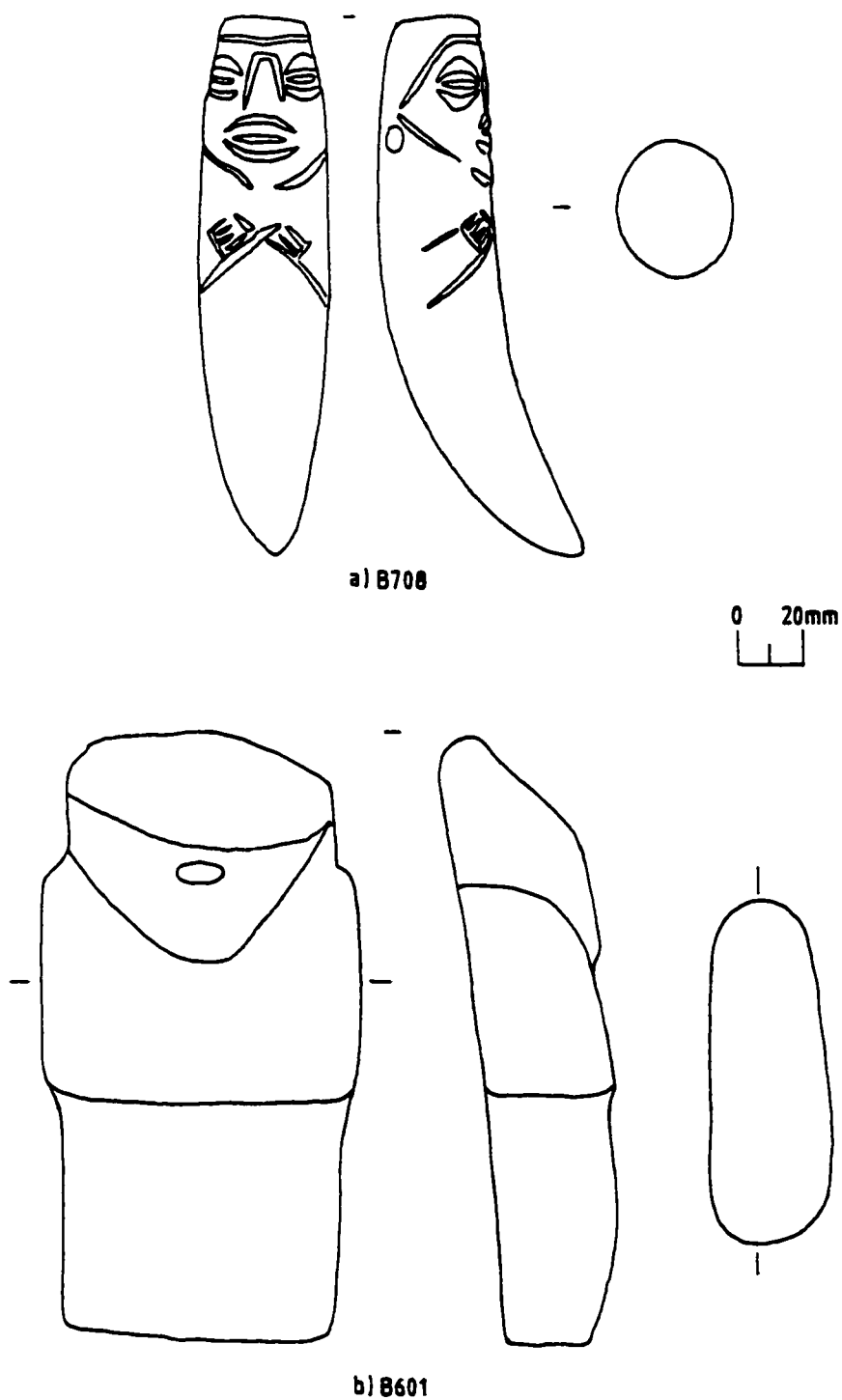
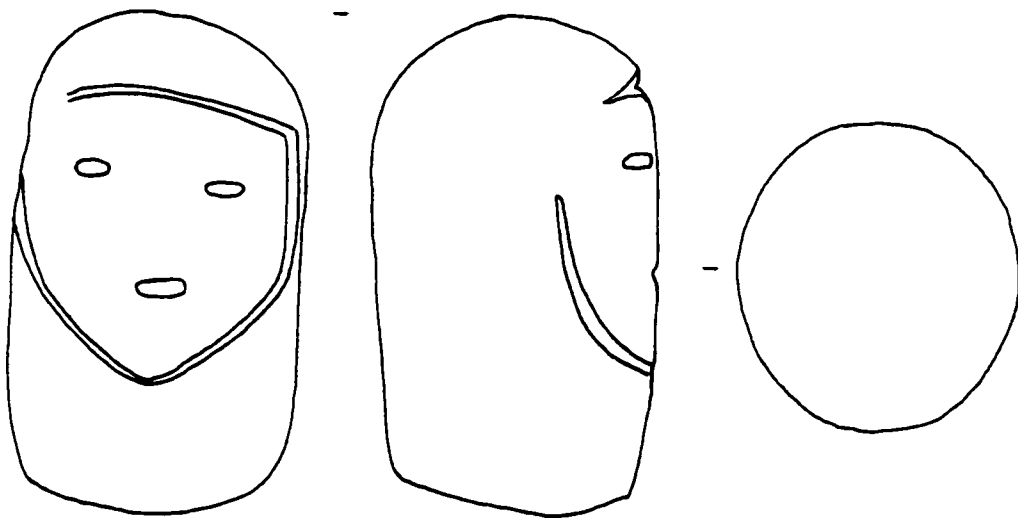
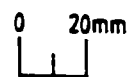


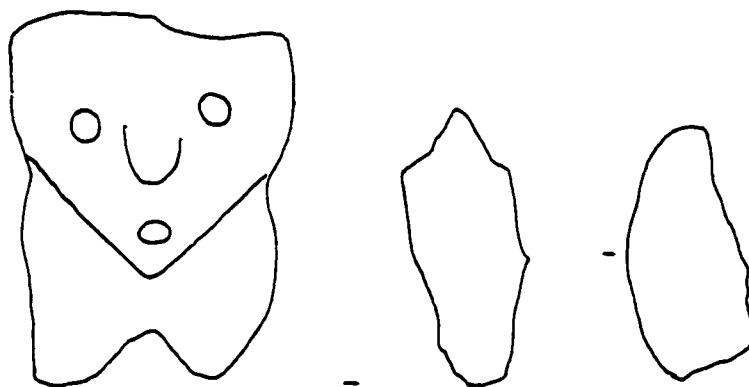
Figure 65. Marble pendant figurine from single deposition 4790 (a), and green-painted stone figurine from single deposition 3810 (b).



a) B625

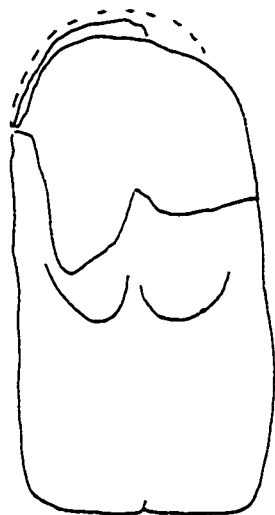


field sketch

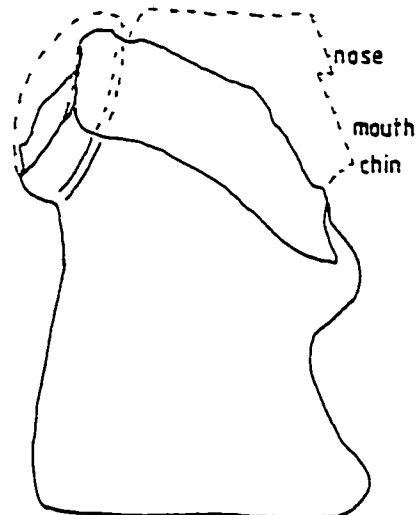


b) B576

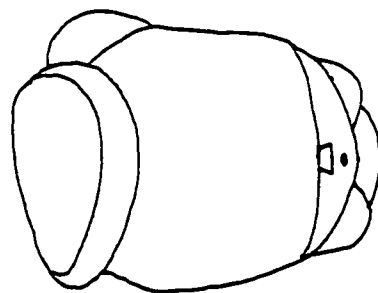
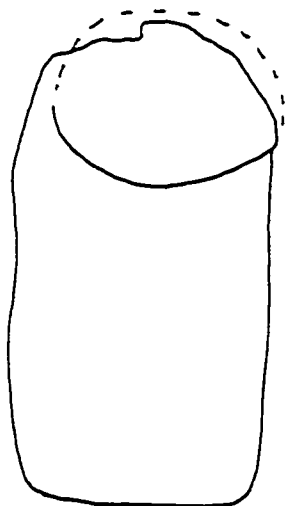
Figure 66. Stone figurines from secondary or disturbed deposition 3935 (a) and single deposition 3650 (b).



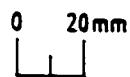
1



1



reconstructed plan view



8591

Figure 67. Stone figurine from single deposition 3608.

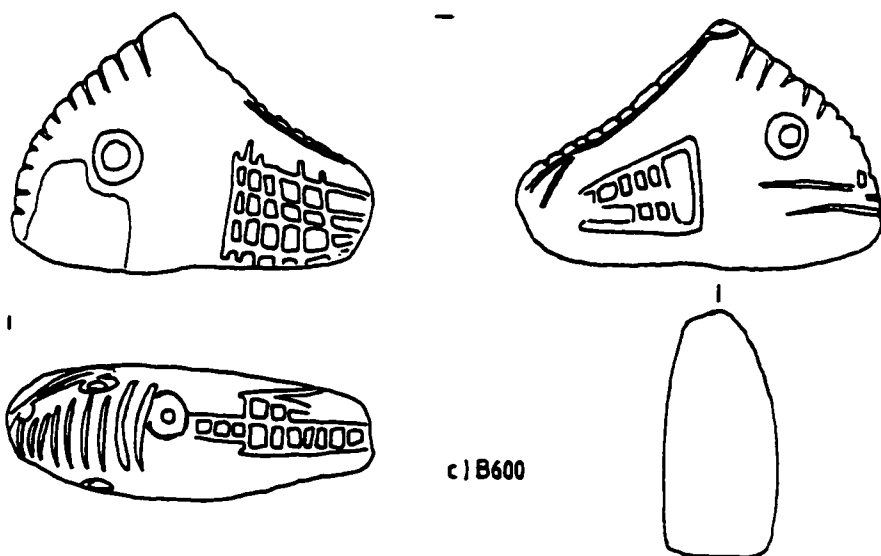
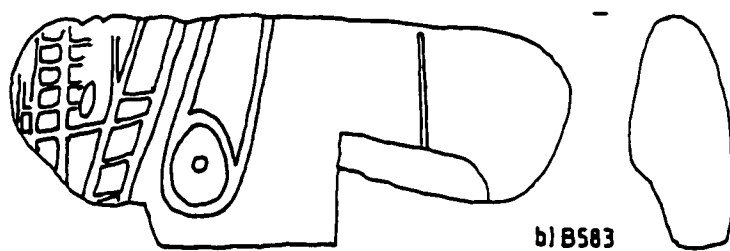
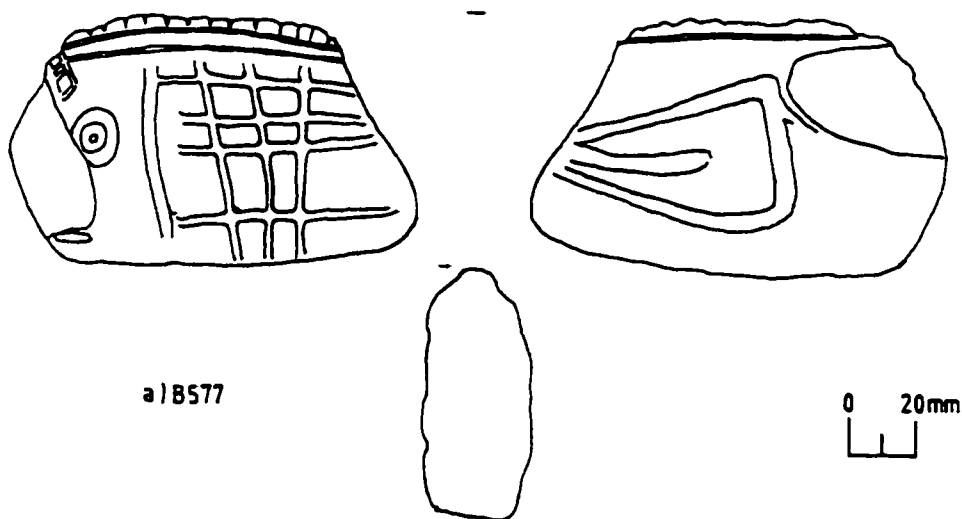
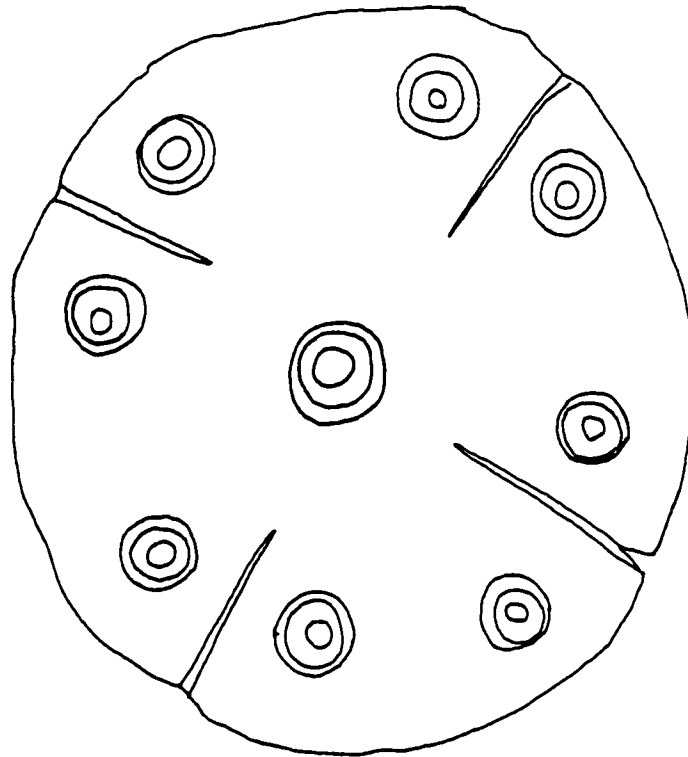
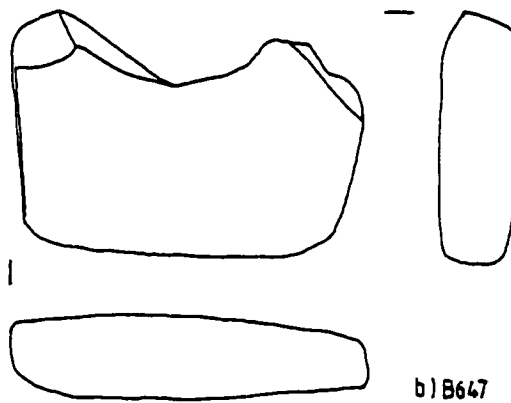


Figure 68. Stone fish figurines from multiple depositions 3655 (a, b), and 3802 (c). The other pieces of 3802 were three river stones.



a) B569



b) B647

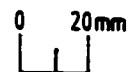


Figure 69. Stone disc from single deposition 3610 (a), and stone fragment, painted green, from secondary deposition 3179 (b).



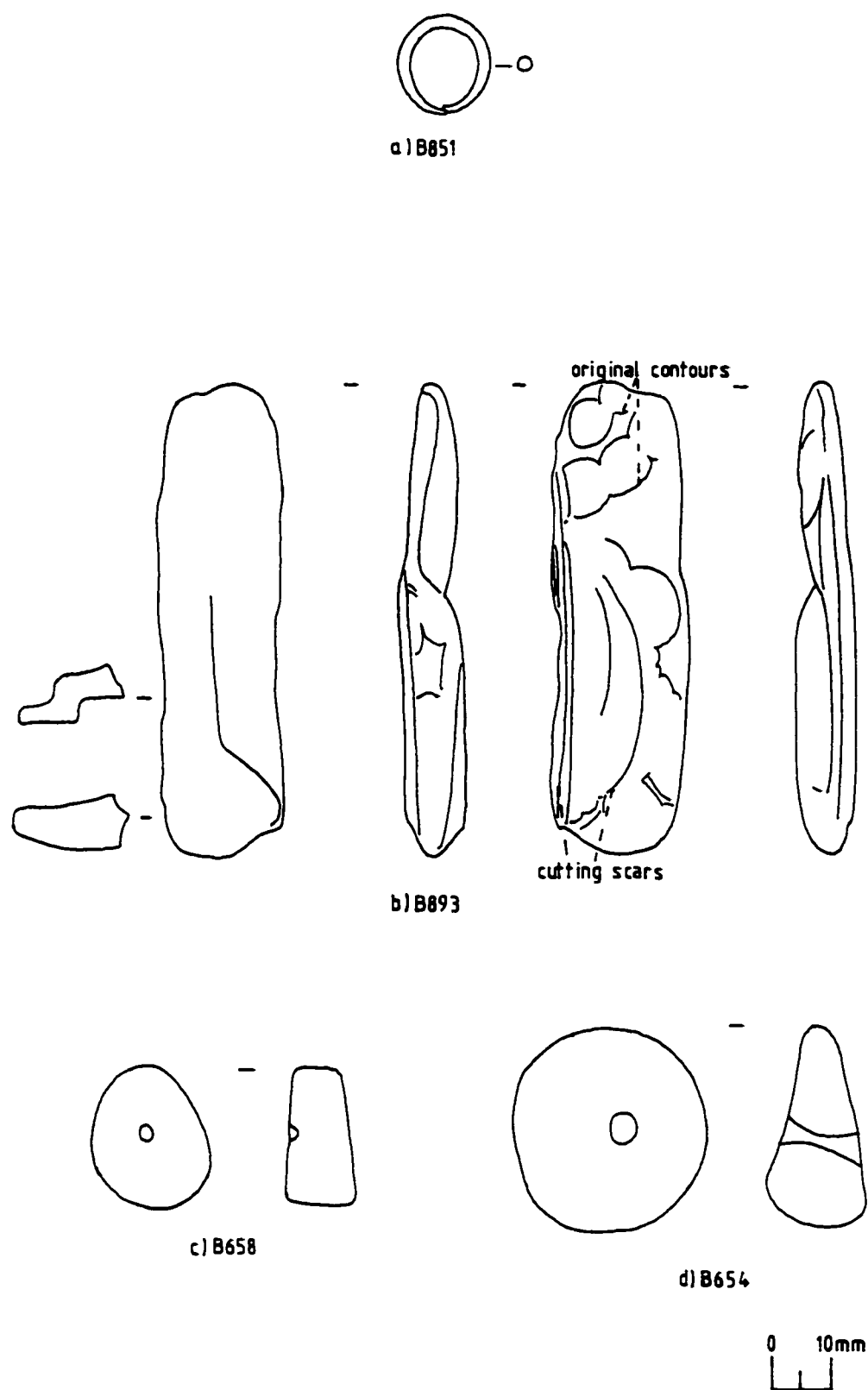
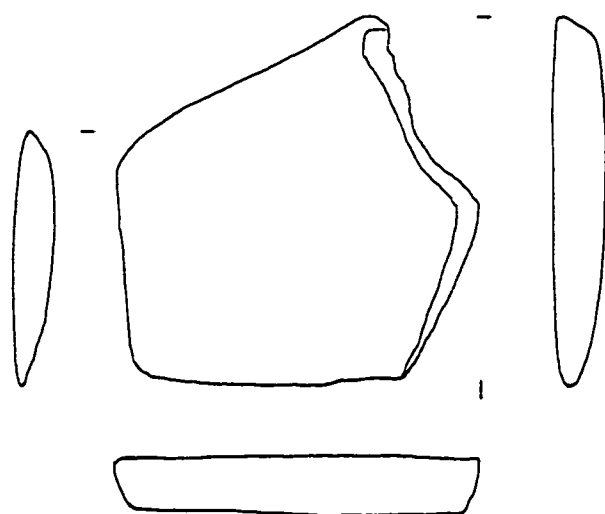
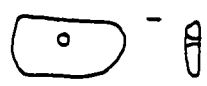


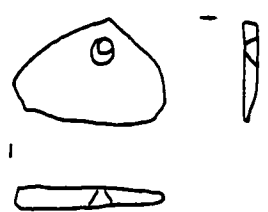
Figure 70. Artefacts of gold (a) and malachite (b-d), from Phases II (a), IIIE (b) and IIIL (c,d).



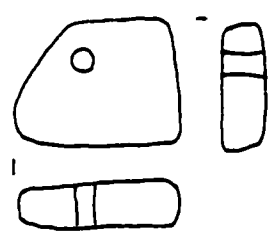
a) B630



b) B623



c) B572



d) B547



e) B846

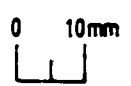


Figure 71. Green stone artefacts, other than beads, from structured depositions of Phases II/IIIE (e) and IIIL (a-c). B547 (d) is of brown stone, and of Phase IIIL.

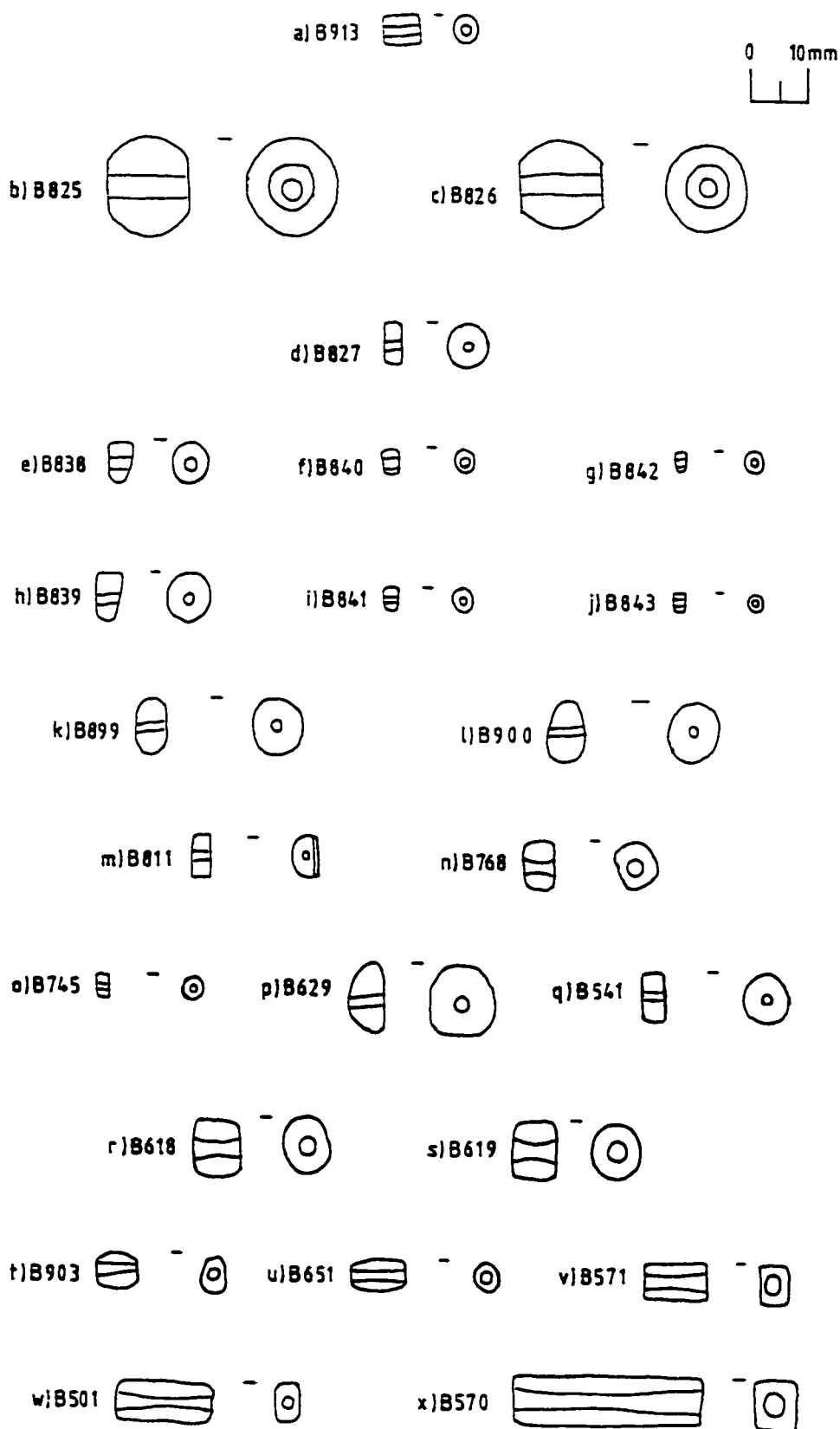


Figure 72. Green stone beads from structured depositions of Phases I (a), II/IIIE (b-i), IIIIE (k-n), IIIL (o-s, u, v and x) and IV (t, w).

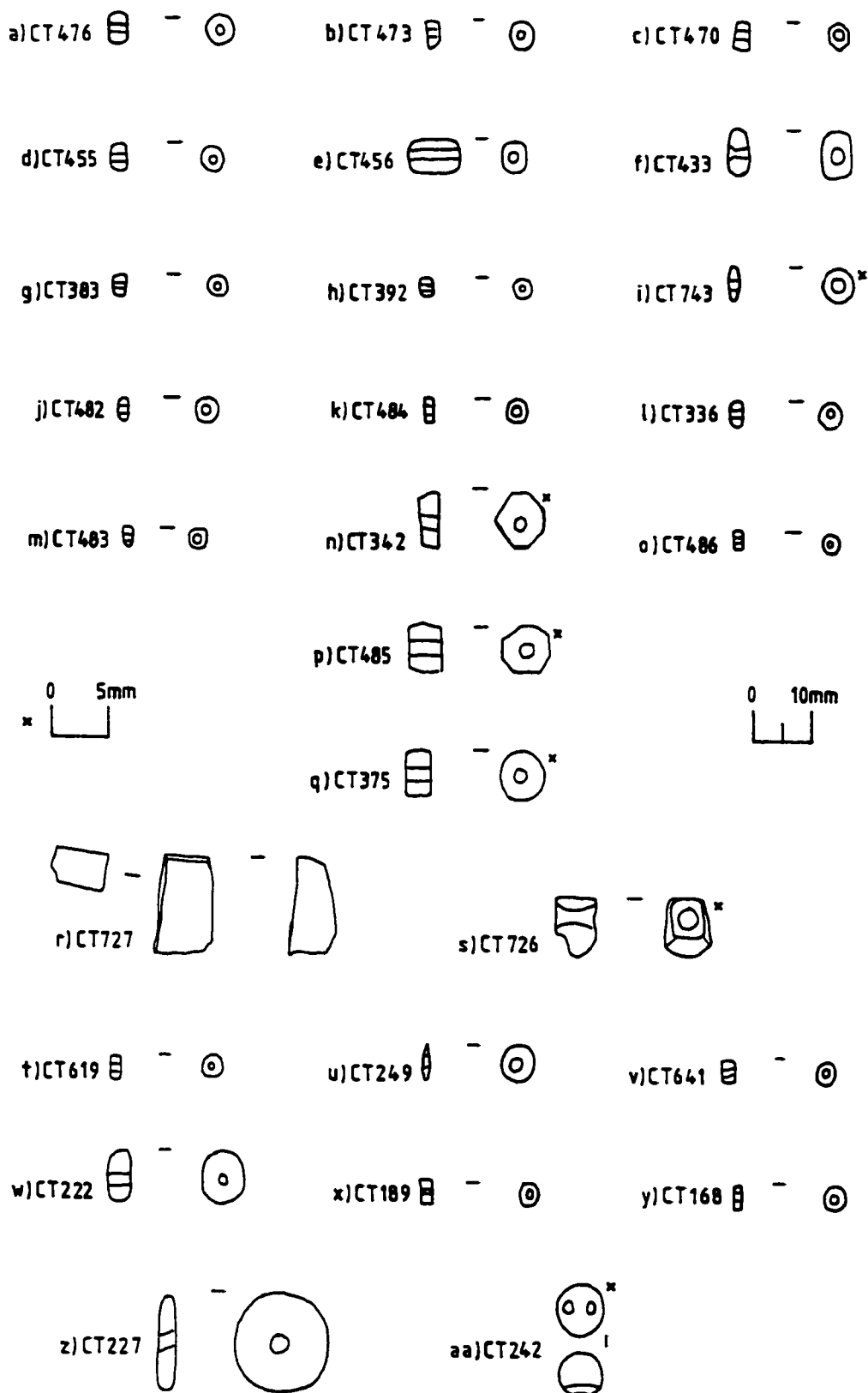


Figure 73. Shell beads from structured depositions of Phases I (a-f), IIIE (g-p), IIIL (q-x, z, aa) and IV (y). There is one pearl (aa), as well as four unfinished beads (c, n, p, s) and an unperforated block (r).

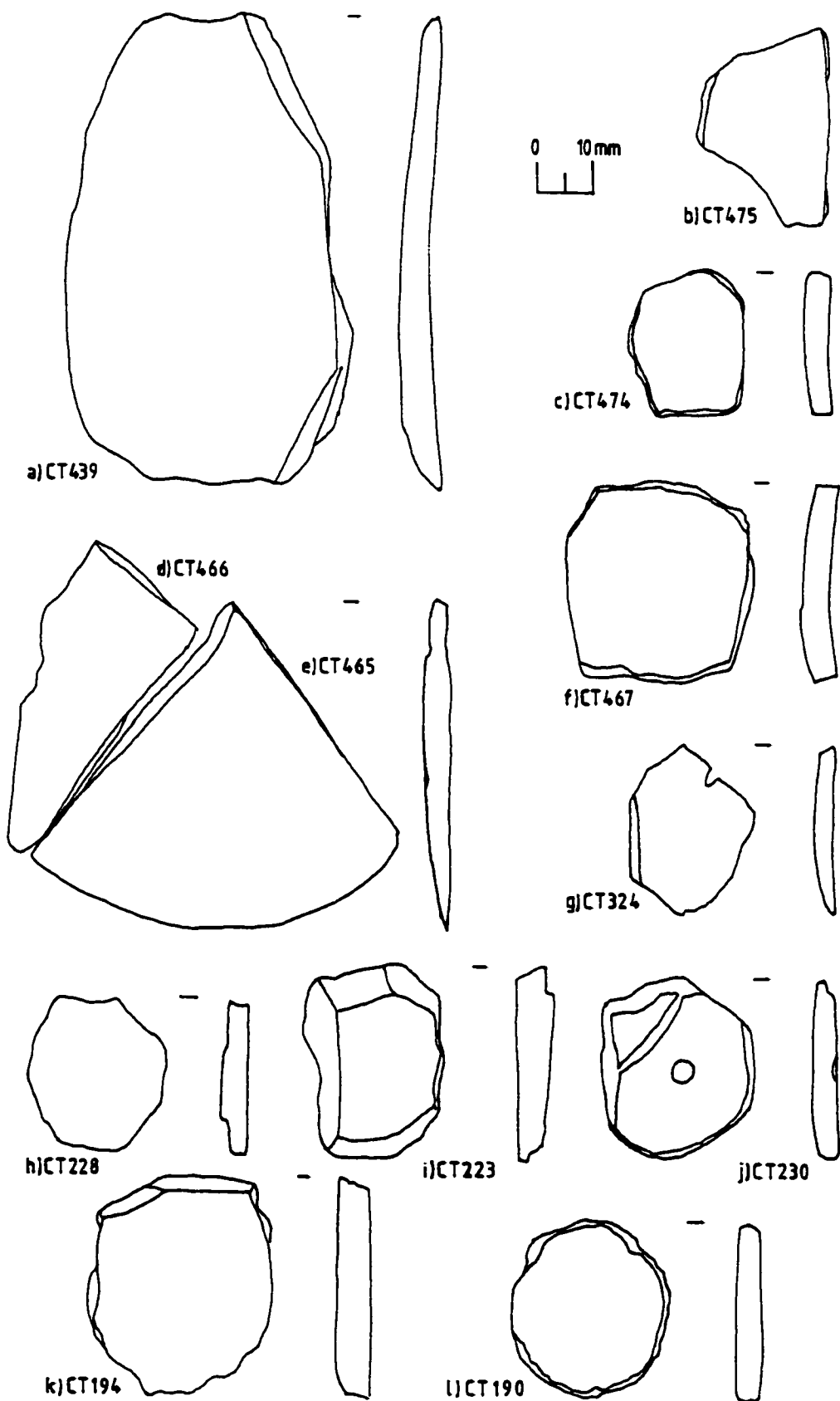
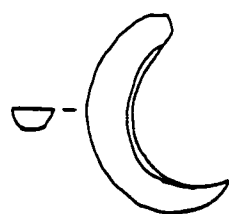


Figure 74. Blanks and preforms of *Pinctada mazatlanica* from fills of structured depositions of Phases I (a-f), and IIIL (g-l). One piece (a) was possibly a grave offering.



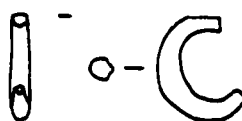
a)CT471



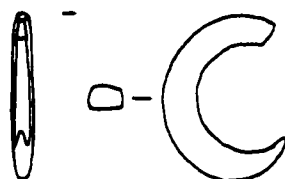
b)CT464



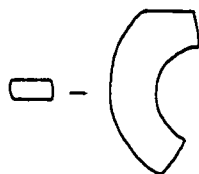
c)CT454



d)CT412



e)CT377



f)CT225



g)CT199

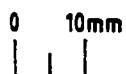
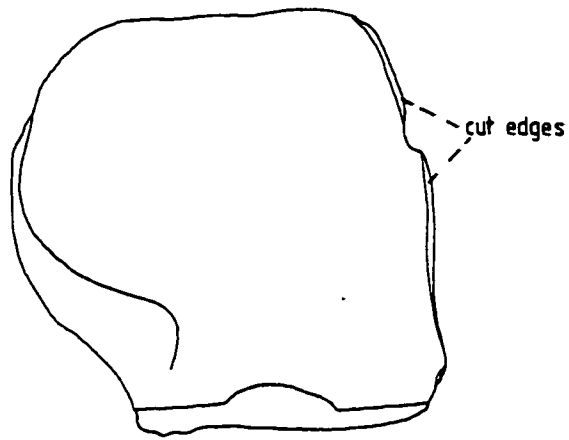
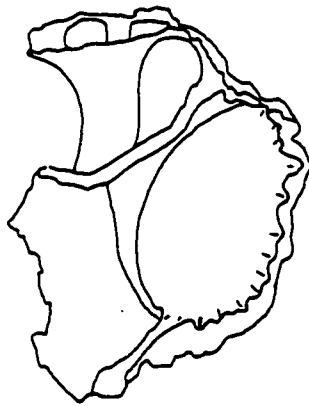


Figure 75. Shell fish-hooks from Phases I (a,b), II (c,d), IIIE (e) and IIIL (f,g.)



a)CT842



b)CT844



c)CT841



Figure 76. Miscellaneous shell artefacts of Phase IIIL. Two pieces (a,b) were from structured deposition 3806. the other (c) was from structured deposition 4645.

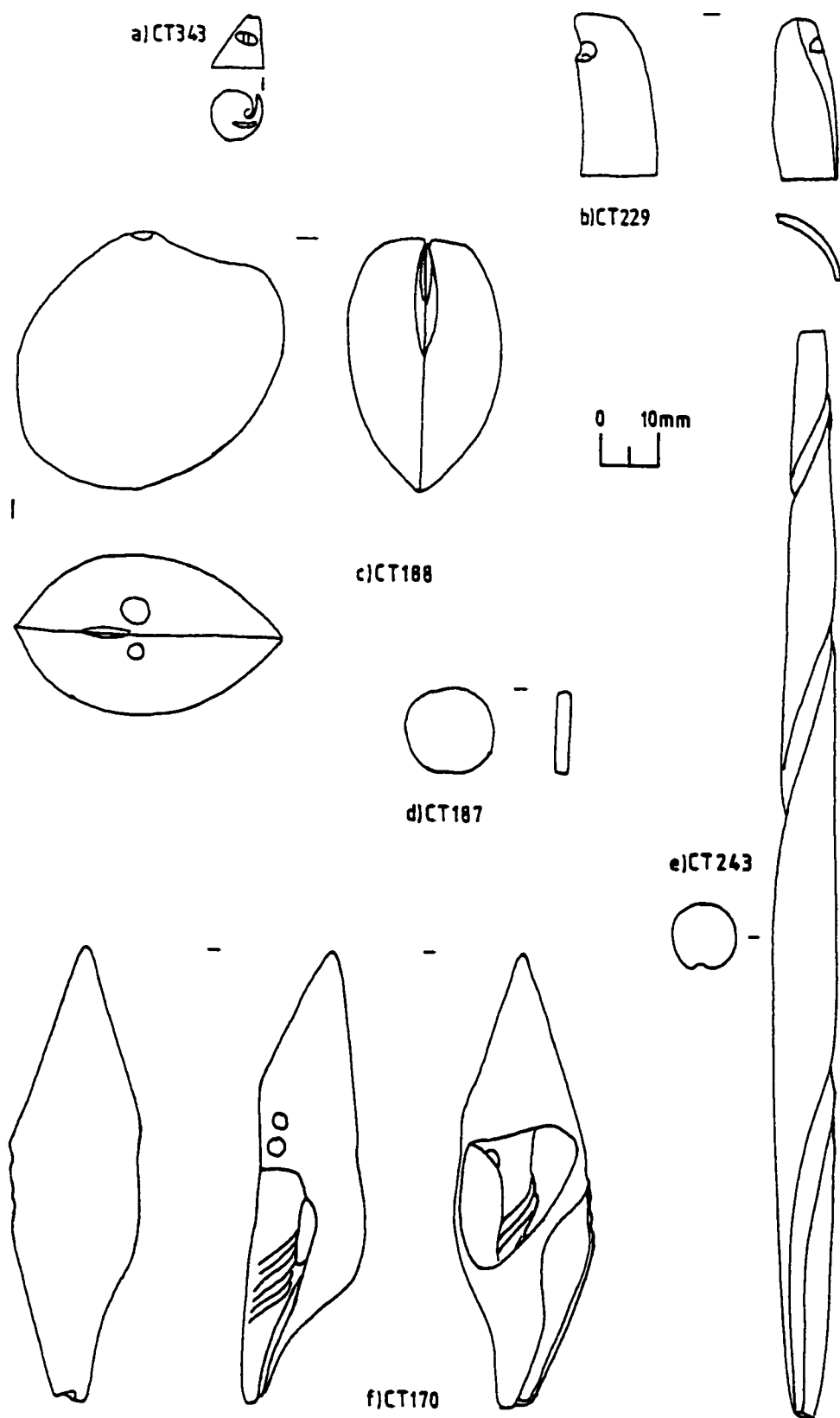


Figure 77. Miscellaneous shell artefacts from structured depositions of Phases IIIE (a), IIIL (b-e) and IV (f).



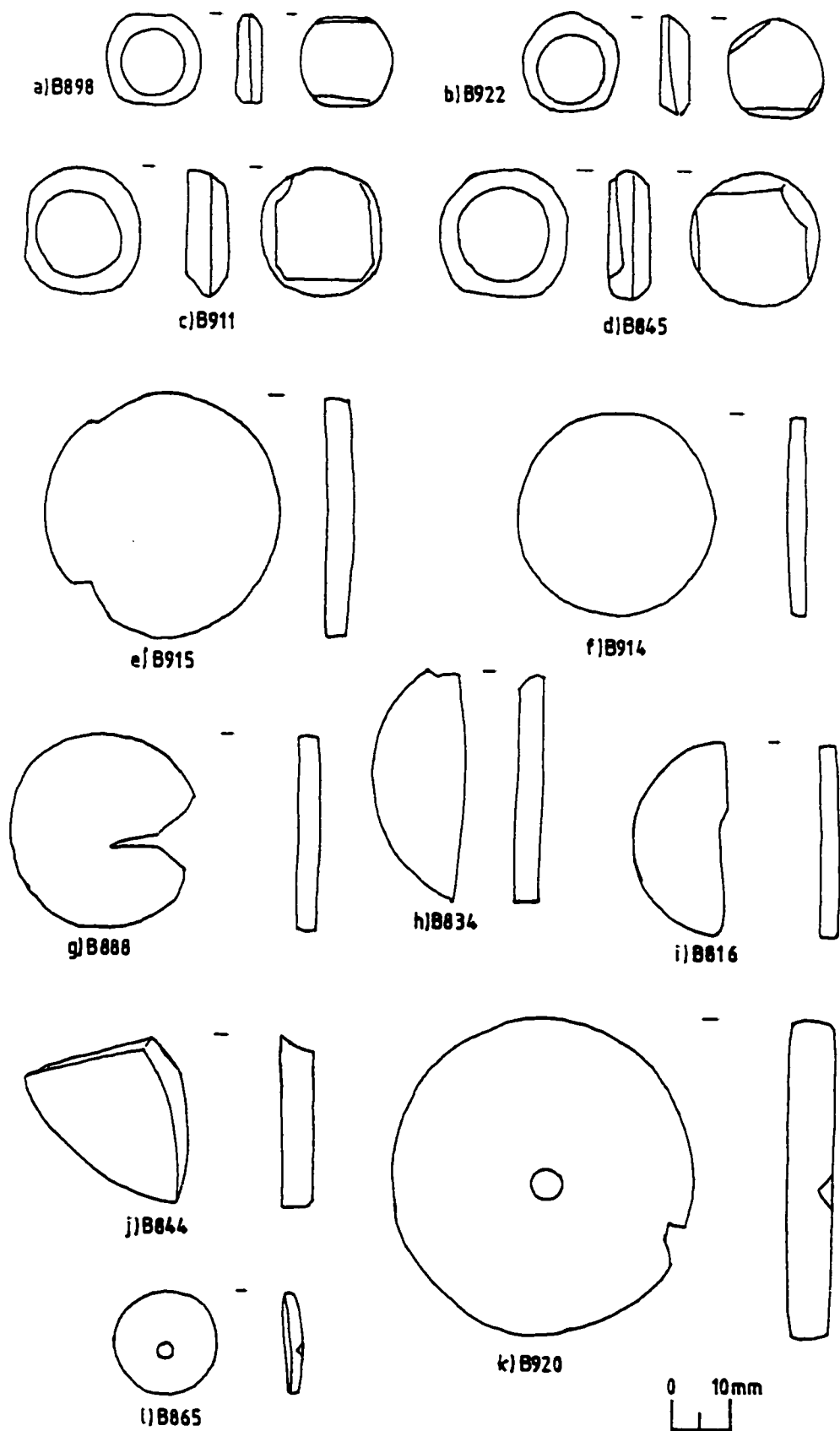


Figure 78. Round shale discs (a-d) and flat tuff discs (e-l) of Phases I and II/IIIE. Two tuff discs (k,l) each have a small hole drilled into one face.

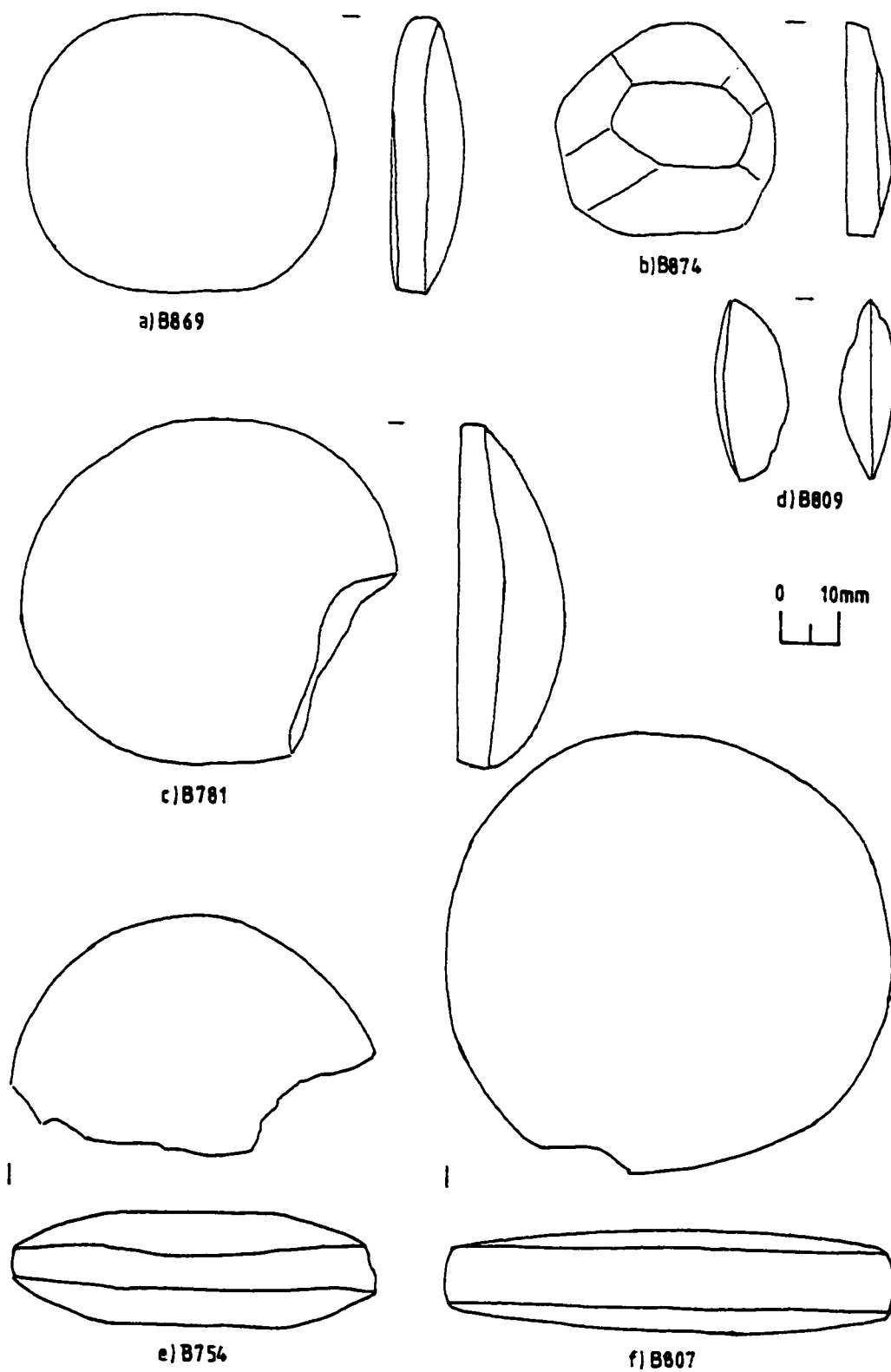
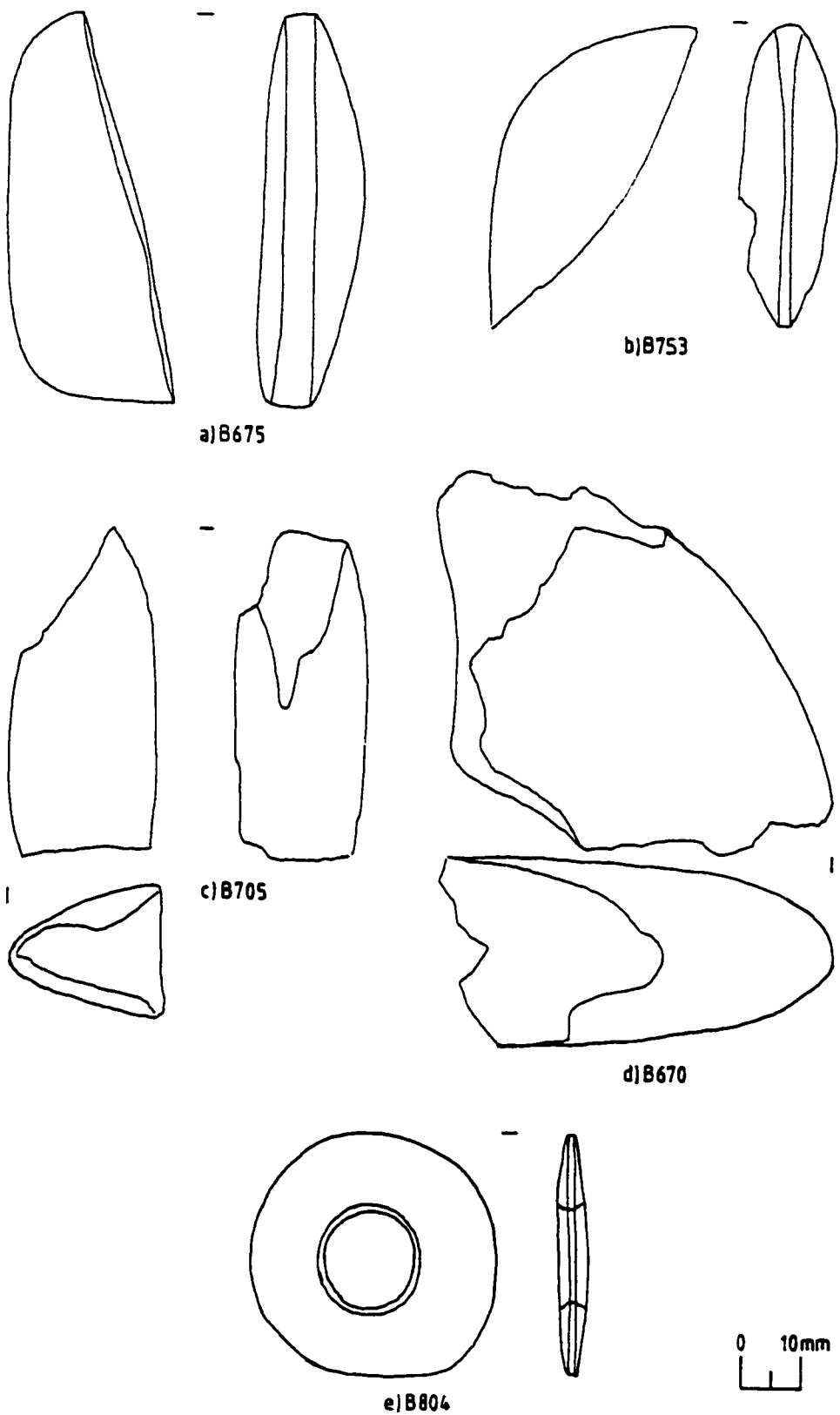


Figure 79. Oval tuff discs of Phases II (a,b), IIIE (c,e) and IIIL (d,f). Three are uniconvex (a-c), two are biconvex (e,f), and the fragment (d) is uncertain. The largest disc (f) was painted green.



**Figure 80.** Phase IIIL discs of tuff (a-d), and a Phase IIIE perforated disc of shale (e). Two of the discs are actually sub-rectangular (a,b).

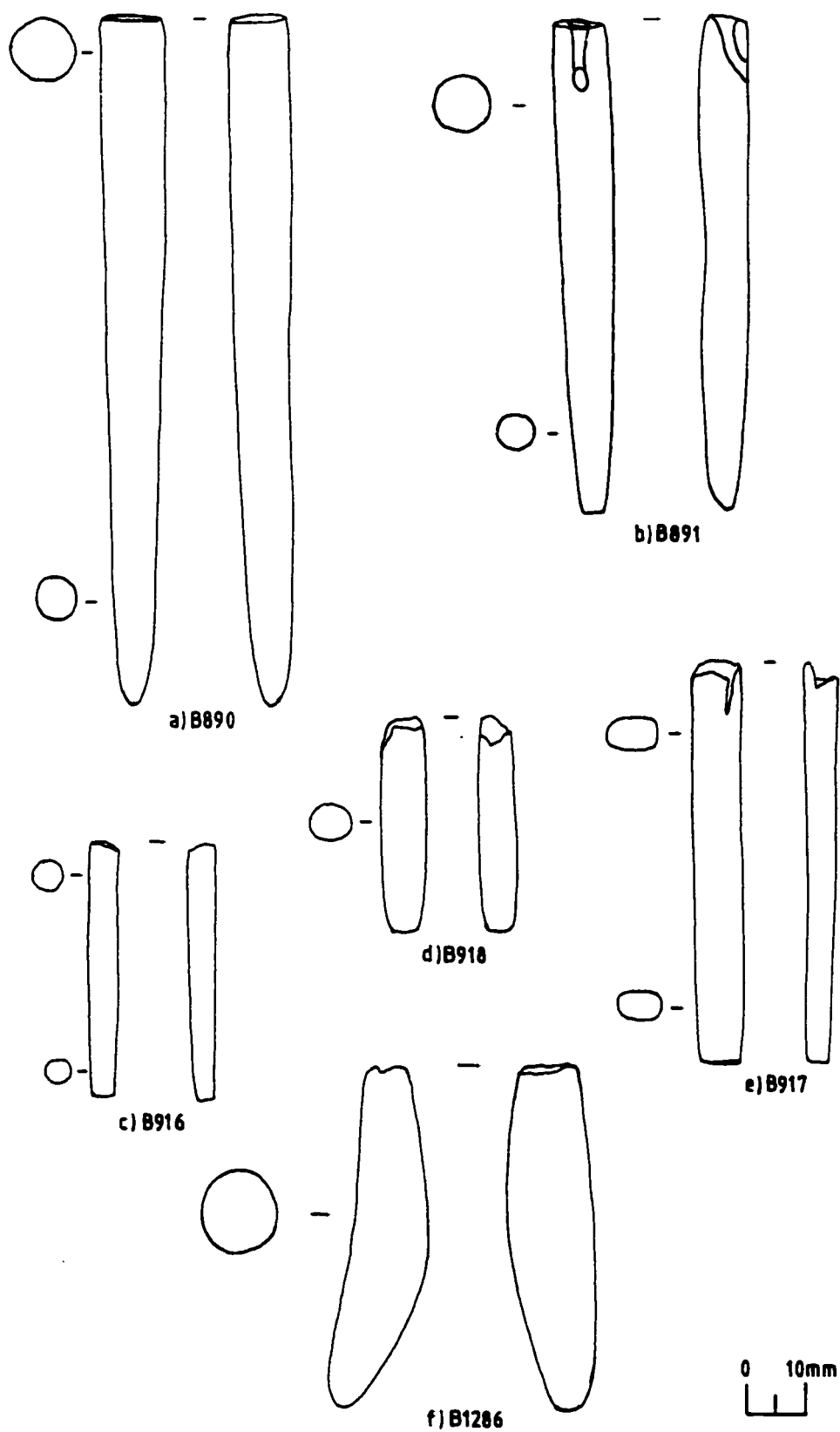


Figure 81. Bone artefacts of Phase I. The two longer points (a,b) came from layer 6554. The other pieces came from the fills of pits.

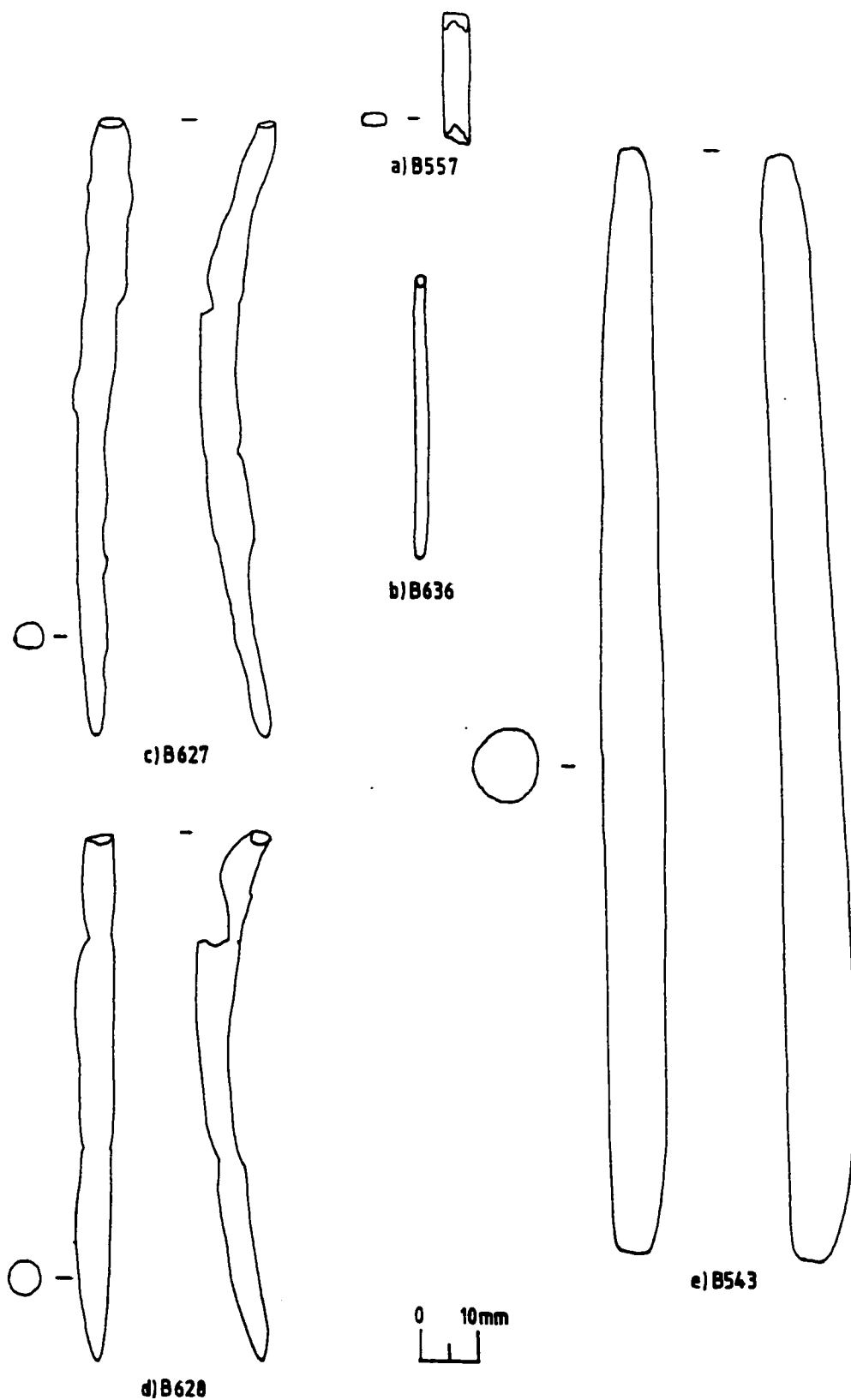
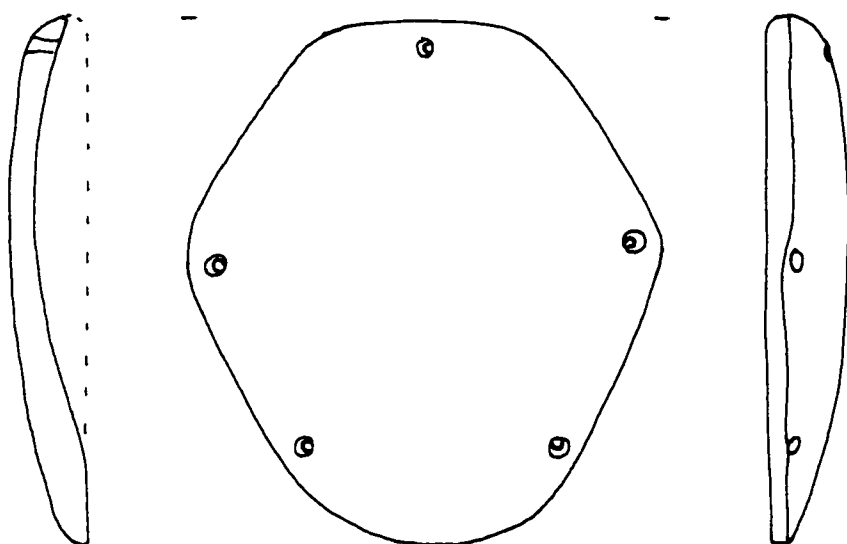
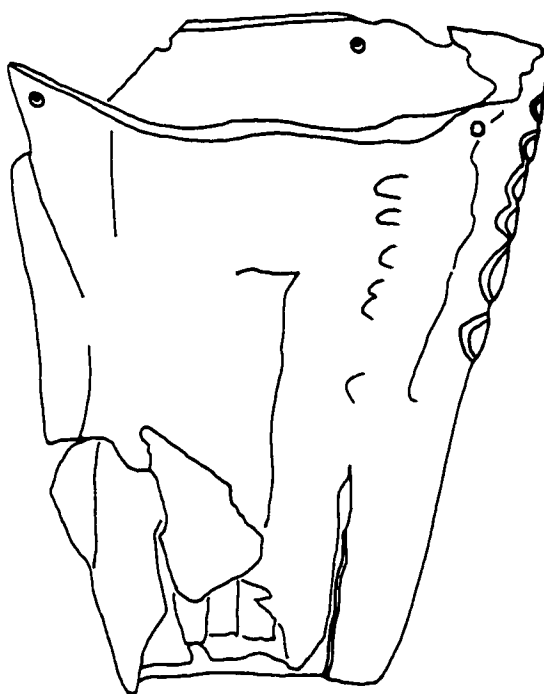


Figure 82. Bone artefacts of Phase IIIL. One came from a layer (a), one from a post-hole (b), and three were grave goods (c-e).



a) CT146



b) B546

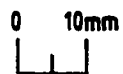


Figure 83. A container from Phase IIII grave 3302, made with the skull (b) of a deer (*Odocoileus virginianus*), to which was tied a lid (a) of *Pinctada mazatlanica*. The nose end was packed with tar.

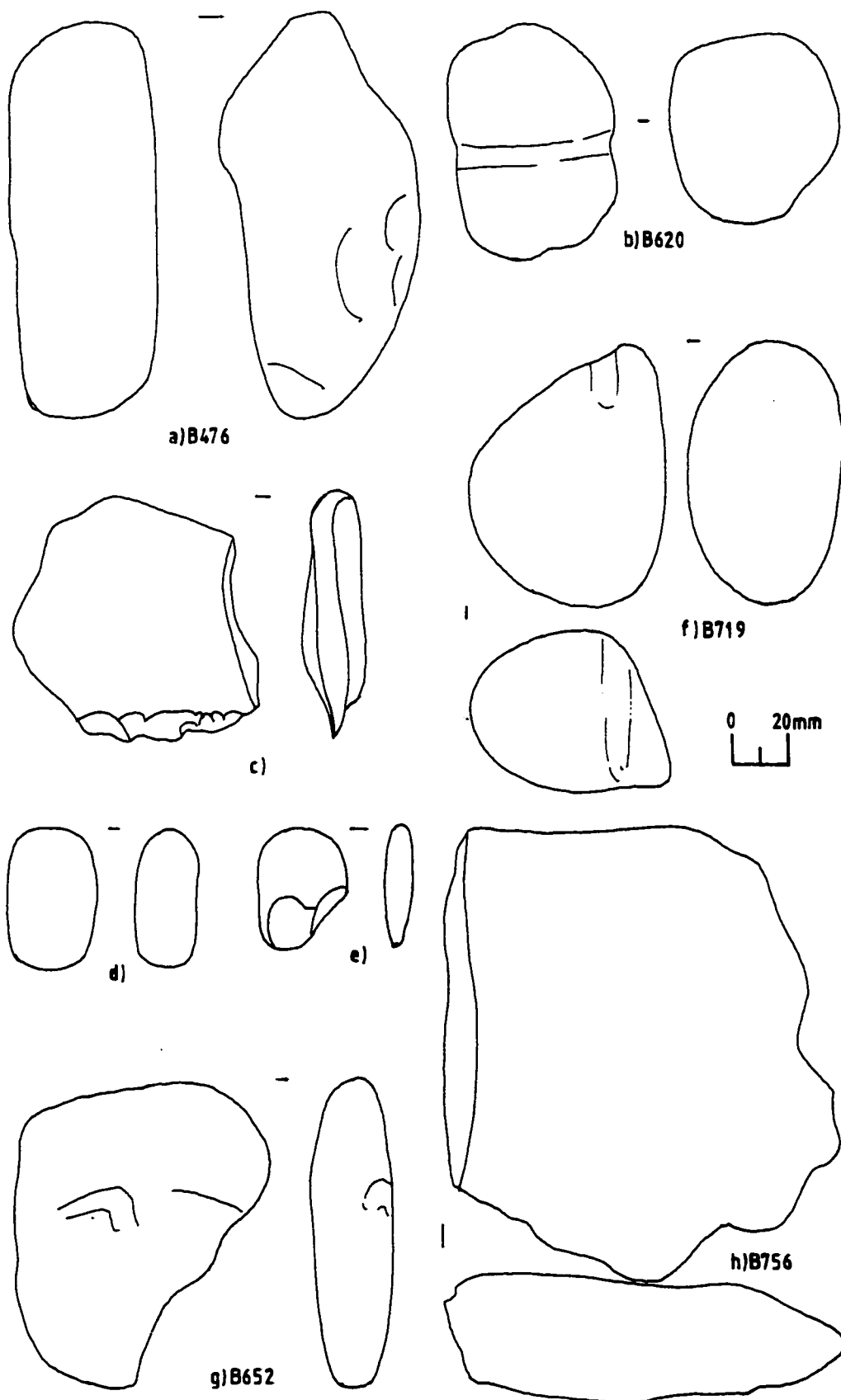
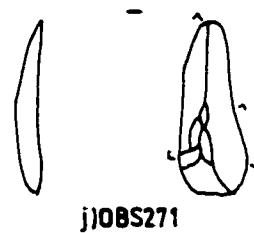
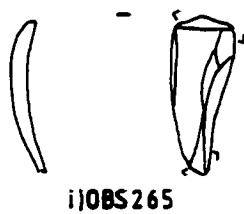
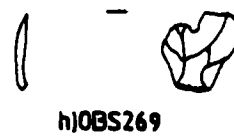
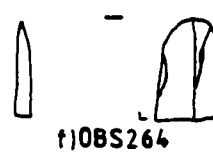
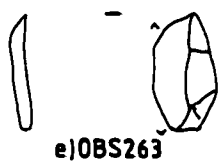
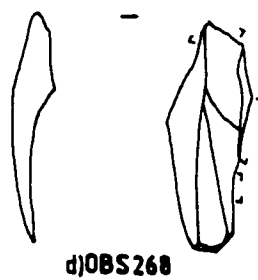
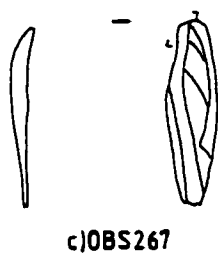
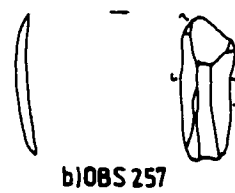
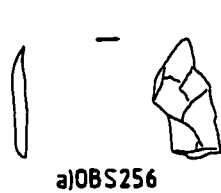


Figure 84. Knapped and pecked stone from structured depositions of Phase IIIL: a hammer (a), two net weights (b,f), a scraper (c), two pebble hammers (d,e) and two roughly worked pieces of tuff (g,h).



edge wear

0 10mm

Figure 85. Obsidian flakes from structured depositions of Phase IIIL. They include three pairs from a figurine deposition (a-b) and two graves (c-d and e-f).



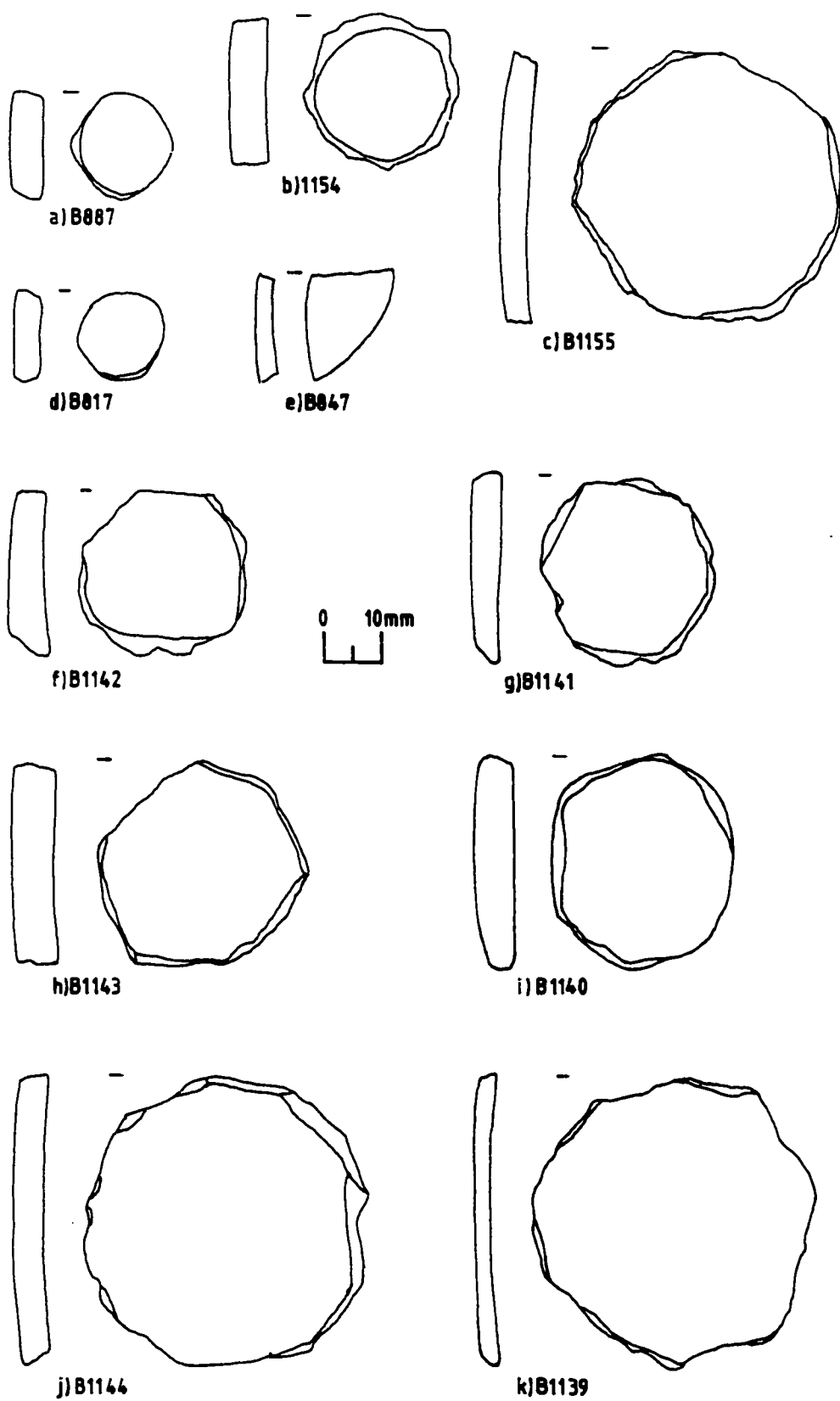


Figure 86. Worked sherds: discs of Phases I(a-c), II/IIIE (d), IIIIE (e) and IIIL (f-k).

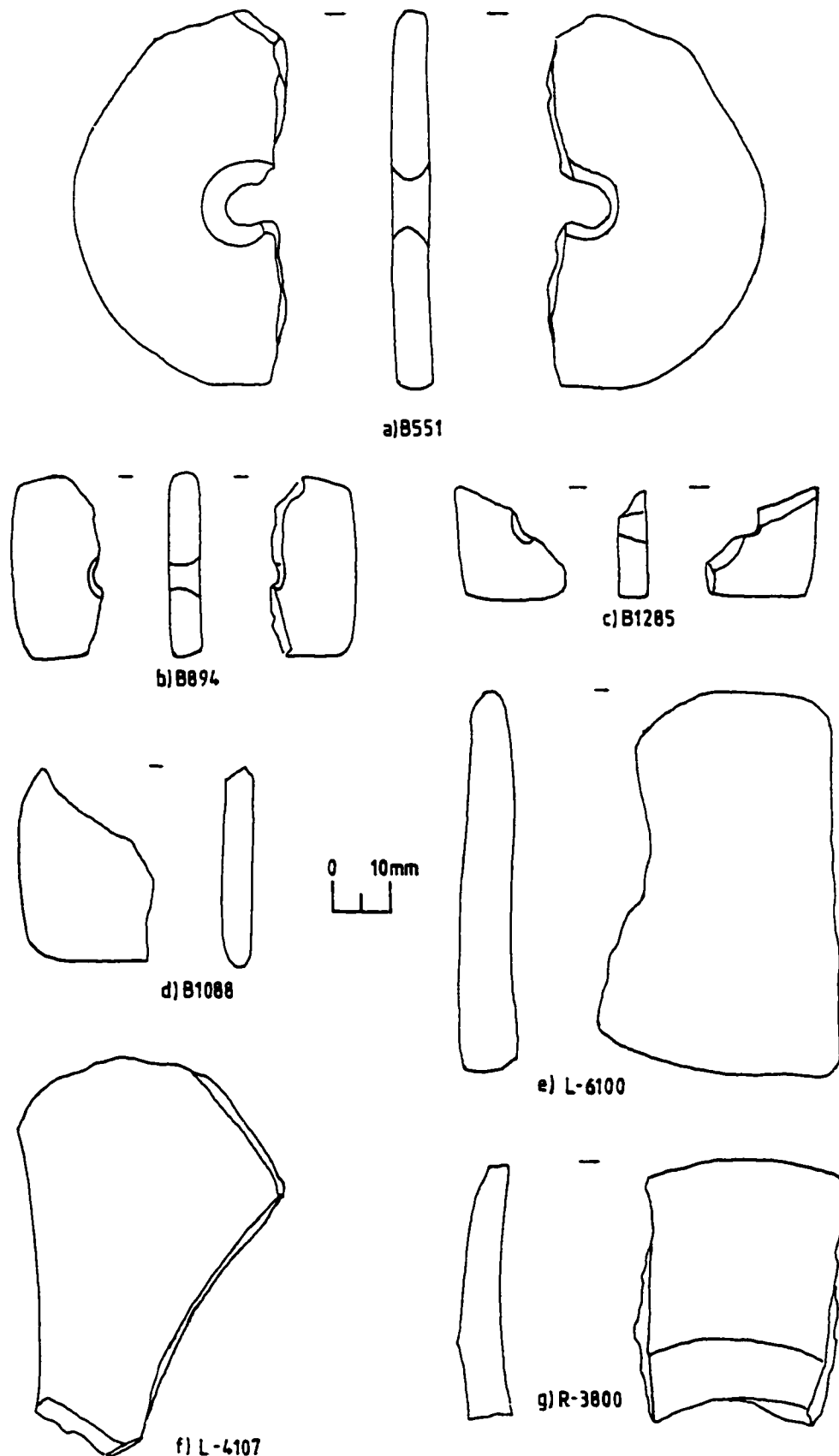


Figure 87. Worked sherds: a large spindle whorl of Phase IIIL (a), two perforated rectangles of Phase I (b,c), a rectangle of Phase IIIE (d), and three shaping tools of Phases II (e) and IIIL (f,g).

1.  
VESSEL FORM \_\_\_\_\_ COND. \_\_\_\_\_ CONTEXT \_\_\_\_\_  
PASTE \_\_\_\_\_  
SURF. FIN. INT. \_\_\_\_\_  
EXT. \_\_\_\_\_  
DEC. INT. \_\_\_\_\_  
EXT. \_\_\_\_\_  
RIM RAD. \_\_\_\_\_ ORIF. RAD. \_\_\_\_\_ RIM THICK. \_\_\_\_\_ BODY DIAM. \_\_\_\_\_  
% RIM \_\_\_\_\_ % ORIF. \_\_\_\_\_ MAX. THICK. \_\_\_\_\_ VESSEL HT. \_\_\_\_\_  
LIP FORM \_\_\_\_\_ MIN. THICK. \_\_\_\_\_ NECK-LIP INT. \_\_\_\_\_  
BASE FORM \_\_\_\_\_ FRACTURE \_\_\_\_\_ EXT. \_\_\_\_\_  
OBS. \_\_\_\_\_

2.  
VESSEL FORM \_\_\_\_\_ COND. \_\_\_\_\_ CONTEXT \_\_\_\_\_  
PASTE \_\_\_\_\_  
SURF. FIN. INT. \_\_\_\_\_  
EXT. \_\_\_\_\_  
DEC. INT. \_\_\_\_\_  
EXT. \_\_\_\_\_  
RIM RAD. \_\_\_\_\_ ORIF. RAD. \_\_\_\_\_ RIM THICK. \_\_\_\_\_ BODY DIAM. \_\_\_\_\_  
% RIM \_\_\_\_\_ % ORIF. \_\_\_\_\_ MAX. THICK. \_\_\_\_\_ VESSEL HT. \_\_\_\_\_  
LIP FORM \_\_\_\_\_ MIN. THICK. \_\_\_\_\_ NECK-LIP INT. \_\_\_\_\_  
BASE FORM \_\_\_\_\_ FRACTURE \_\_\_\_\_ EXT. \_\_\_\_\_  
OBS. \_\_\_\_\_

3.  
VESSEL FORM \_\_\_\_\_ COND. \_\_\_\_\_ CONTEXT \_\_\_\_\_  
PASTE \_\_\_\_\_  
SURF. FIN. INT. \_\_\_\_\_  
EXT. \_\_\_\_\_  
DEC. INT. \_\_\_\_\_  
EXT. \_\_\_\_\_  
RIM RAD. \_\_\_\_\_ ORIF. RAD. \_\_\_\_\_ RIM THICK. \_\_\_\_\_ BODY DIAM. \_\_\_\_\_  
% RIM \_\_\_\_\_ % ORIF. \_\_\_\_\_ MAX. THICK. \_\_\_\_\_ VESSEL HT. \_\_\_\_\_  
LIP FORM \_\_\_\_\_ MIN. THICK. \_\_\_\_\_ NECK-LIP INT. \_\_\_\_\_  
BASE FORM \_\_\_\_\_ FRACTURE \_\_\_\_\_ EXT. \_\_\_\_\_  
OBS. \_\_\_\_\_

Figure 88. Pottery recording sheet.












	Red slip or red paint
	Iridescent paint
	Green paint
	Yellow paint
	Cream slip
	Limits of red slip or red paint
	Limits of iridescent paint
	Rim diameter, in millimetres
	Orifice diameter, in millimetres
	Body diameter, in millimetres
	Ring base diameter, in millimetres
L-6737	Sherd is from Layer 6737
R-4040	Sherd is from Rubbish Pit 4040
G-719	Sherd is from Grave 719
PH-6819	Sherd is from Post-hole 6819
SD-3806	Sherd is from Structured Deposition 3806
?-3055	Sherd is from Feature 3055, of unknown function

Figure 89. Key to pottery illustrations.

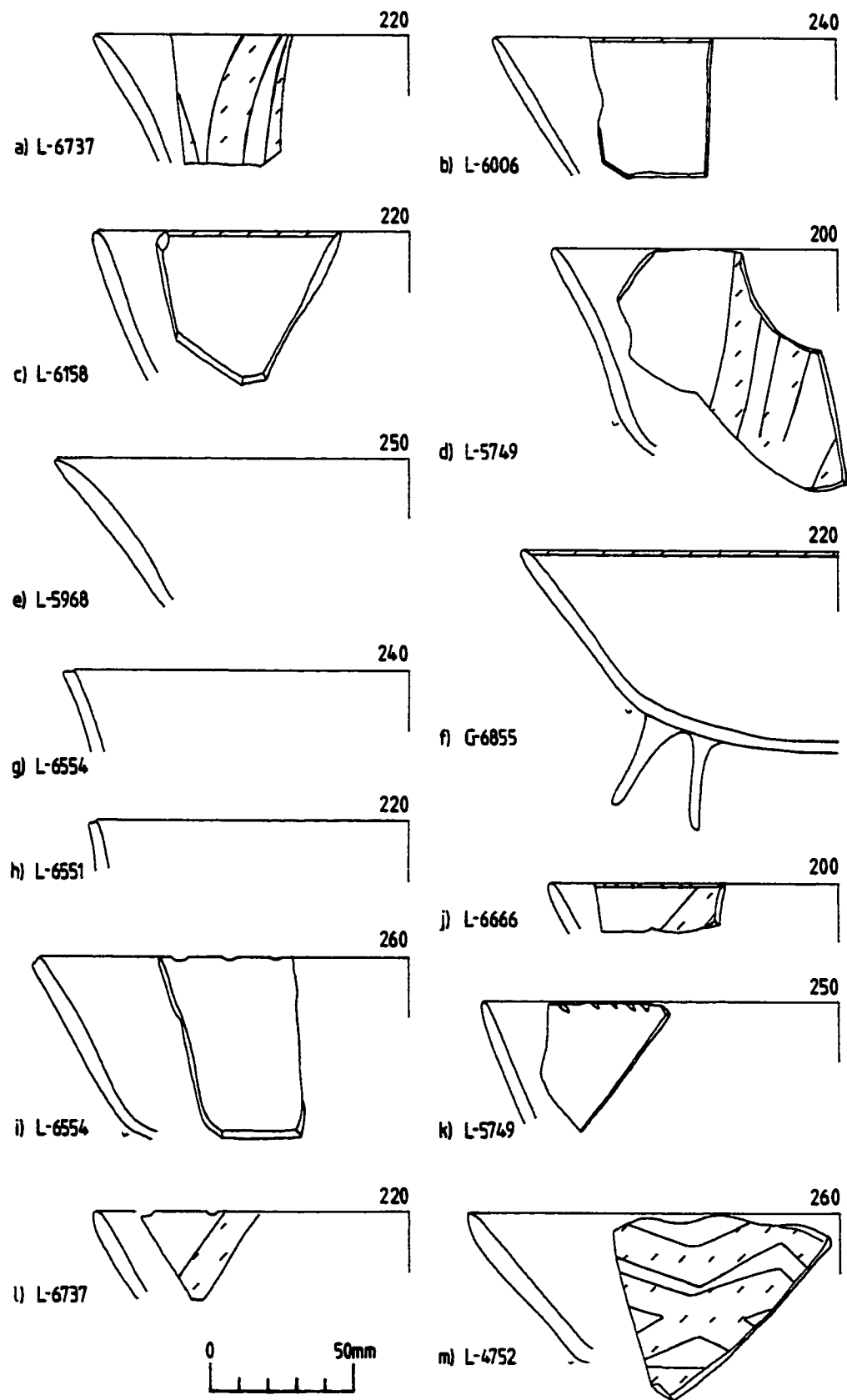


Figure 90. Serving bowl Form Set 1. General vessel shapes (a-f); variations on lip treatment (g-m).

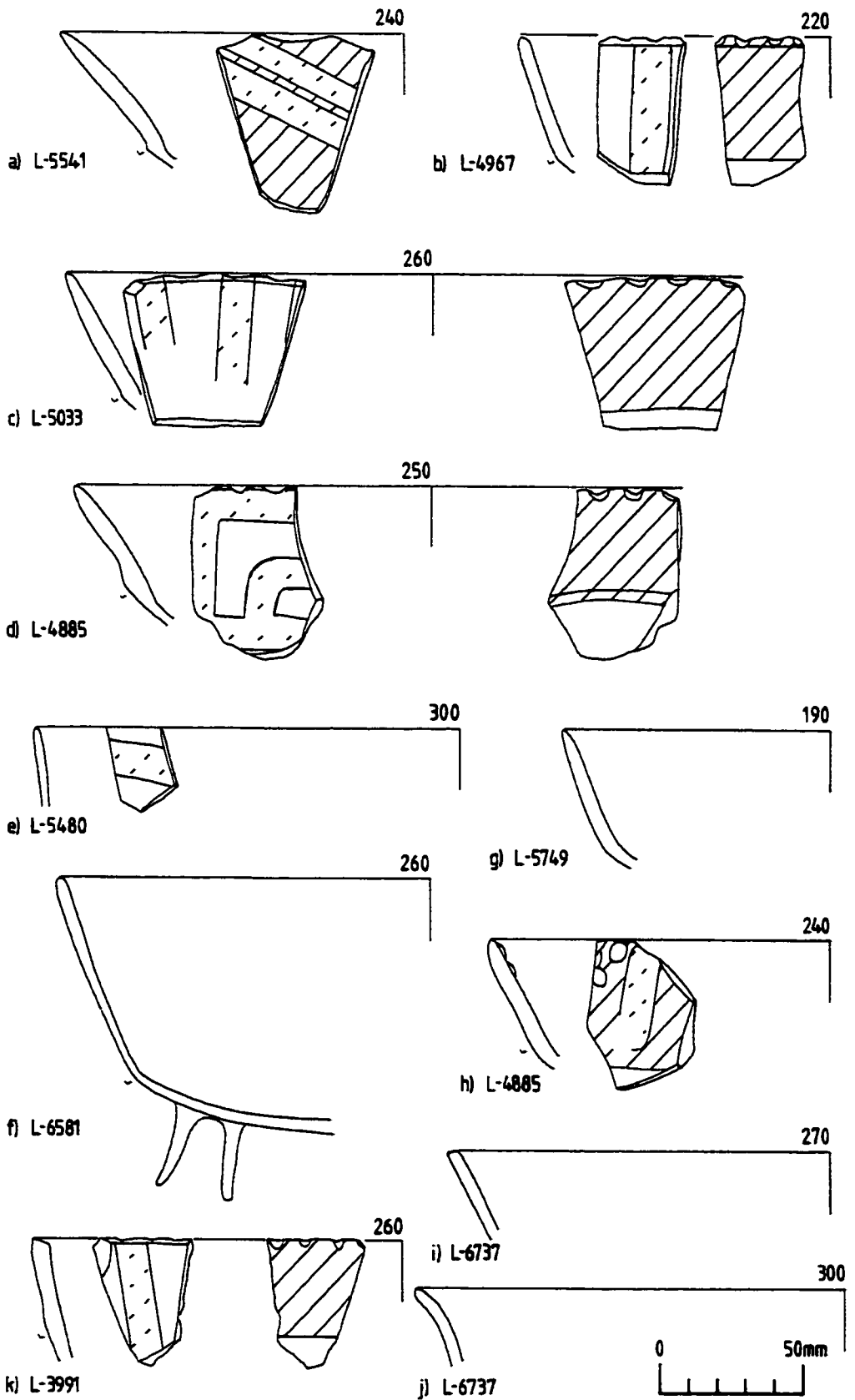
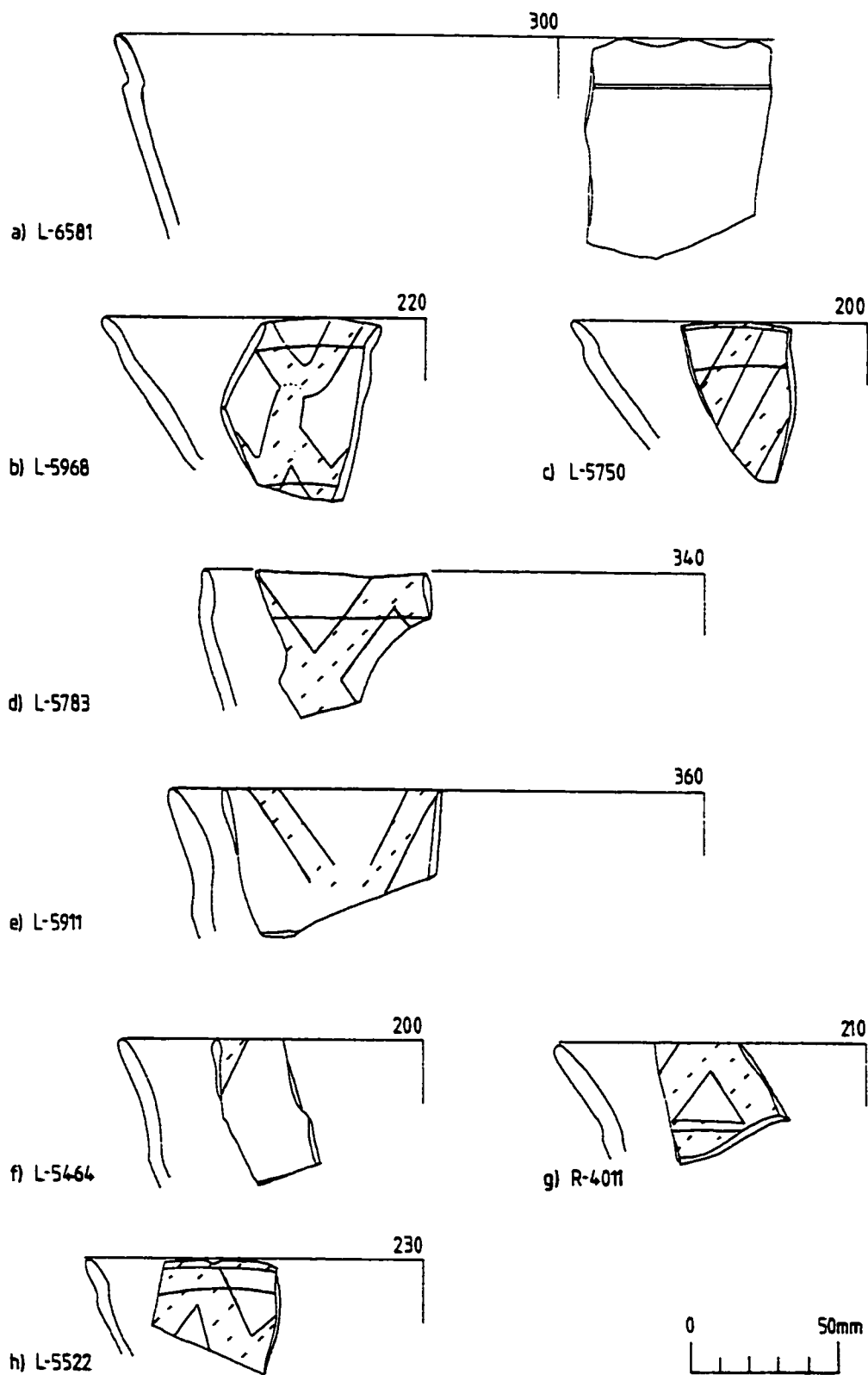


Figure 91. Serving bowl Form Set 1 (cont.). Late variations (a-d); extremes of dimension (e-g); unusual appliqué decoration (h); odd forms (i-k).



**Figure 92. Serving bowl Form Set 2. Form Set 2A: variations on Form Set 1.**

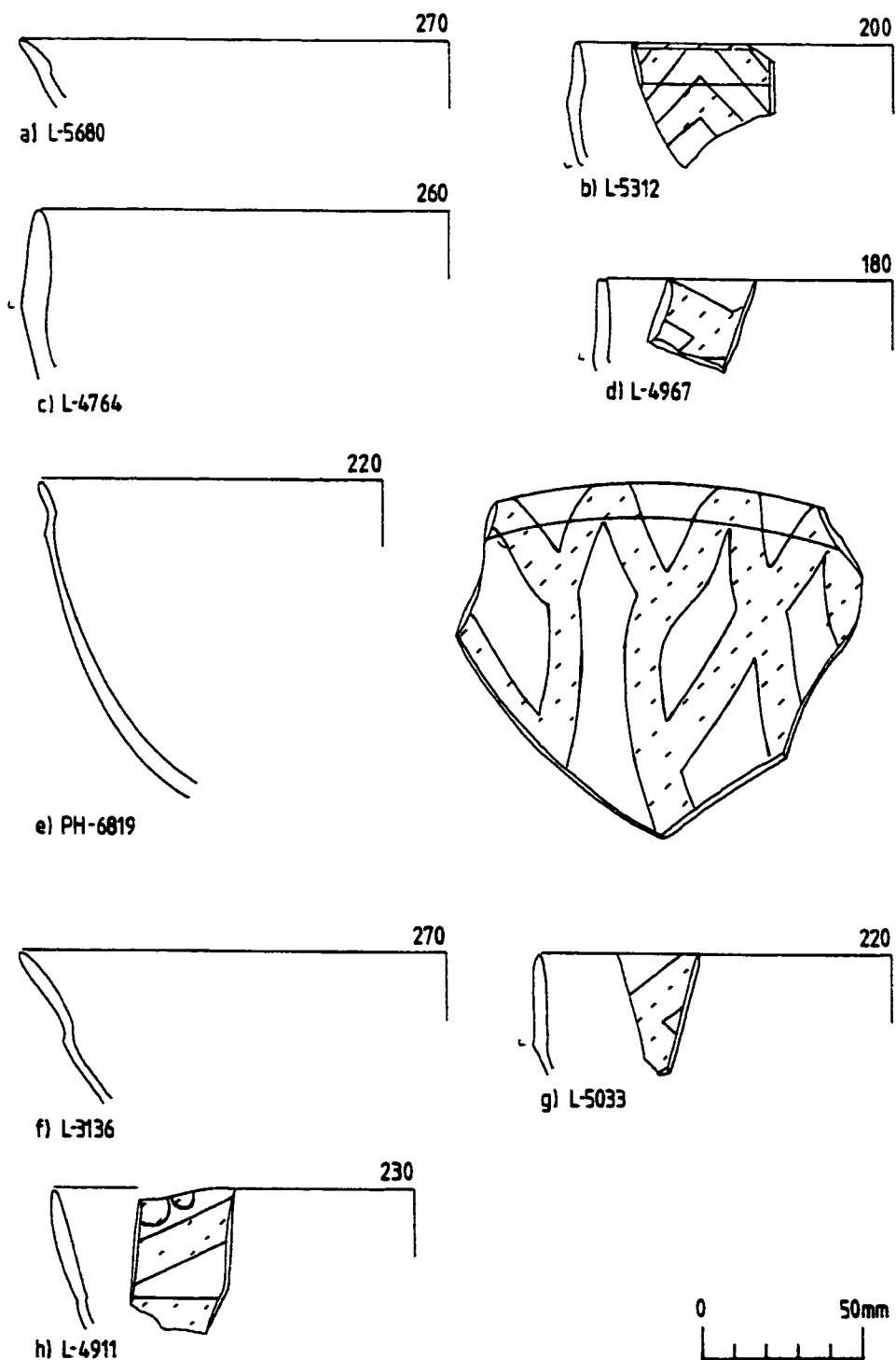


Figure 93. Serving bowl Form Set 2 (cont.). Form Set 2B (a) and Form Set 2C (b-h); transitional Machalilla/Engoroy forms (e,f); unusual forms (g,h).



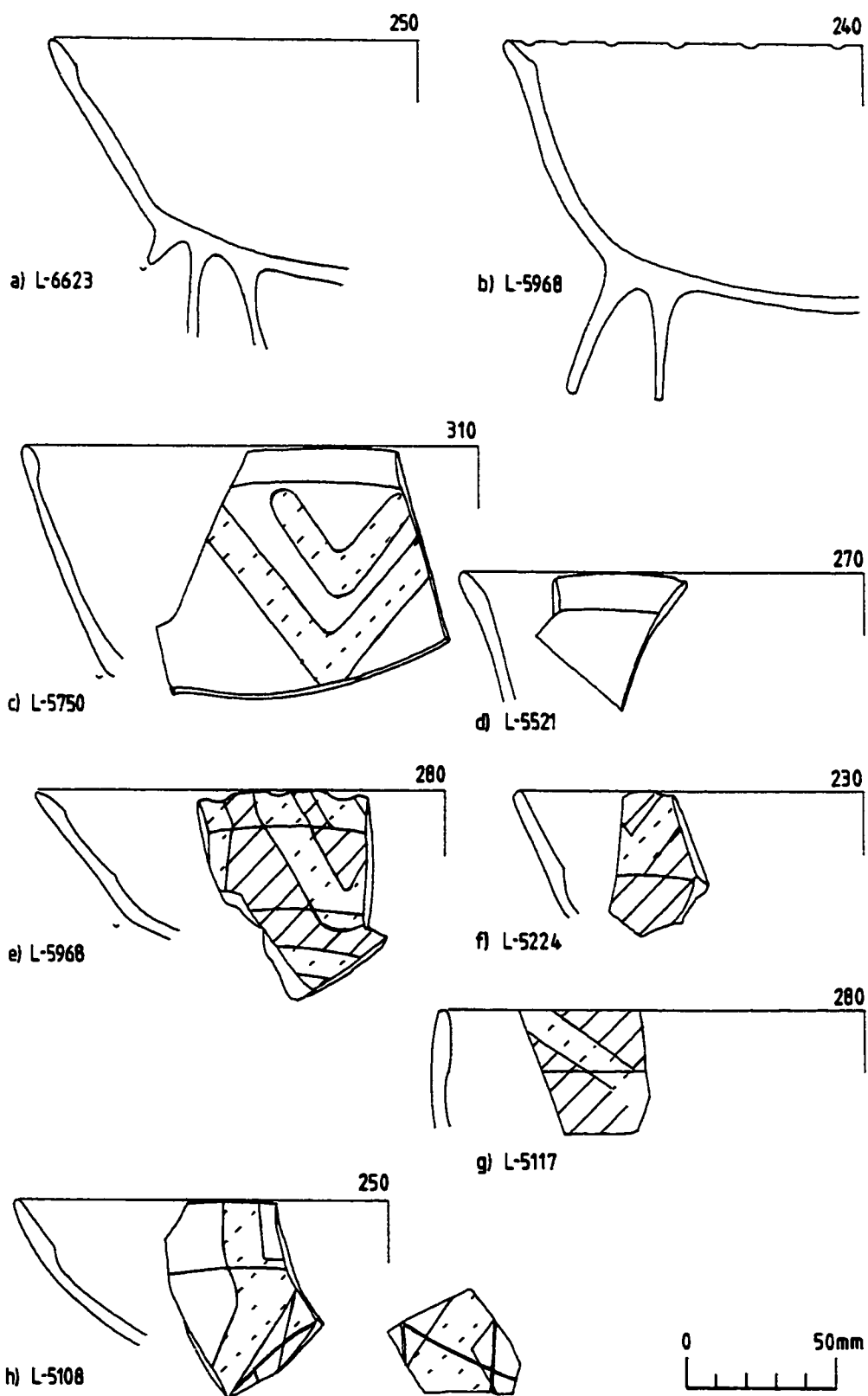


Figure 94. Serving bowl Form Set 3. Form Set 3A variations on Form Set 1 (a-e); Form Set 3B (f); Form Set 3C (Phase IIIE), one carrying an incised design as well as iridescent paint (g,h).

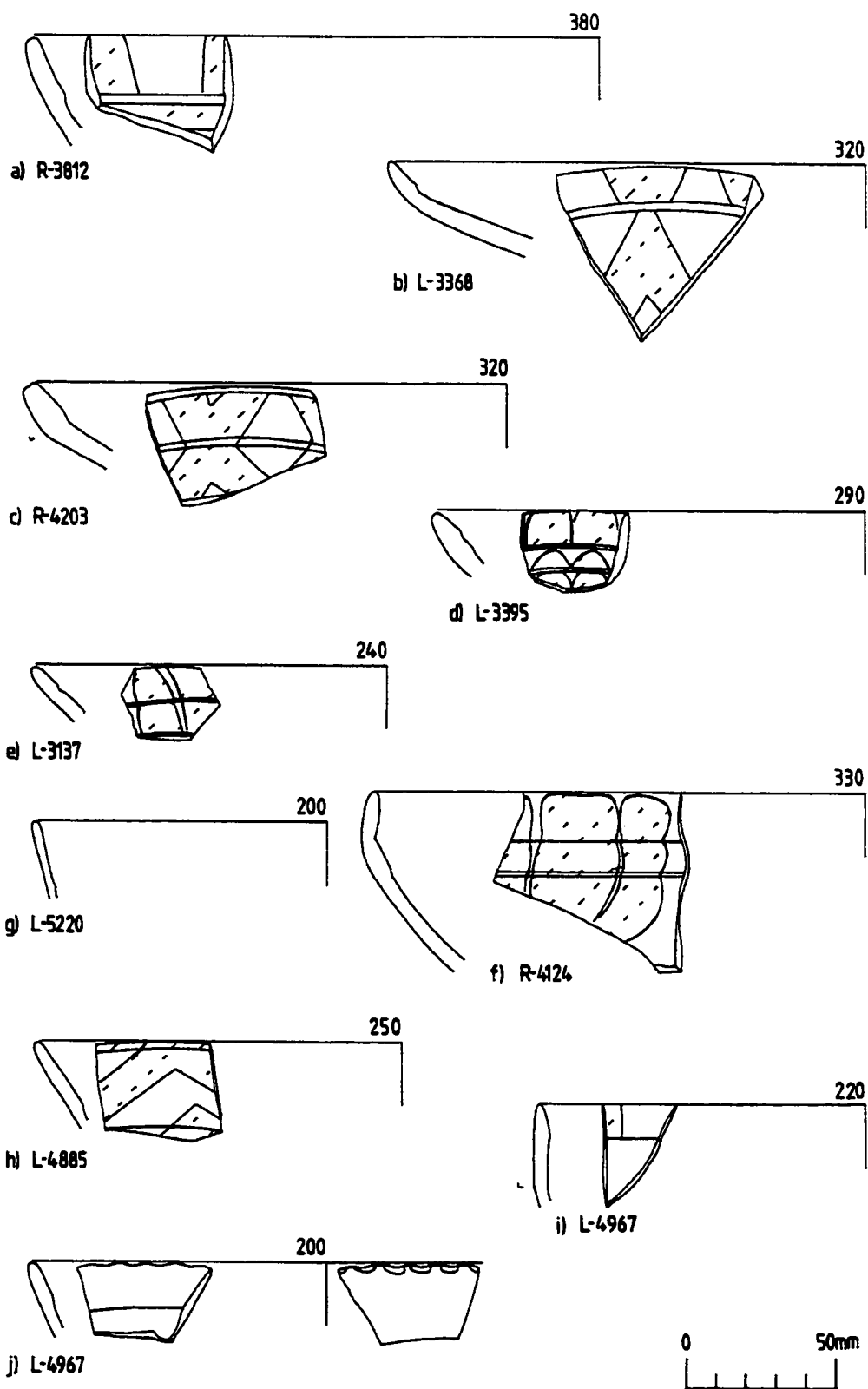


Figure 95. Serving bowl Form Set 3 (cont.). Form Set 3C, Phase IIIIL (a-f); exceptional forms (g-j).

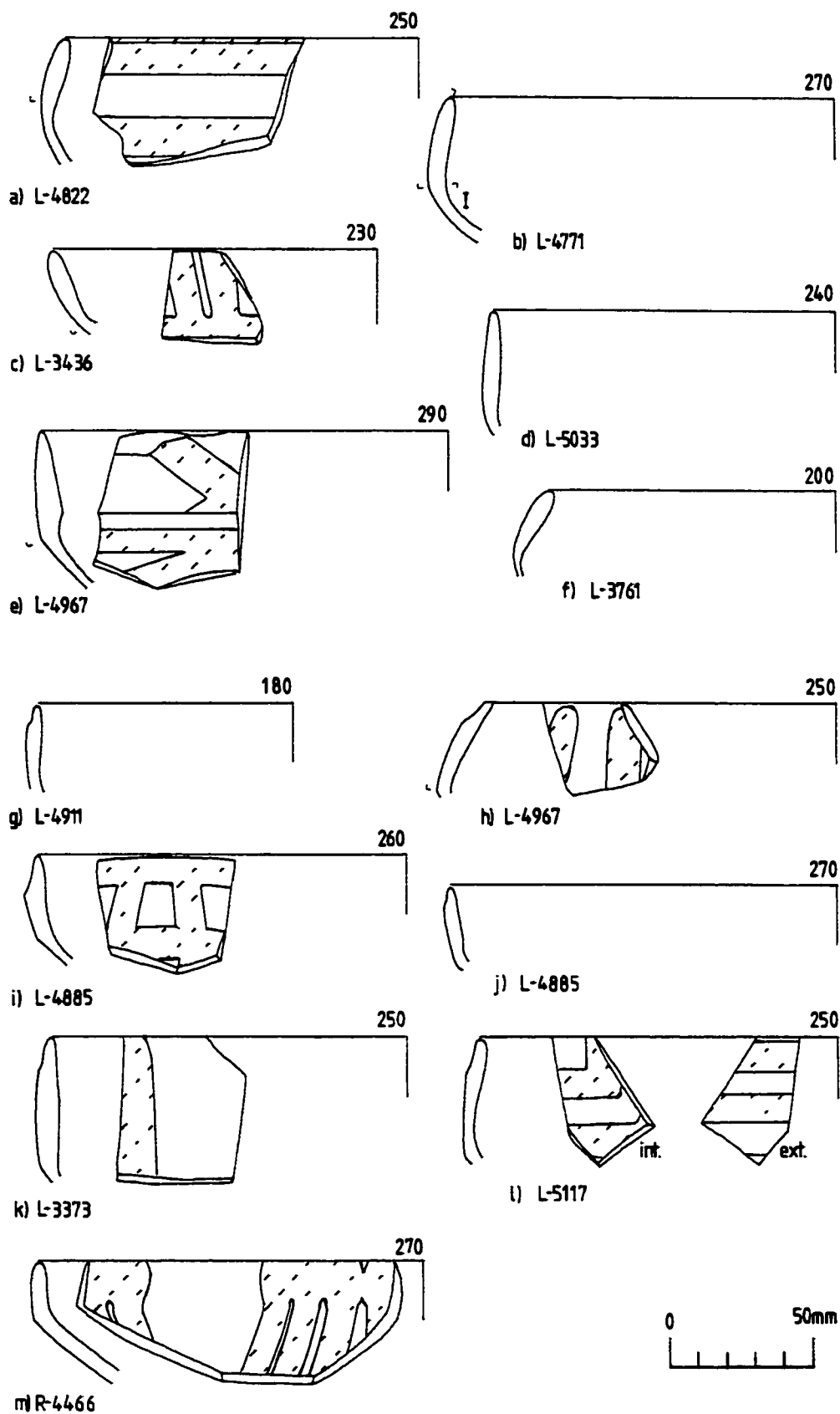


Figure 96. Serving bowl Form Sets 4 (a-f), 6 (g-l) and 7 (m).

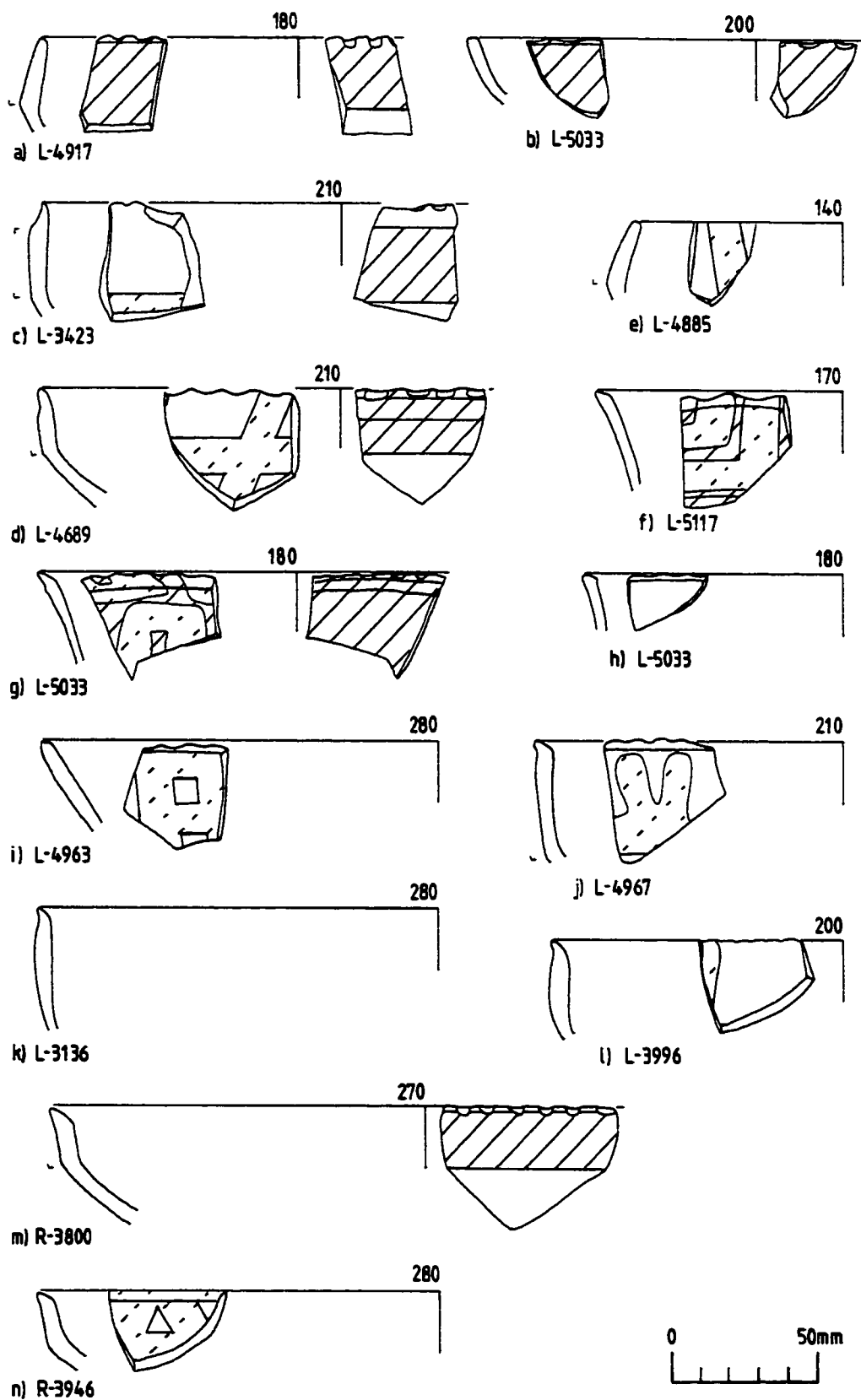


Figure 97. Serving bowl Form Set 5. Form Set 5A (a-d,f-m); Form Set 5B (e,n). The flaring forms (f-h) are all probably imported.

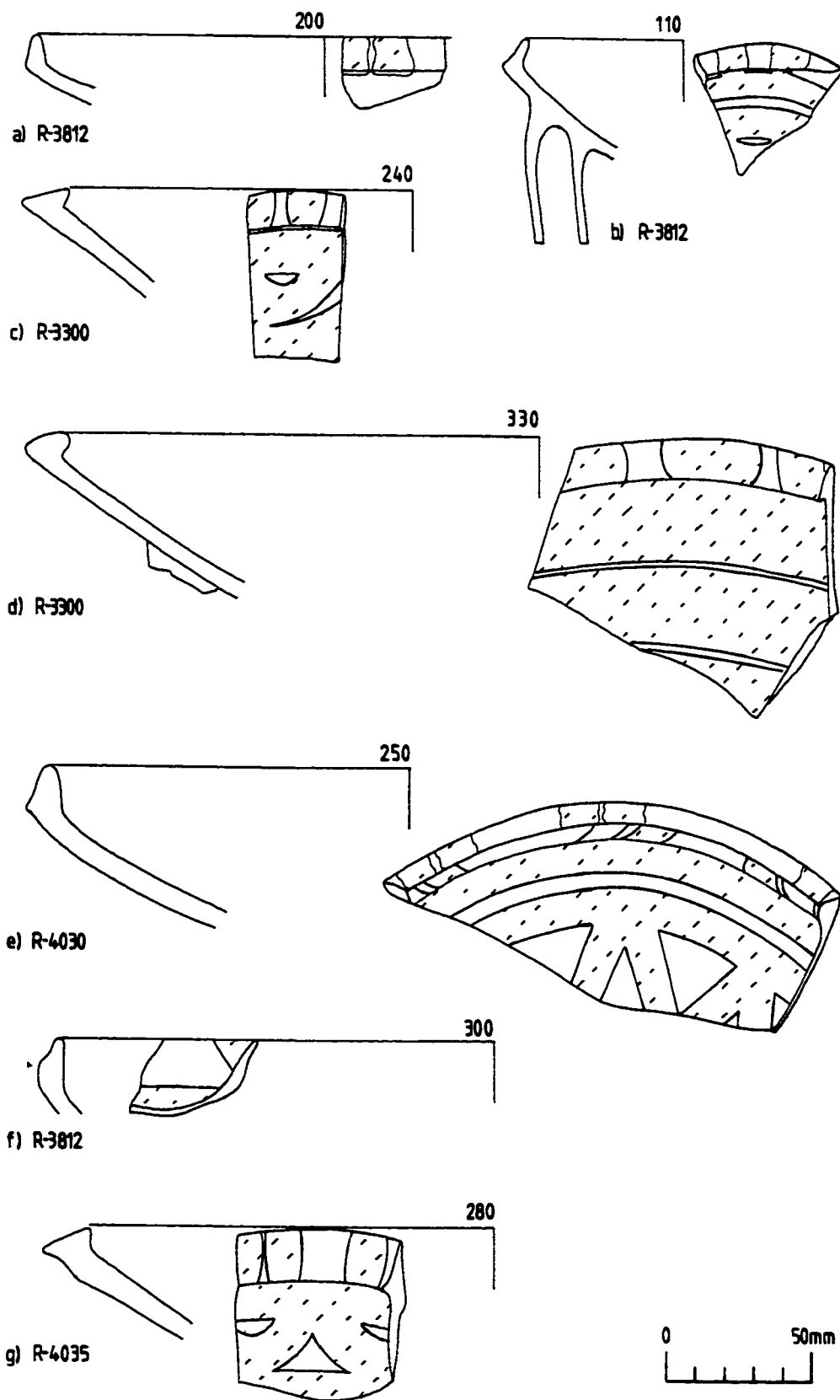


Figure 98. Serving bowl Form Set 8. Form Set 8A (a-f):  
Form Set 8C (g).

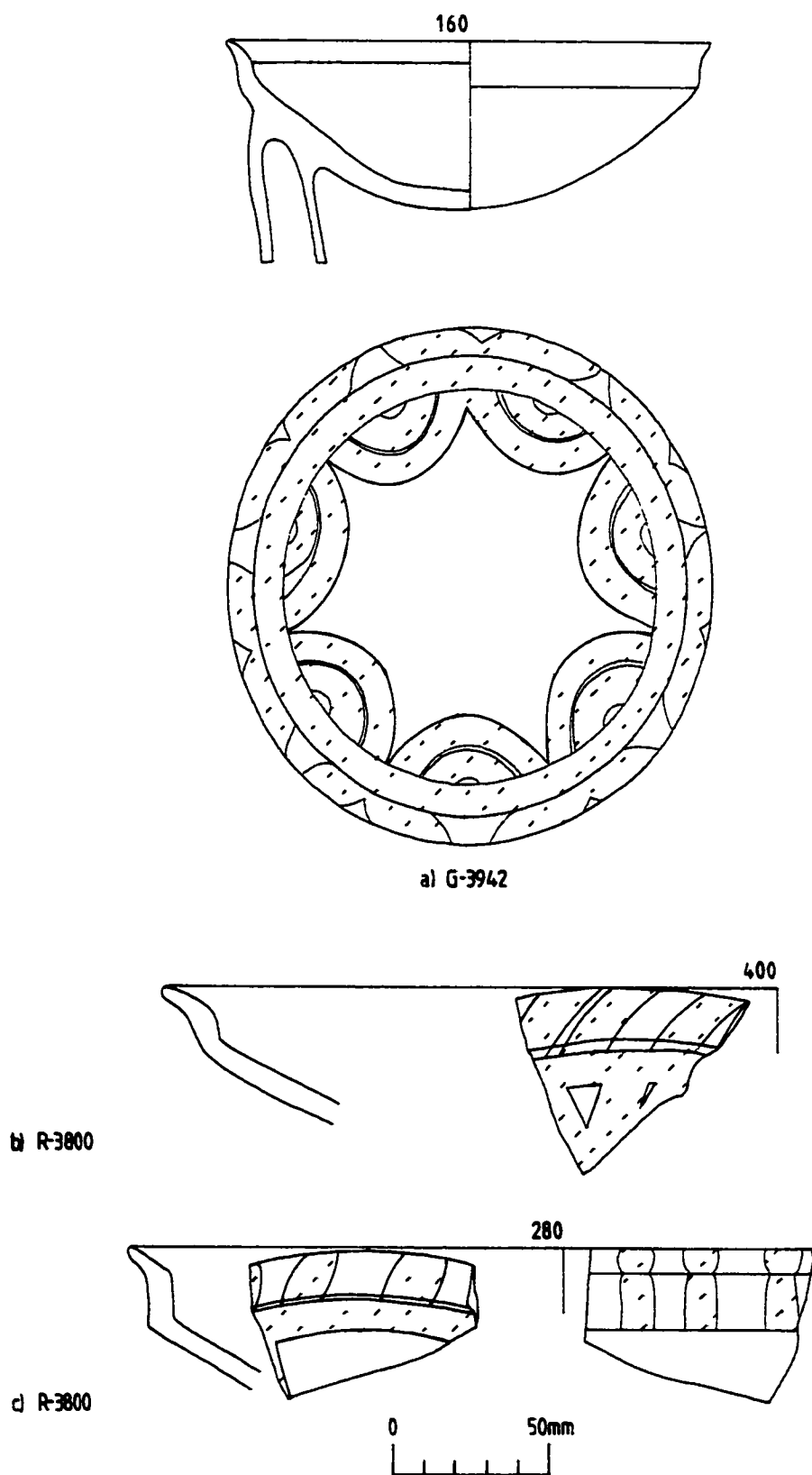


Figure 99. Serving bowl Form Set 8 (cont.). Form Set 8B.

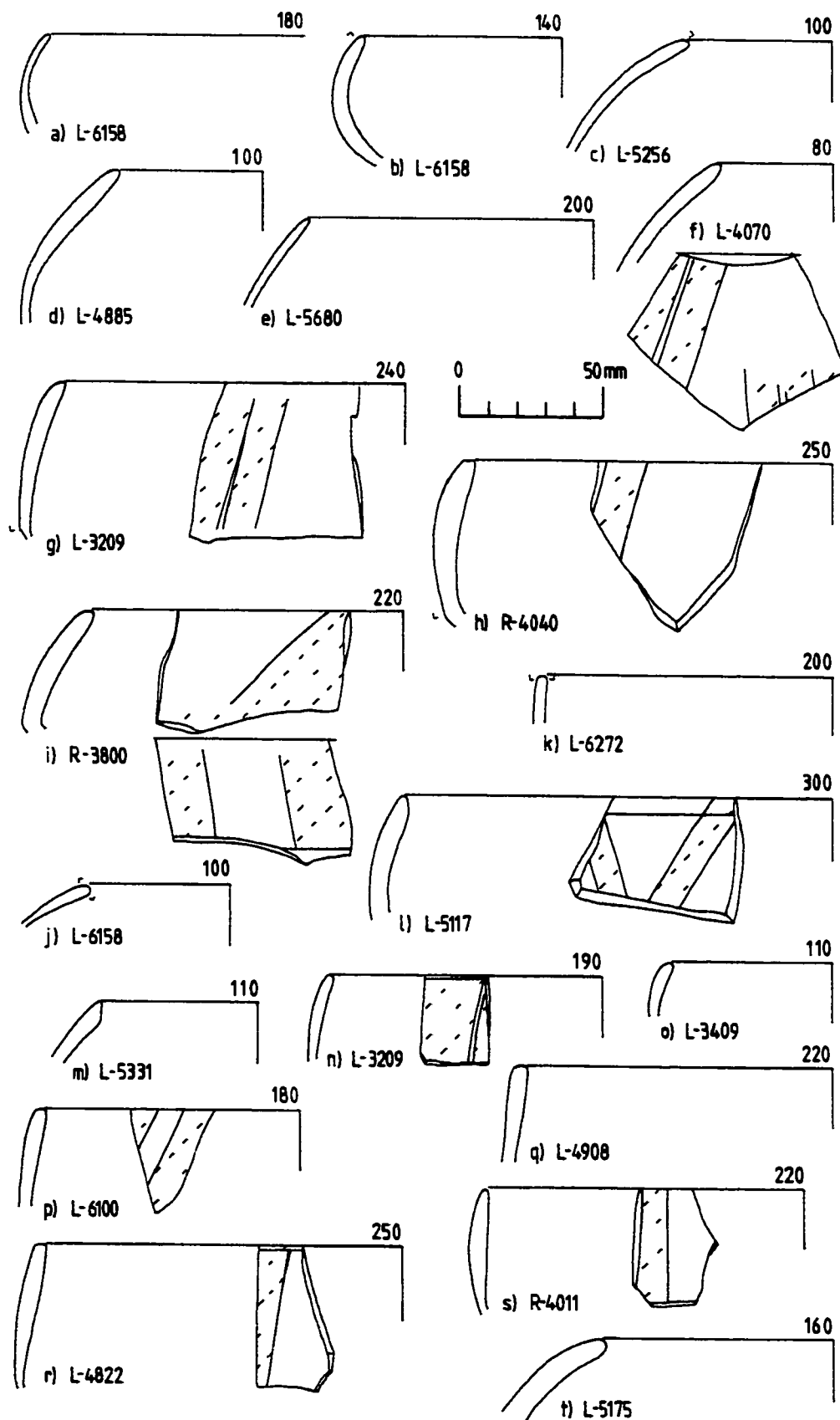


Figure 100. Serving bowl Form Set 9. Form Set 9A simple restricted bowls (a-f); Form Set 9B composite restricted bowls of Phase III (g-i); other restricted bowls (j-t).

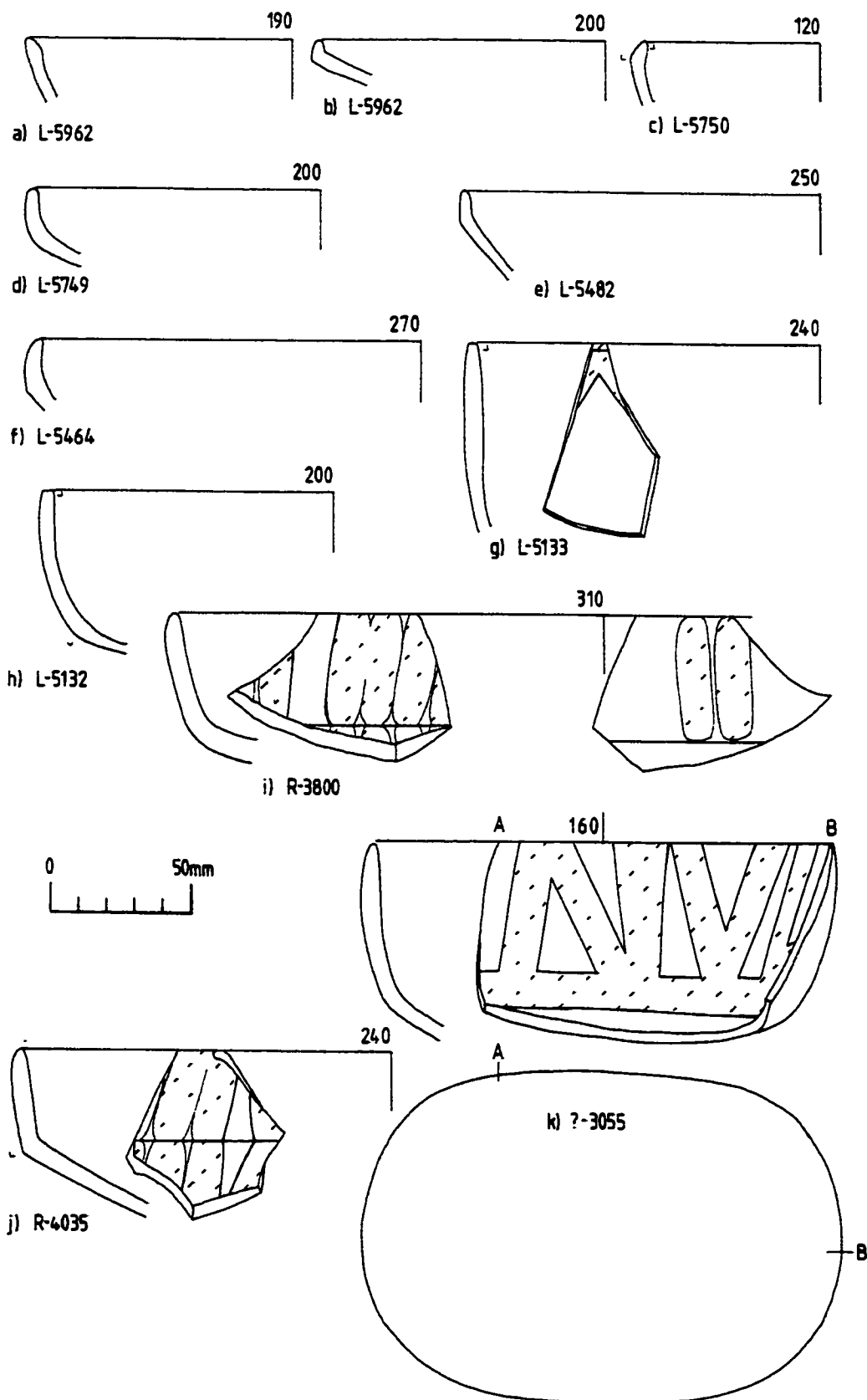


Figure 101. Serving bowl Form Set 10. Form Set 10A, Phase II (a-c); Form Set 10B, Phase III E (d-f); Form Set 10C, Phase III E (g,h); Form Set 10C, Phase III L (i-k).



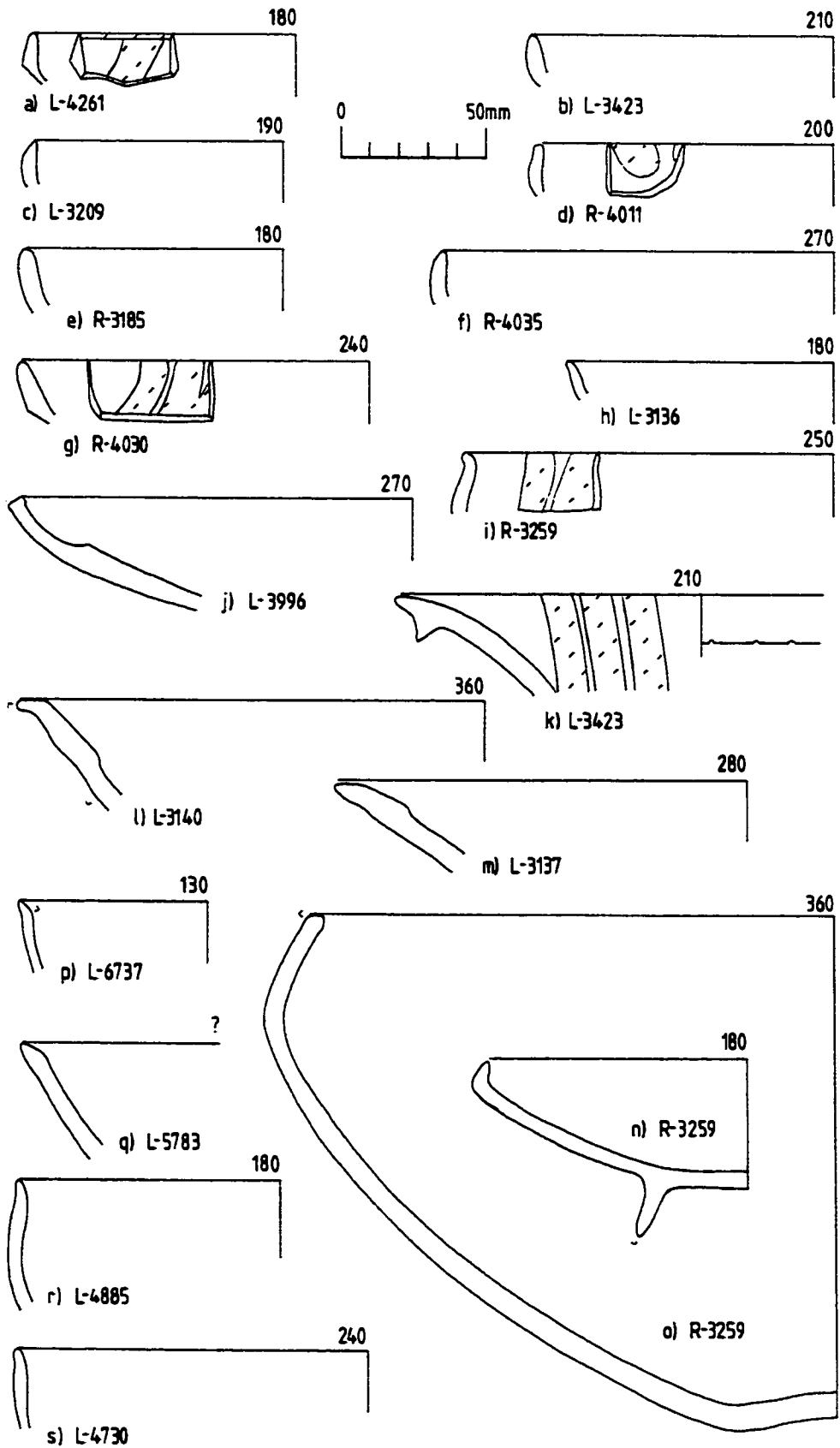


Figure 102. Serving bowl Form Set 10 (cont.). Form Set 10D (a-g); Form Set 10E (h,i); Form Set 10F (j-m); Form Set 10G imports (n,o); Form Set 10H (p,s). All are of Phase IIIIL save p (Phase I) and q (Phase IIIE).

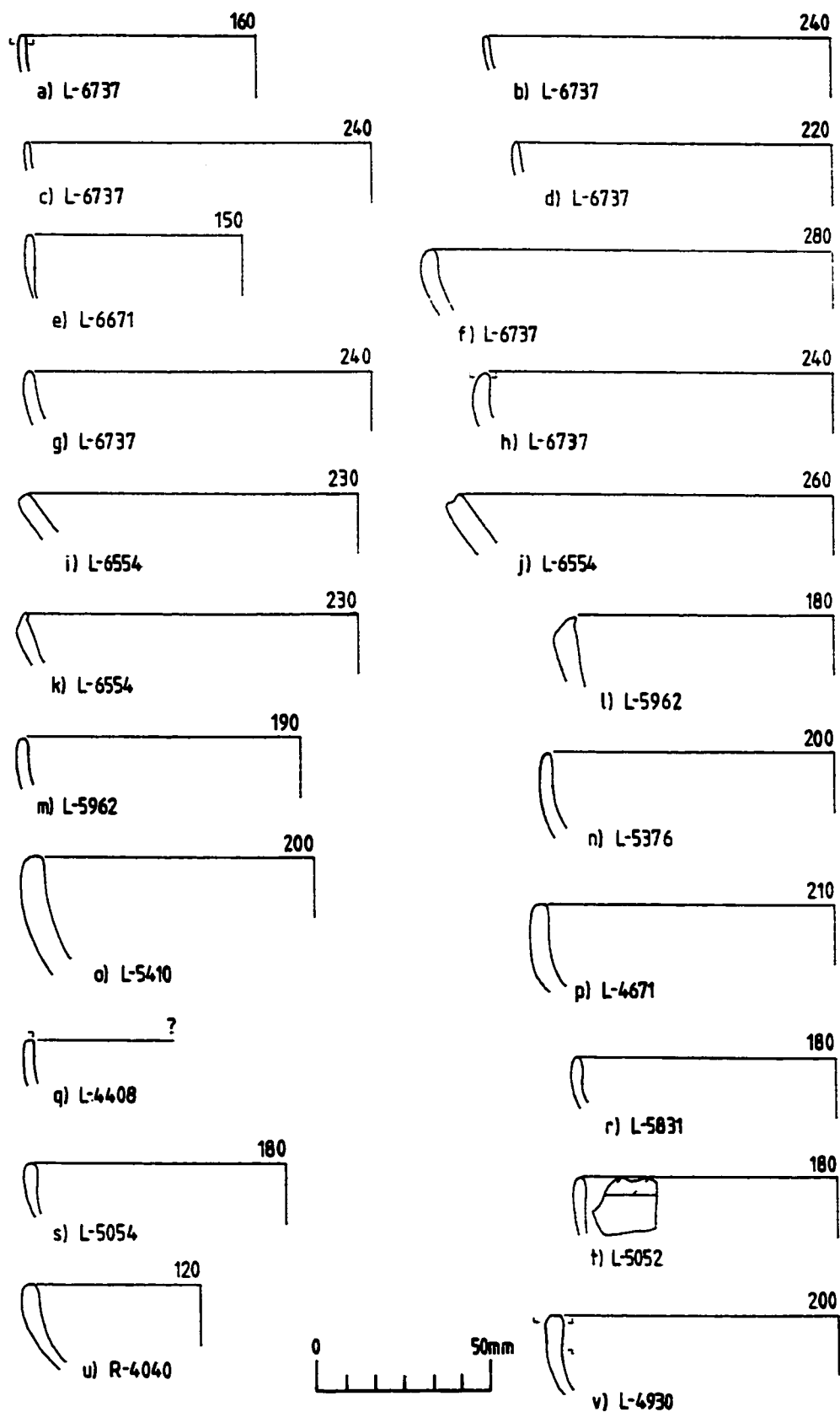


Figure 103. Serving bowl Form Set 11. Phase I (a-l); Phase II and IIIE rounded walls (m,n); Phase IIIE and IIIL medium fabrics (o-q); Phase IIIE-IIIL rounded lips (r-u); odd Phase IIIE red slip (v).

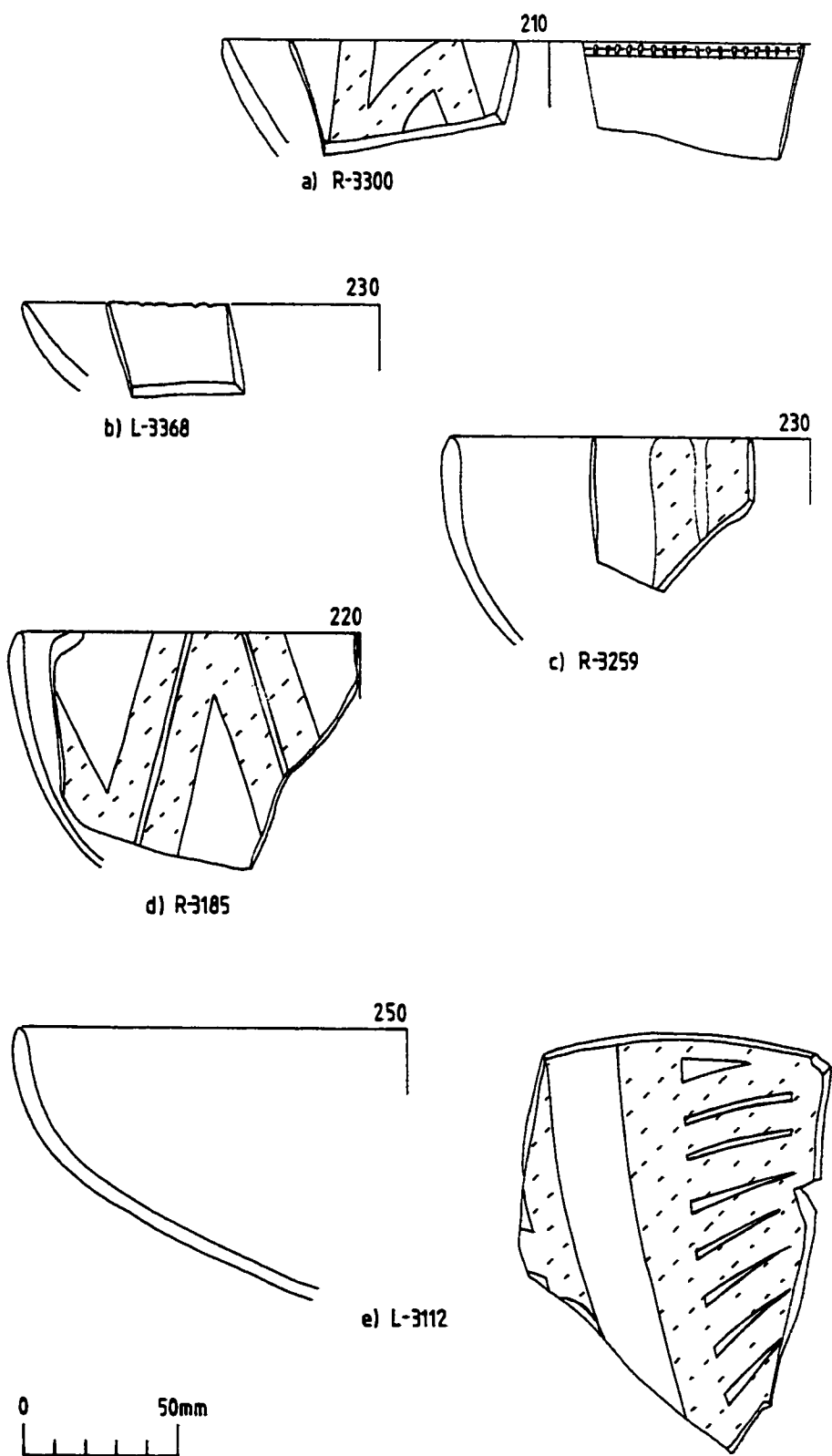


Figure 104. Serving bowl Form Set 11 (cont.). Phase IIIIL forms.

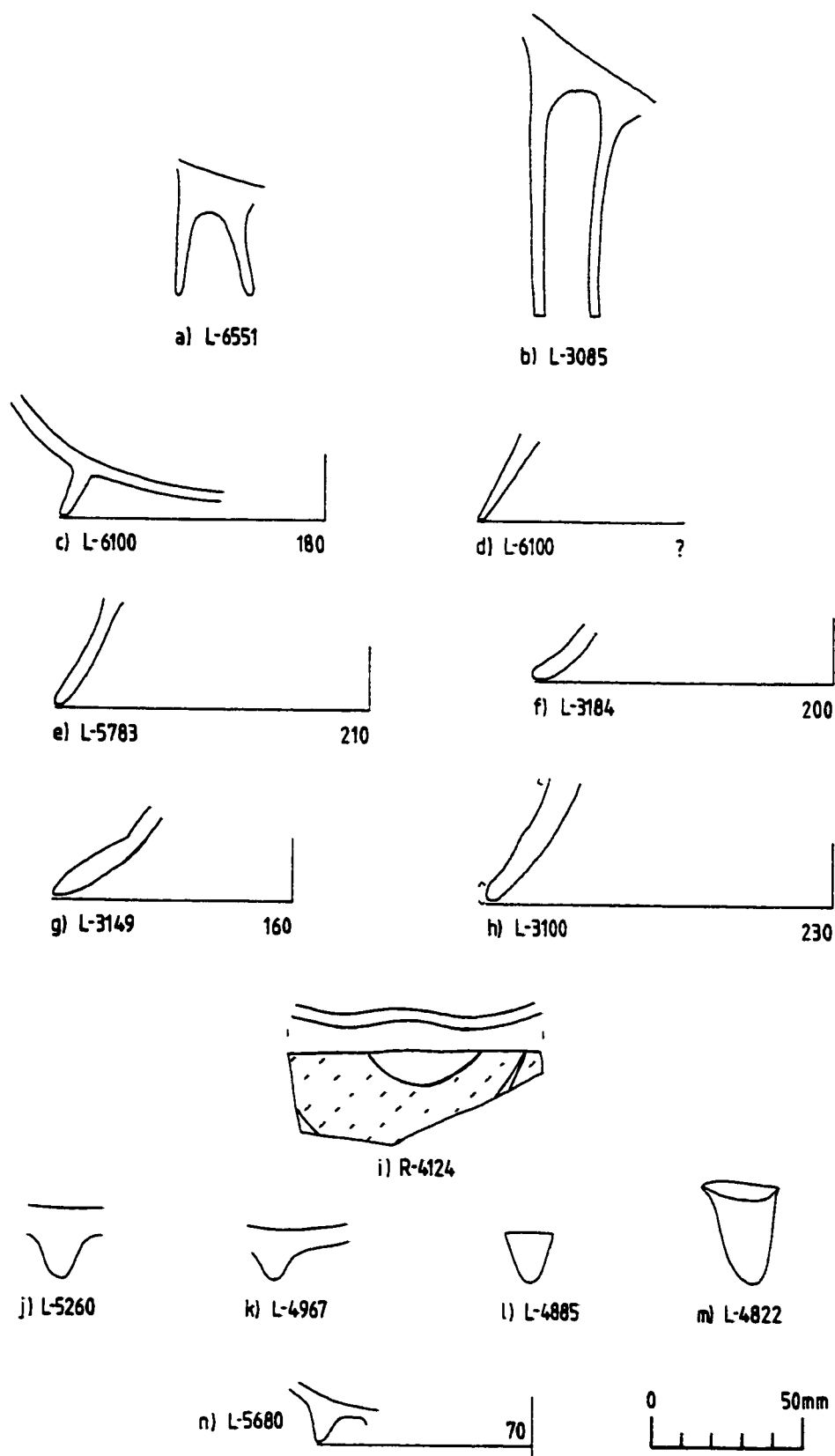


Figure 105. Serving bowl bases and flanges. Hollow legs of Phases I (a) and IIIIL (b); ring bases of Phases II (c,d) and IIIIE (e); pedestal bases of Phase IIIIL (f-h); Phase IIIIL concave base (i); Phase IIIIE- IIIIL solid conical feet (j-m); Phase IIIIE flange (n).

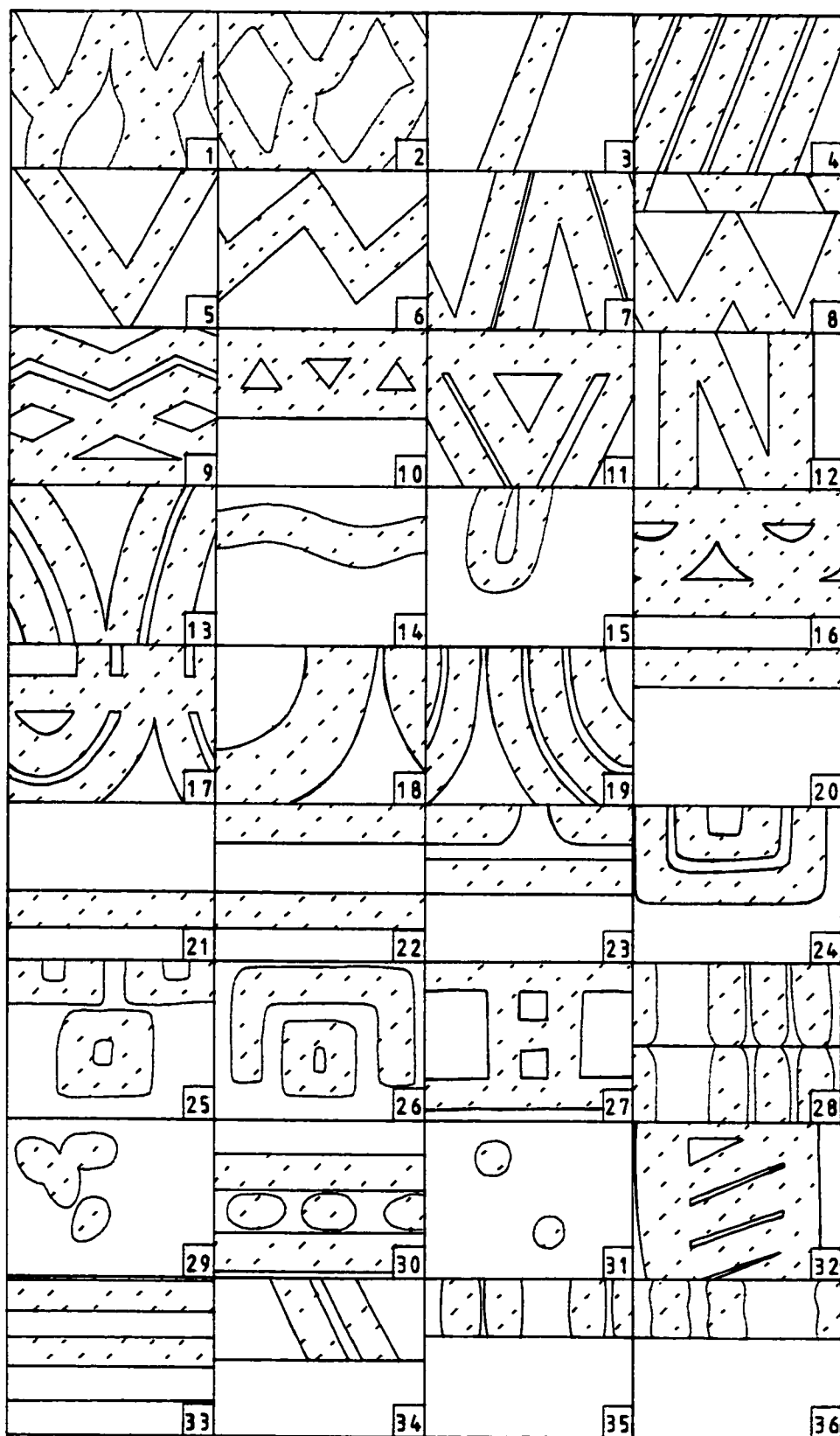
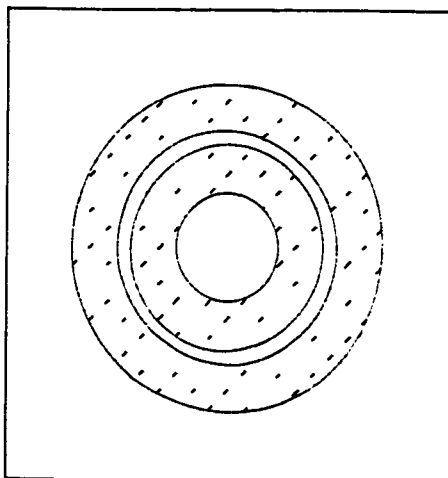


Figure 106. Table of designs on iridescent-painted serving bowls. 1-32: interior designs; 33-36: exterior designs.

a)



b)

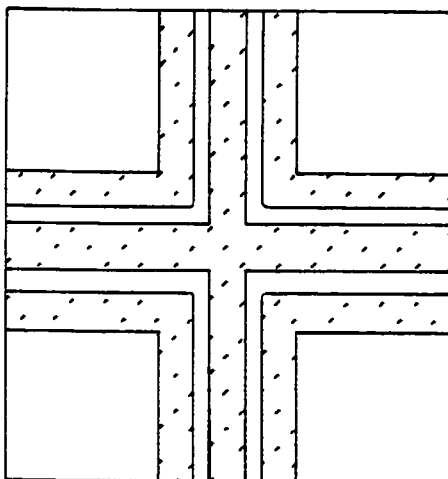


Figure 107. Designs on interior centres of iridescent-painted serving bowls.

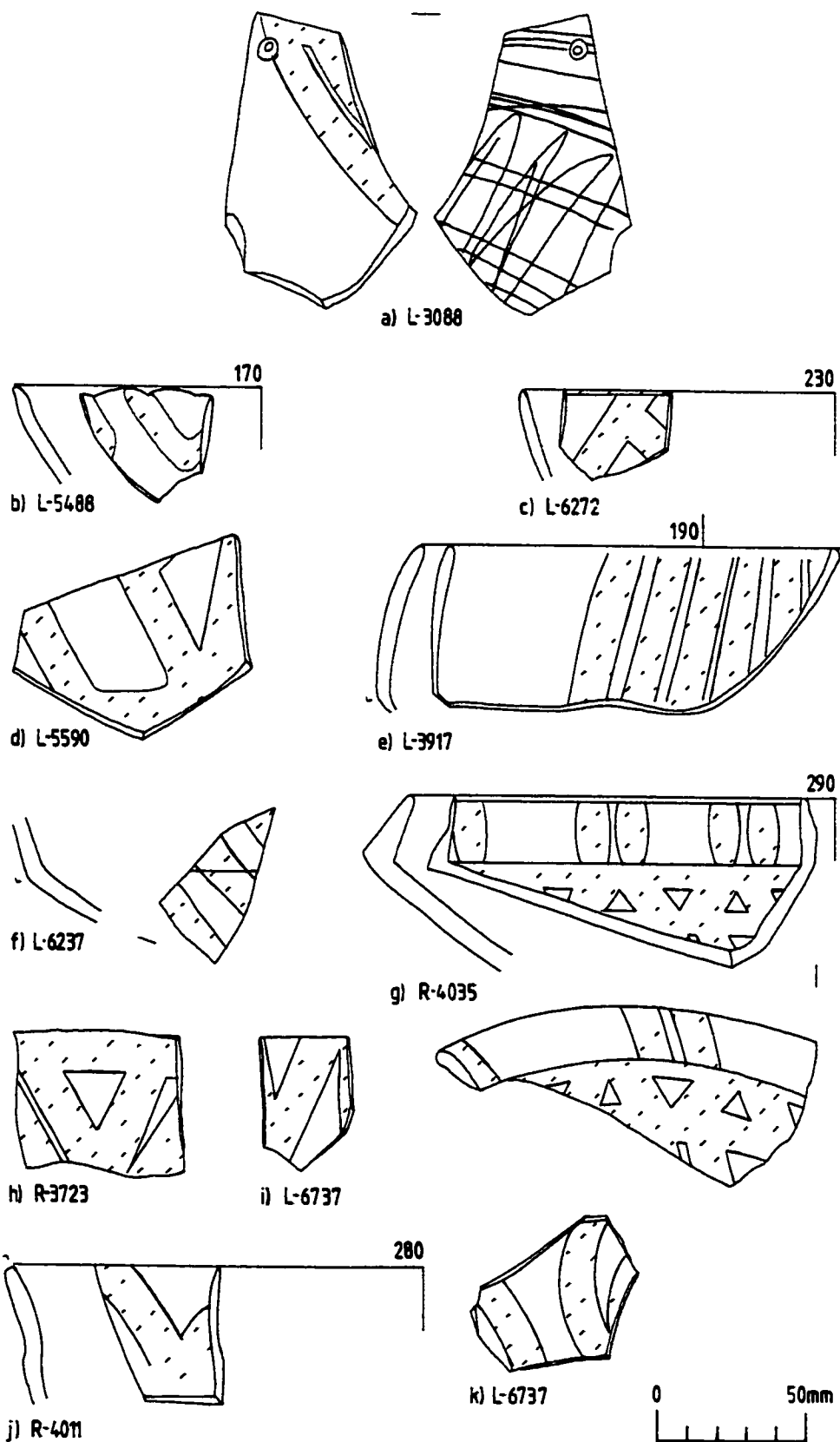


Figure 108. Examples of iridescent designs. The body sherd from L-3088 (a) carries line burnishing on the outside, which is otherwise simply wiped (cf. Figure 109r)

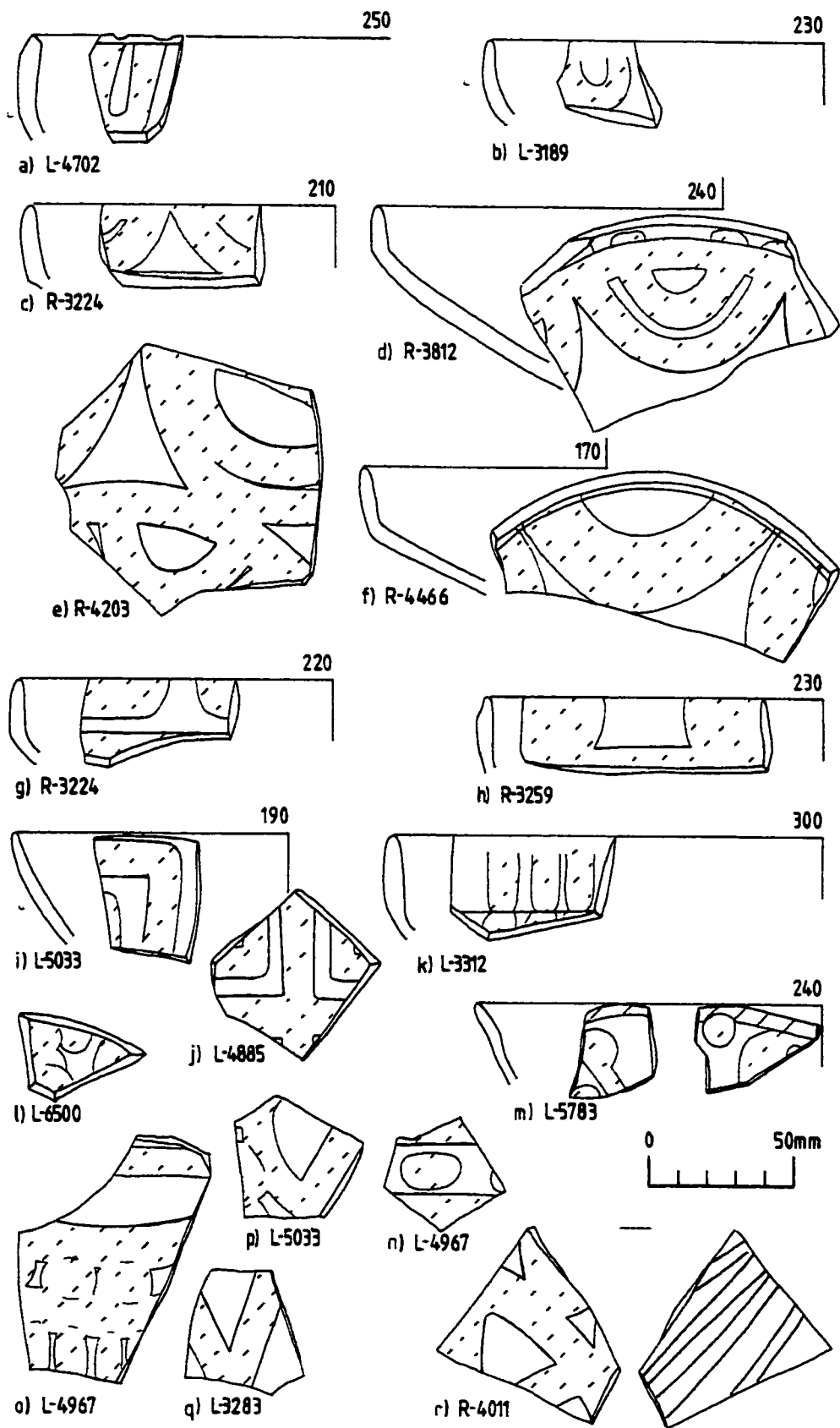


Figure 109. Examples of iridescent designs (cont.).



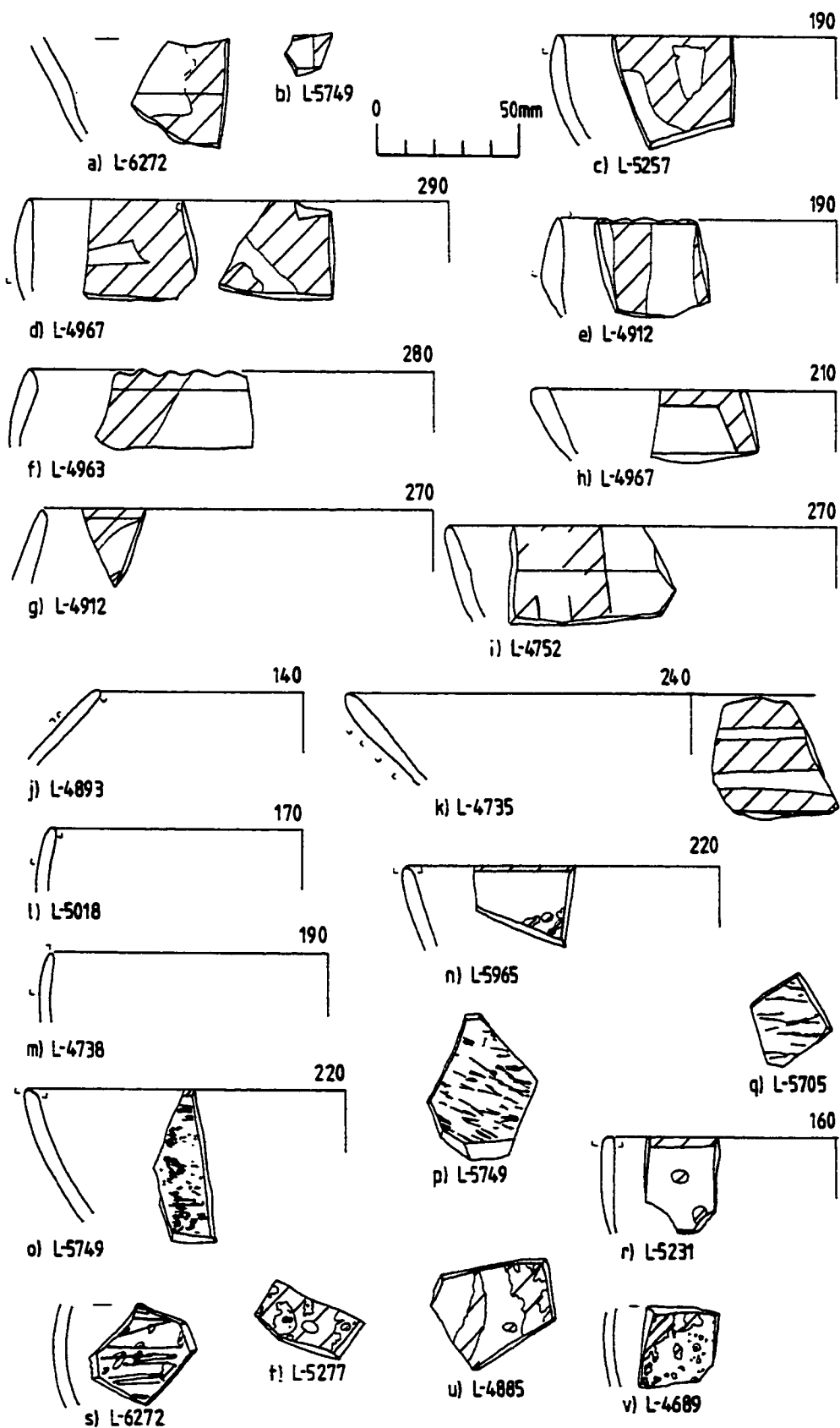


Figure 110. Red-painted serving bowls. Banded interiors of Phases II (a,b), III E (c-h) and III L (i); banded exteriors of Phase III L (j,k); banded exterior rims of Phases III E (l) and III L (m); spot paint of Phases II (n, s), III E (o-r,t) and III L (u,v).

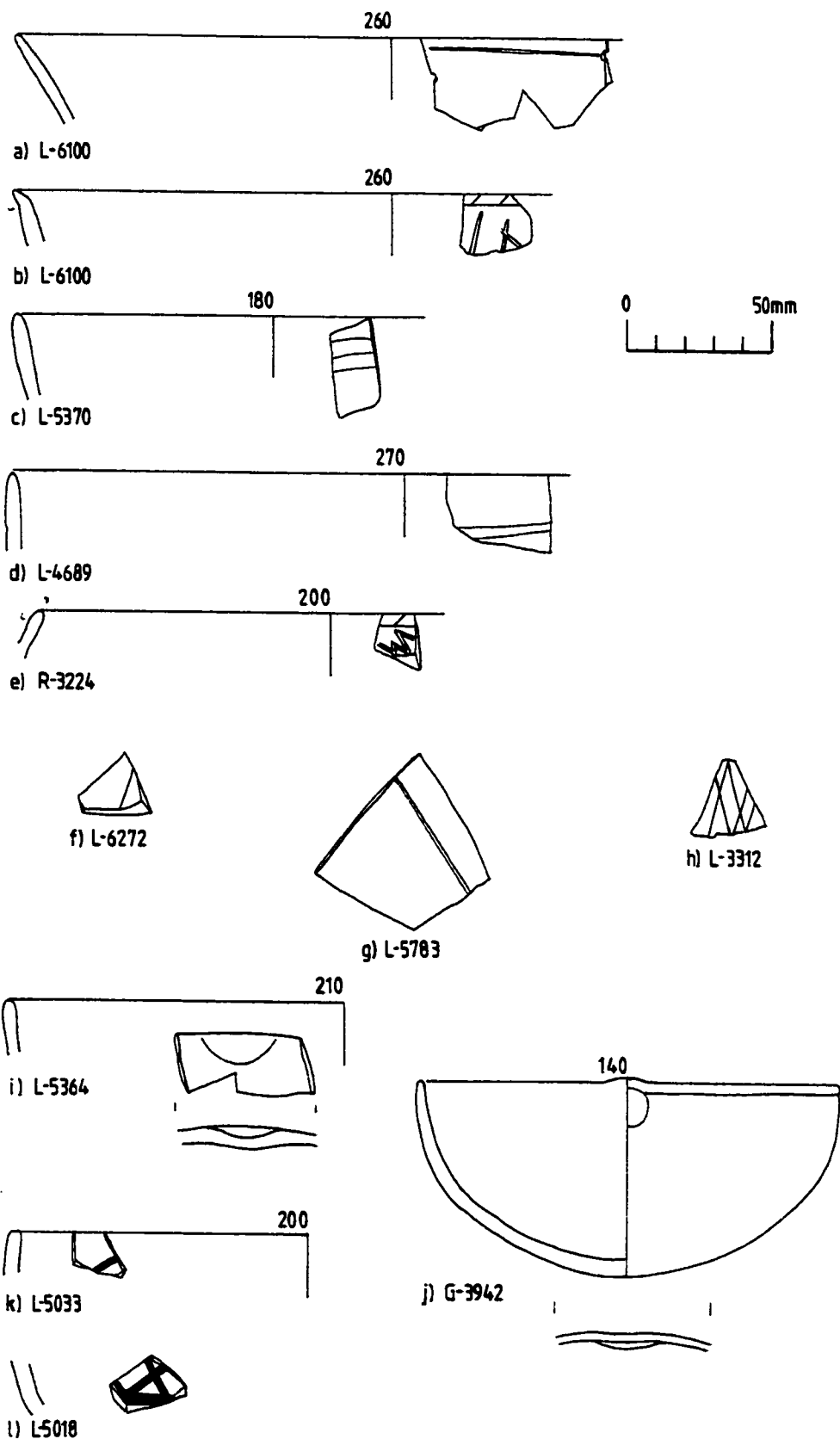


Figure 111. Miscellaneous decorated serving bowls. Exterior incision of Phases II (a,b), III E (c) and III L (d,e); interior incision of Phases II (f), III E (g) and III L (h); punched rims of Phases III E (i) and III L (j); interior line burnish of Phase III E (k,l).

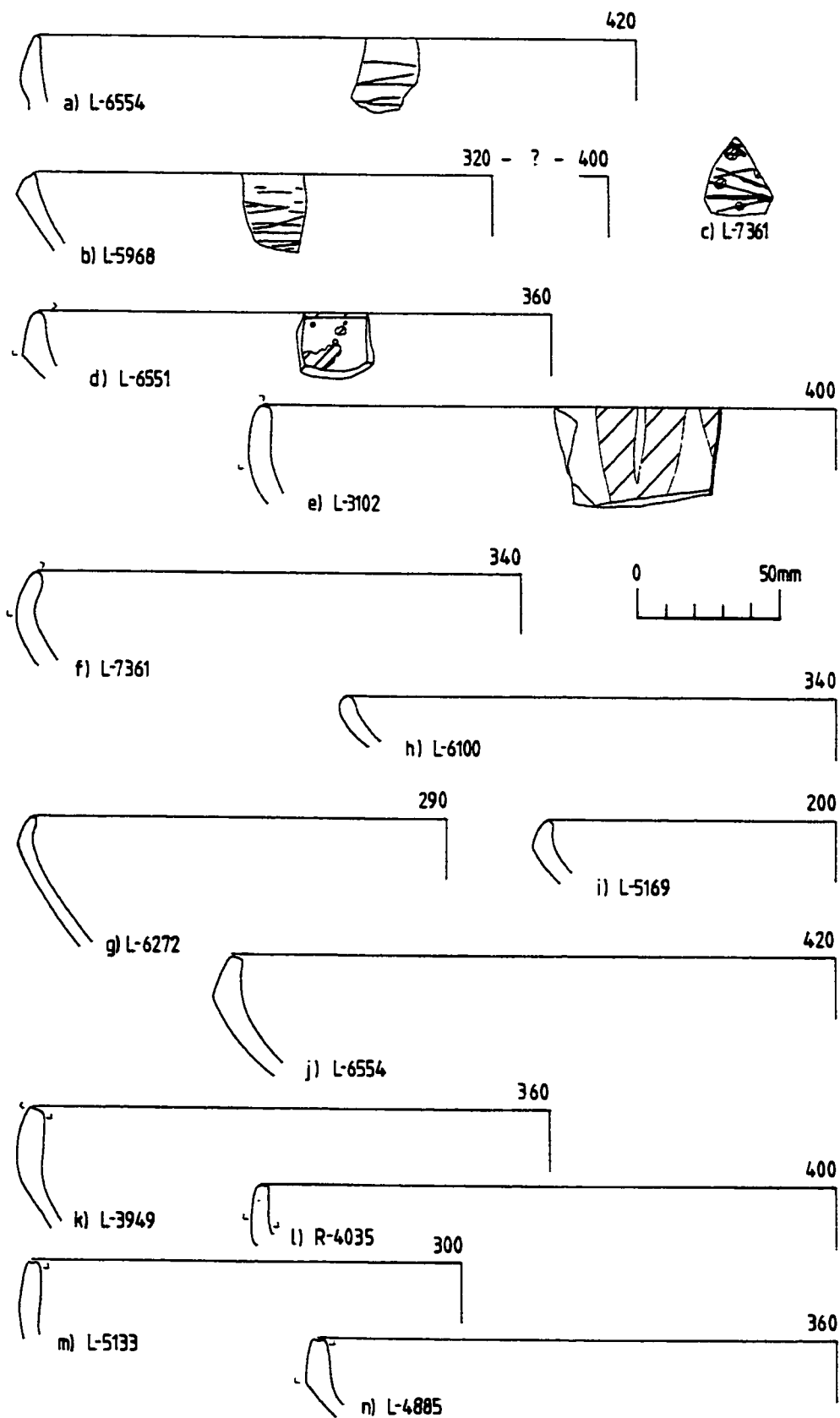


Figure 112. Widebowls. Early Tradition (a-c) and Main Tradition (d-n). Phase I rim (d); Phase IIIIL rim (e); different treatment of lip and rim of Phases I (f,j) II (g,h), IIIE (i,m) and IIIIL (k,l,n).

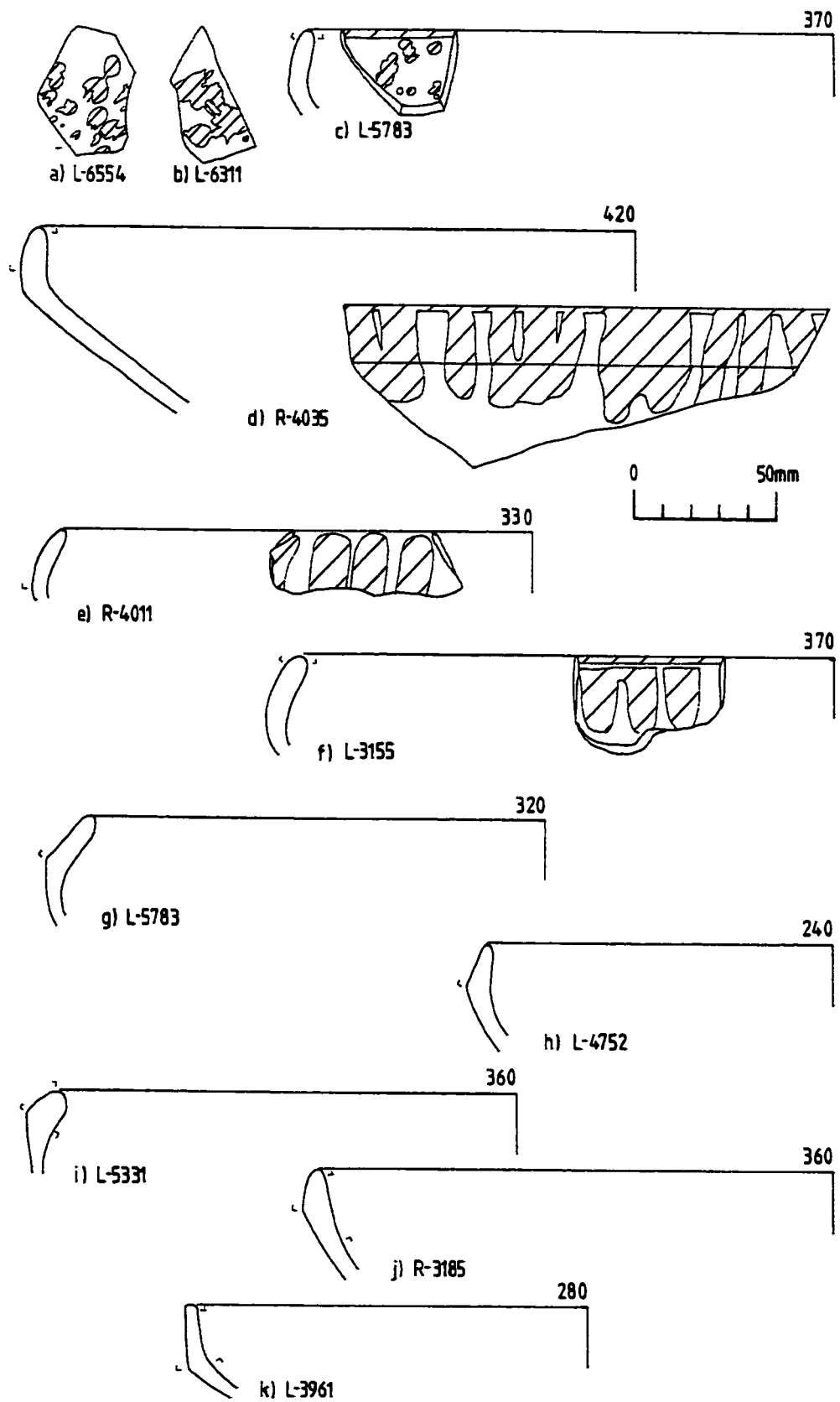


Figure 113. Widebowls (cont.). Decorative designs: red-spot paint (a-c); finger strokes of Phase IIIL (d-f); slipped interiors (g,h); part-slipped interiors (i-k).

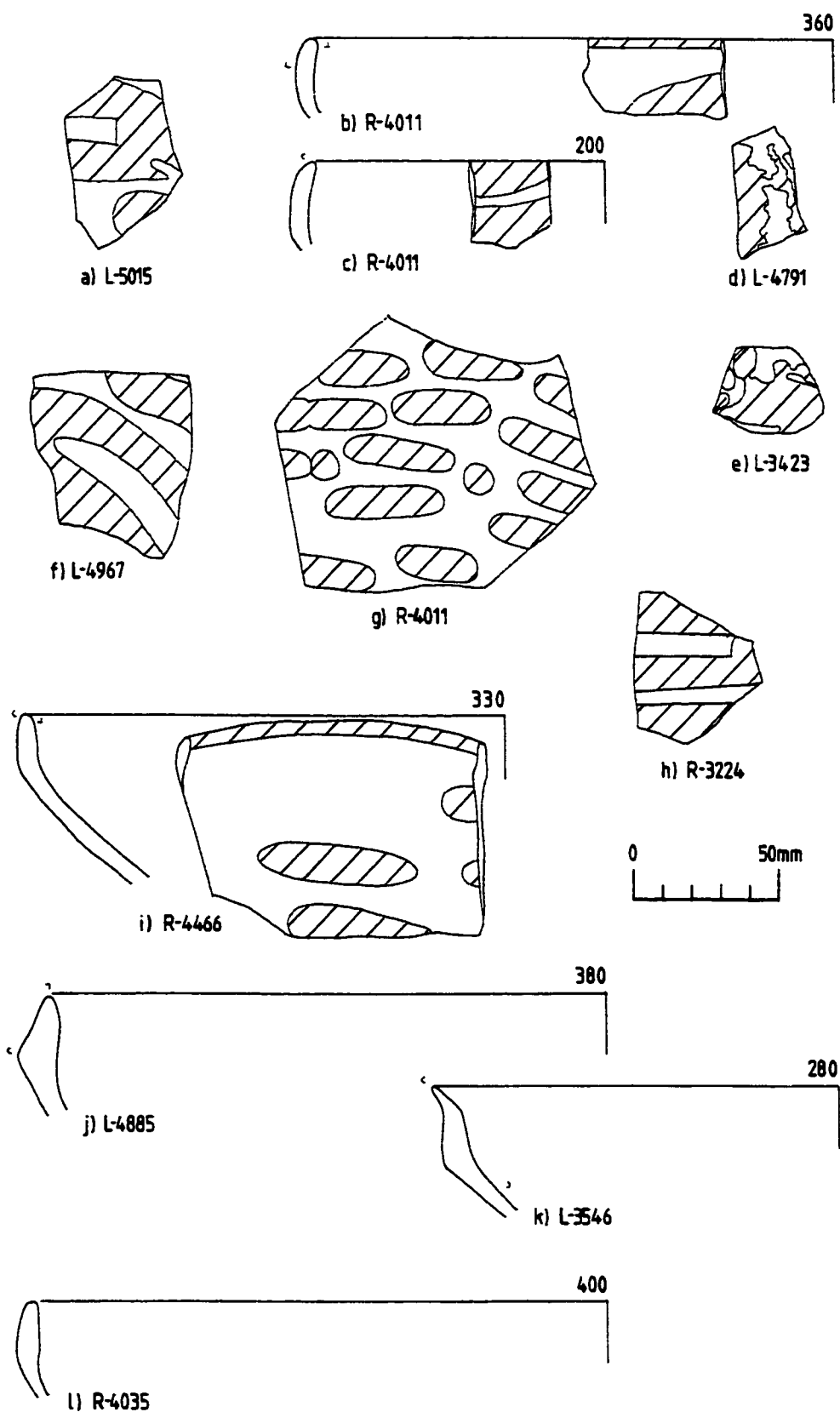


Figure 114. Widebowls (cont). Decorative designs: irregular bands (a-c); irregular patches (d,e); finger strokes on imported bowls (f-i). Odd rims (j-l), including one import (j - cf. Figures 115g and 116f).

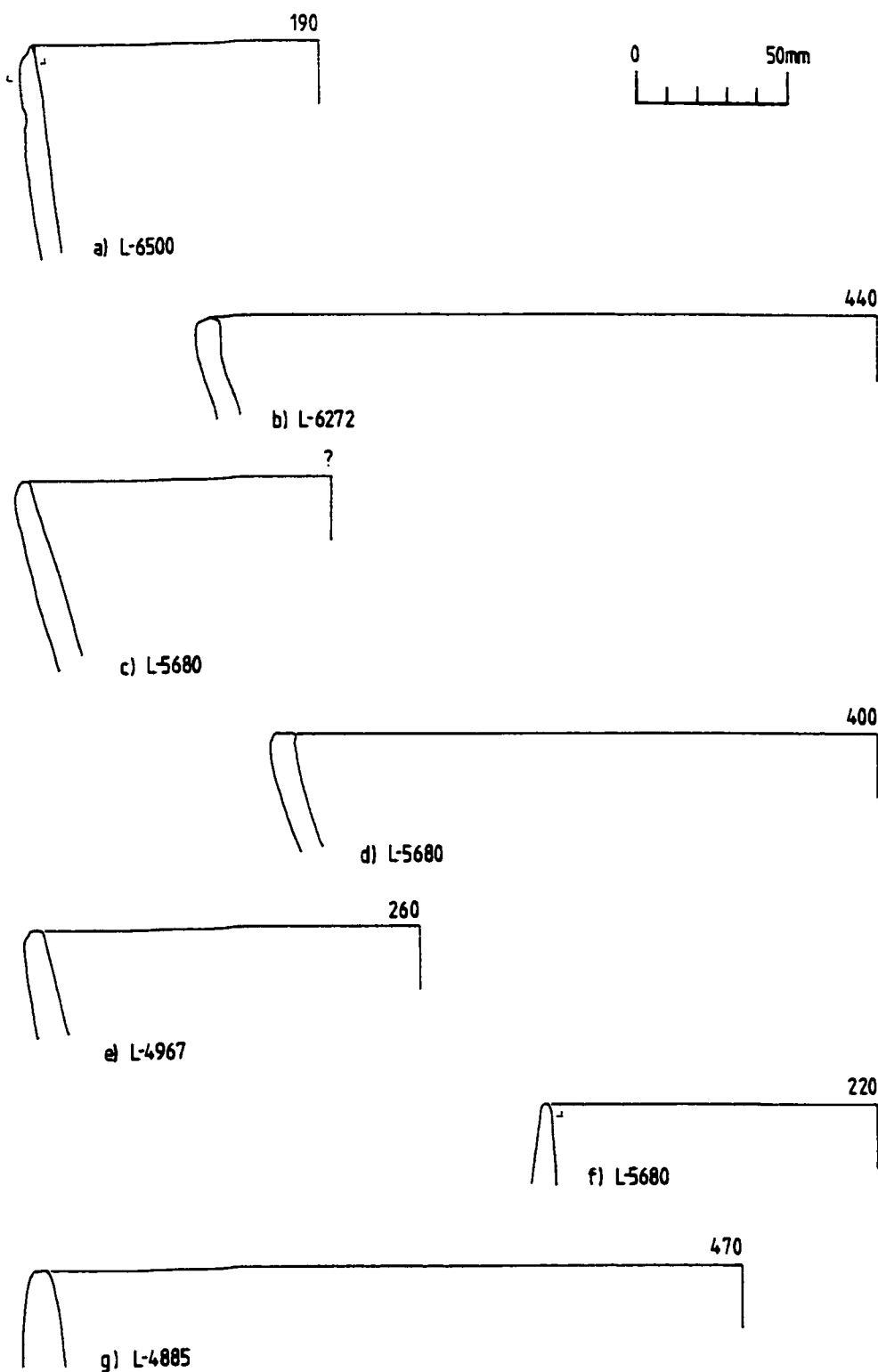


Figure 115. Wide-walled bowls. Upright walls of Phases II (a,b), IIIIE (c-f) and IIIL (g).

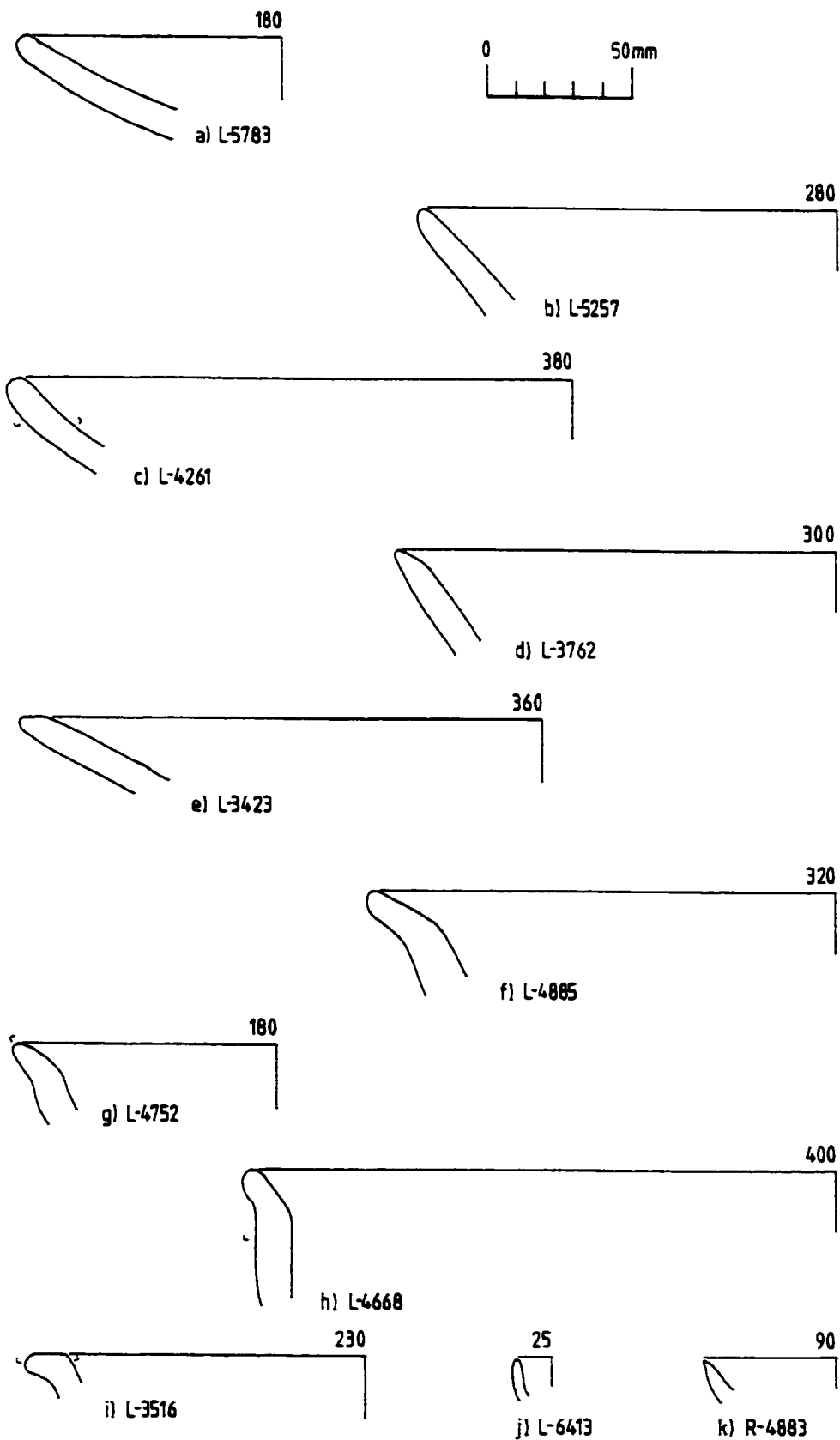
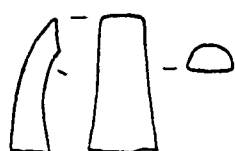


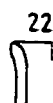
Figure 116. Wide-walled bowls (cont.) and miniature bowls. Shallow wide-walled bowls of Phases IIIIE (a,b) and IIIL (c-e); wide-walled bowls with everted lips of Phase IIIL (f-i); miniature bowls of Phases II (j) and IIIL (k).



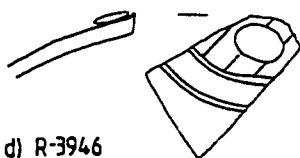
a) PH-6779



b) L-6272



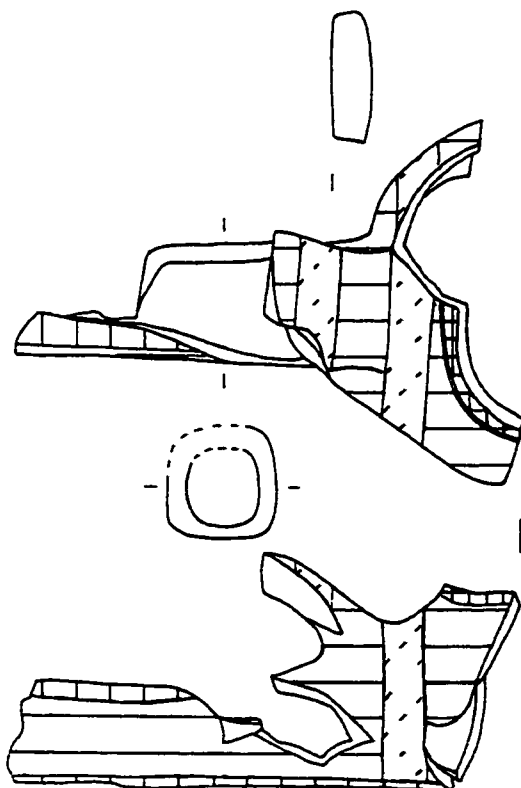
c) L-5541



d) R-3946



e) R-4035



polished  
brown



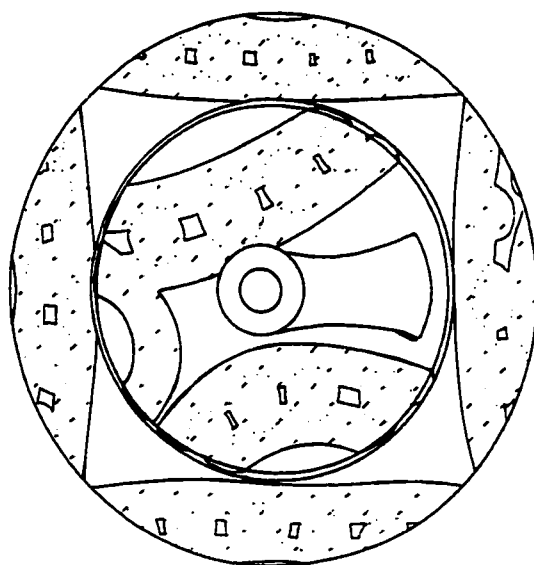
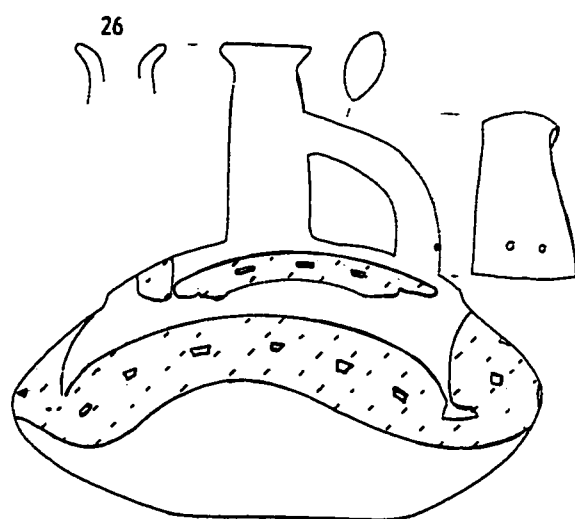
wiped  
grey



green

Figure 117. Bottles. Phase I handle (a); Phase II spout rim (b); Phase IIIIE spout rim (c); Phase IIIIL chamber fragment (d); part of a Phase IIIIL double-chambered bottle (e). b,d and e are imports.

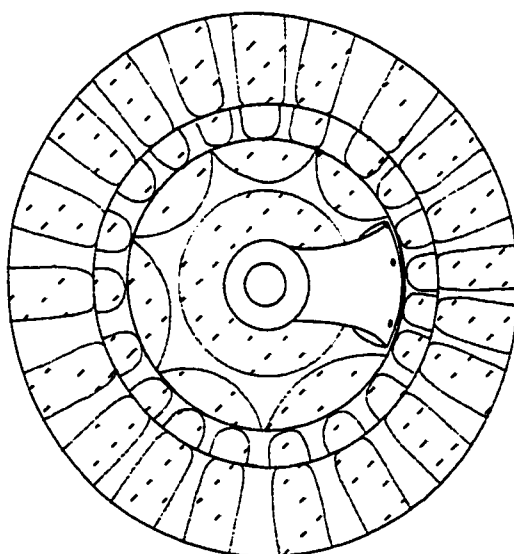
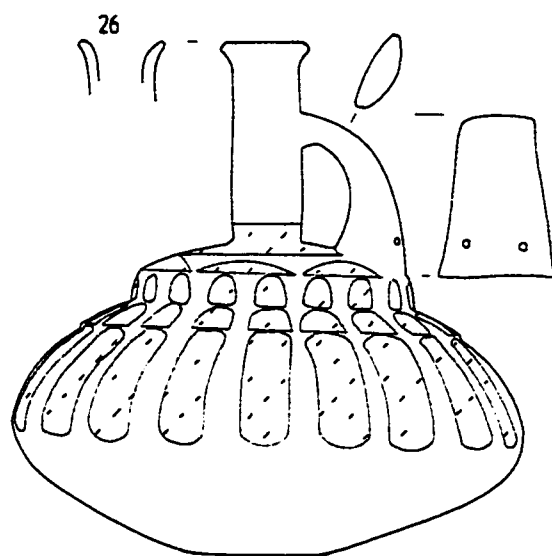




G-4471



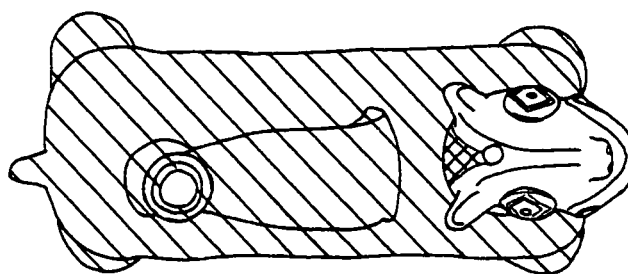
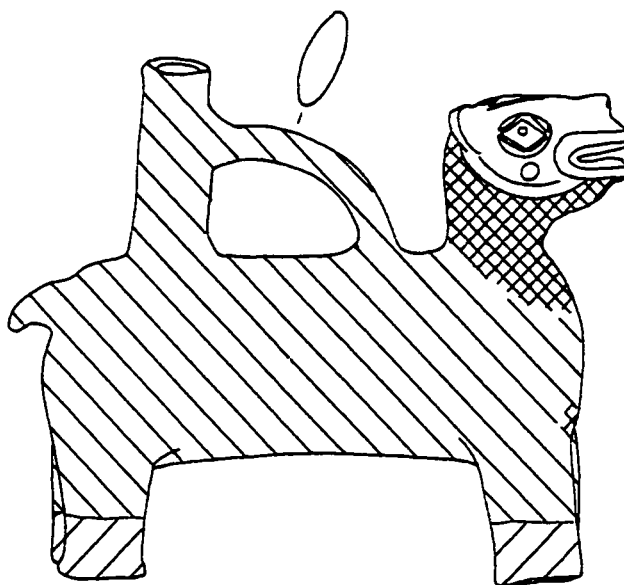
Figure 118. Bottles (cont.). Phase IIIL  
single-chambered. strap-handled whistling bottle.



G-3642



Figure 119. Bottles (cont.). Phase III L  
single-chambered, strap-handled whistling bottle.



G-3302



yellow



light brownish grey



Figure 120. Bottles (cont.). Phase IIIL  
whistling bottle in form of a dog.

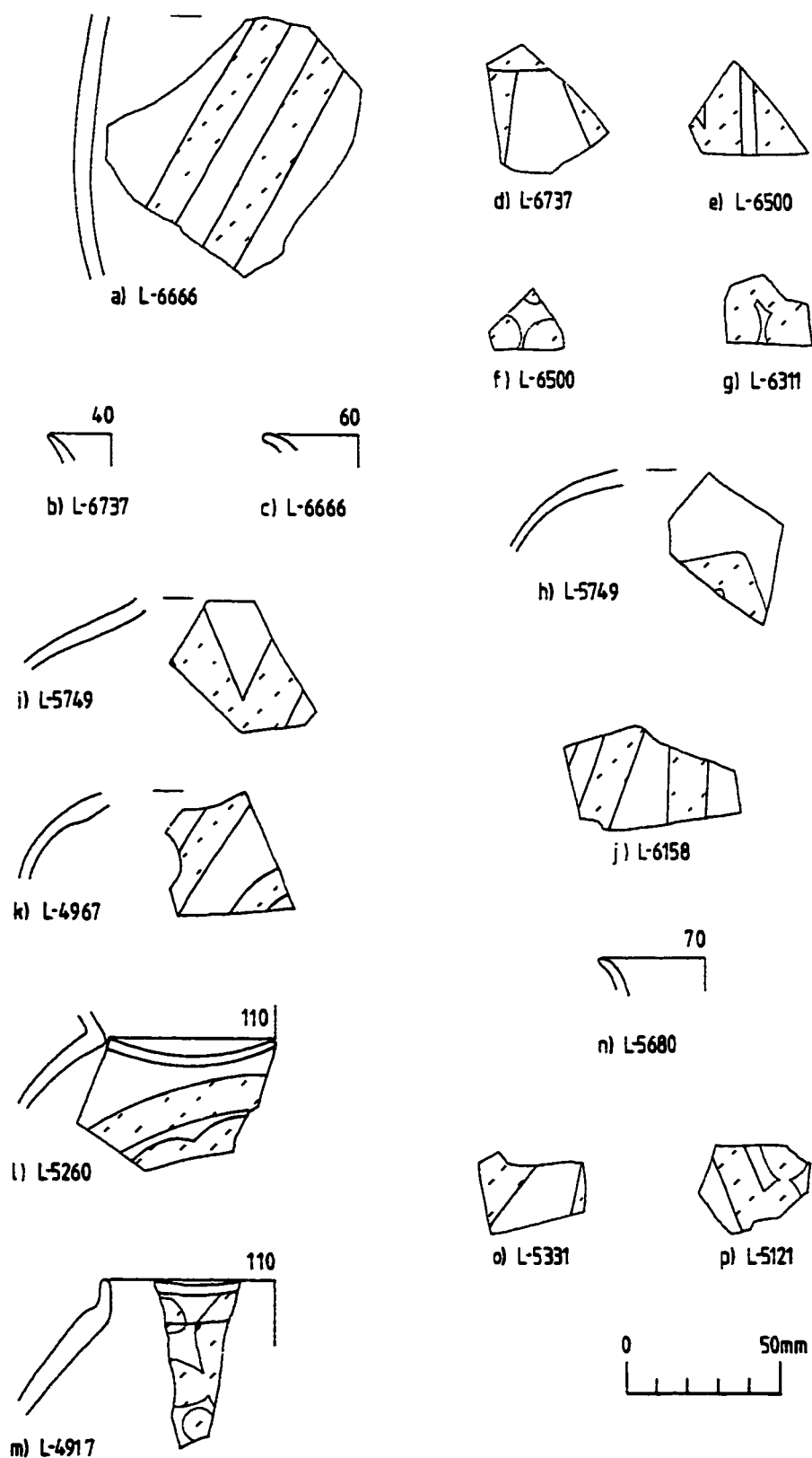


Figure 121. Iridescent-painted jars. Phase I (a-d), Phase II (e-j) and Phase IIIE (k-p). d has zones marked off by fine engraved lines (cf. Figure 133a,b).

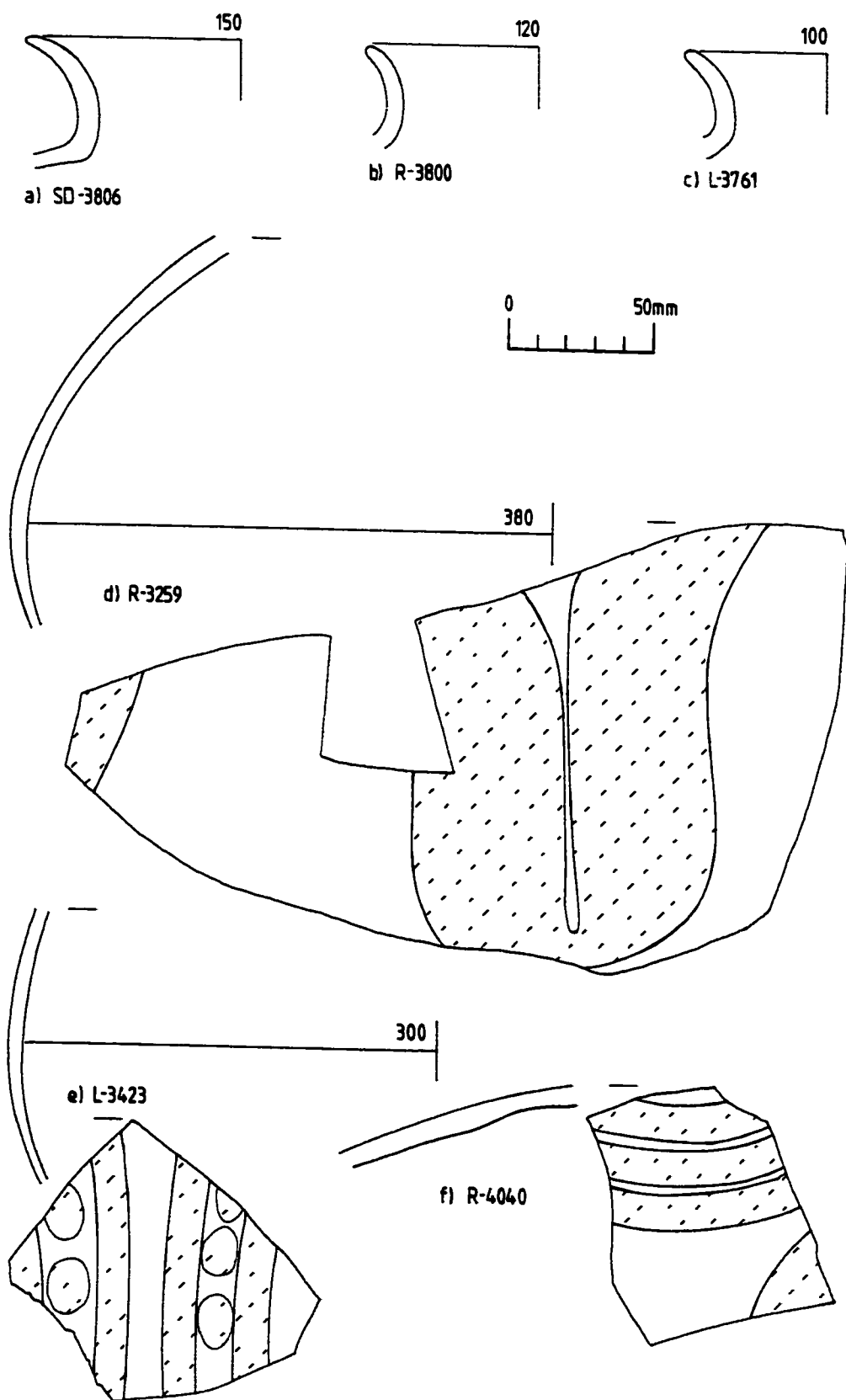


Figure 122. Iridescent-painted jars (cont.). Phase IIIIL, Form 1.

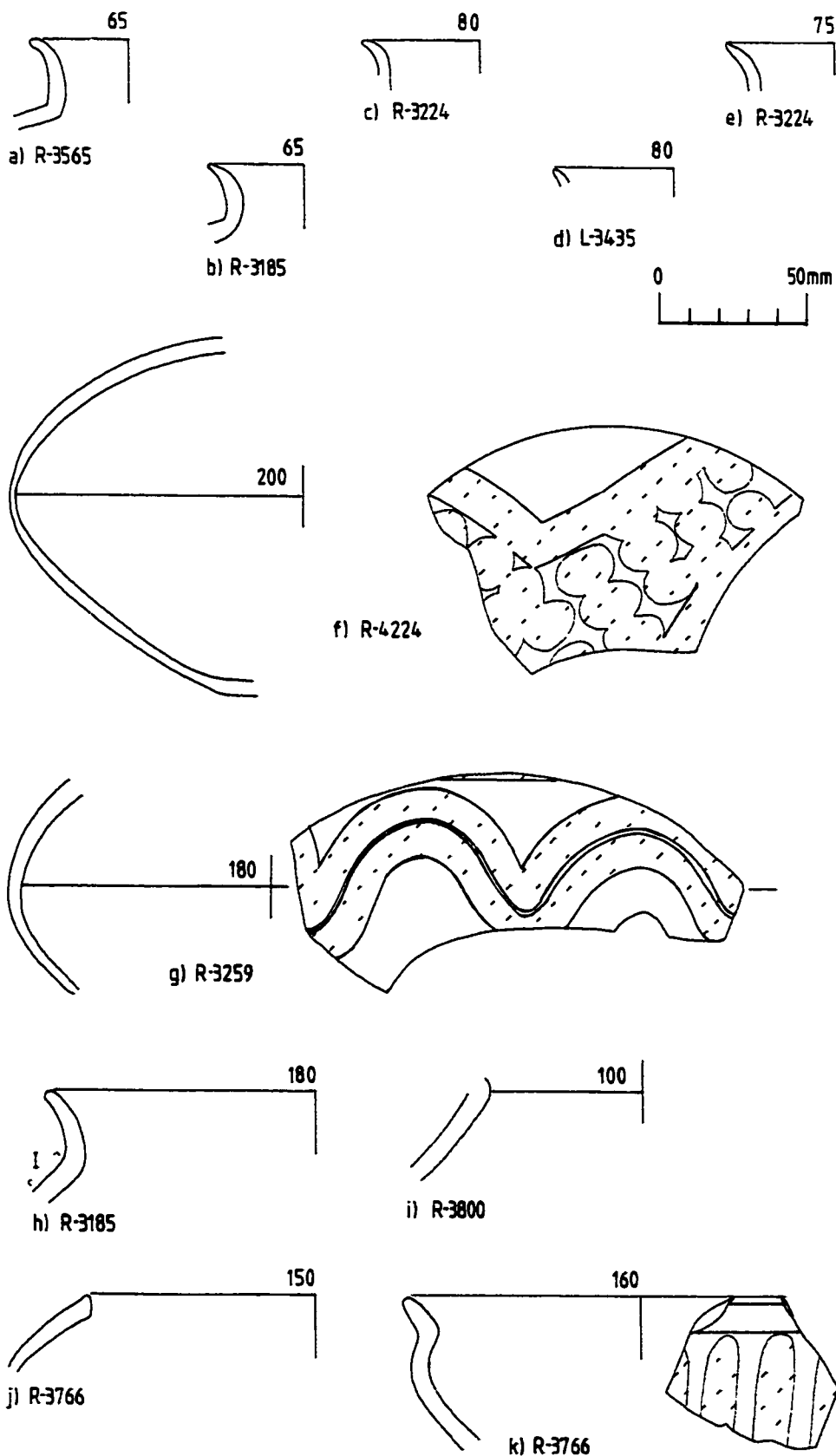


Figure 123. Iridescent-painted jars (cont.). Phase IIIL, Form 2 (a-g), Form 3 (h,i), Form 7 (j), and Form 8 (k).

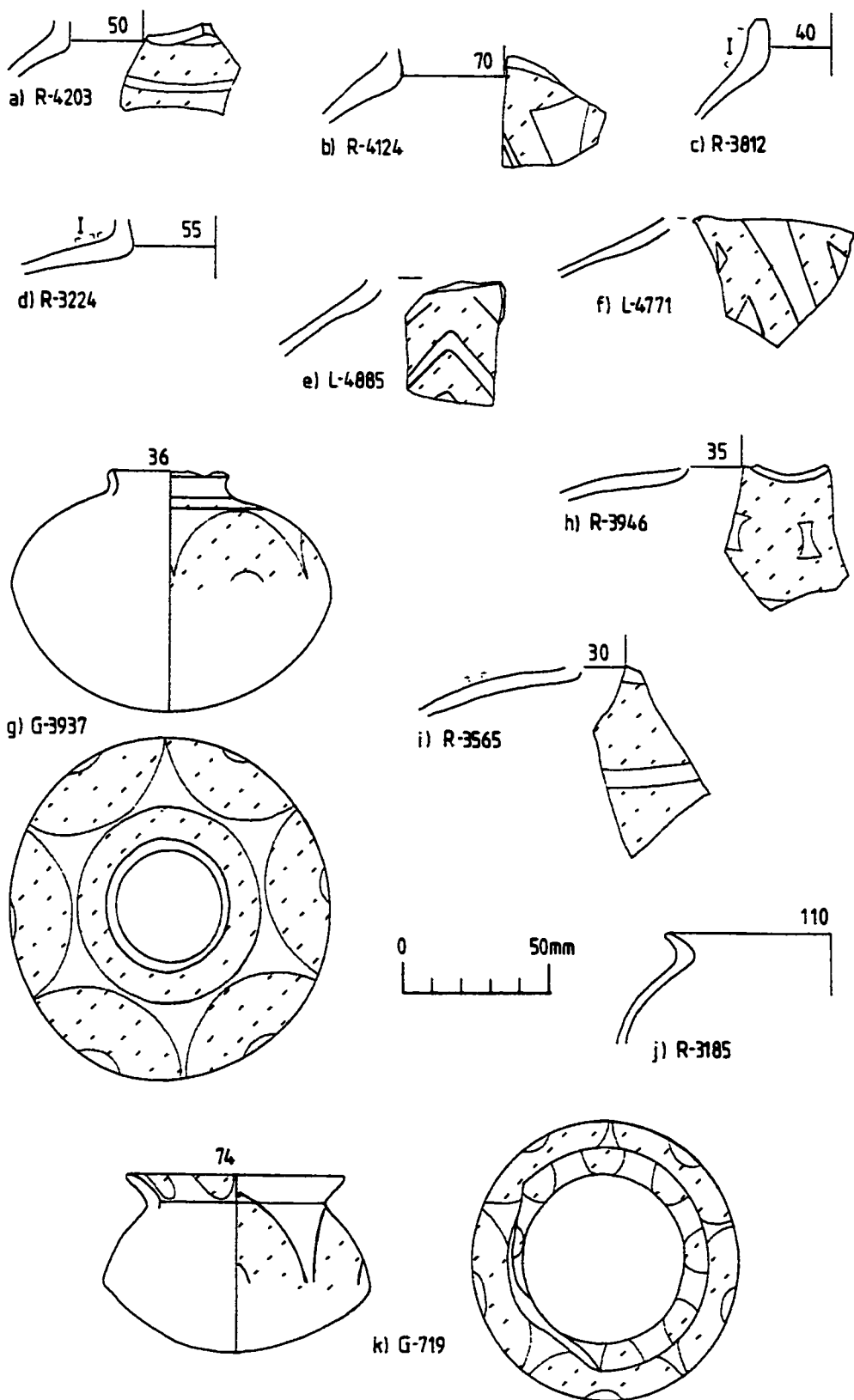


Figure 124. Iridescent-painted jars (cont.). Phase IIIL, Form 4 (a-f), Form 5 (g-i) and Form 6 (j,k). The rim of c has been removed, and the neck edges bevelled (cf. Figure 126v).

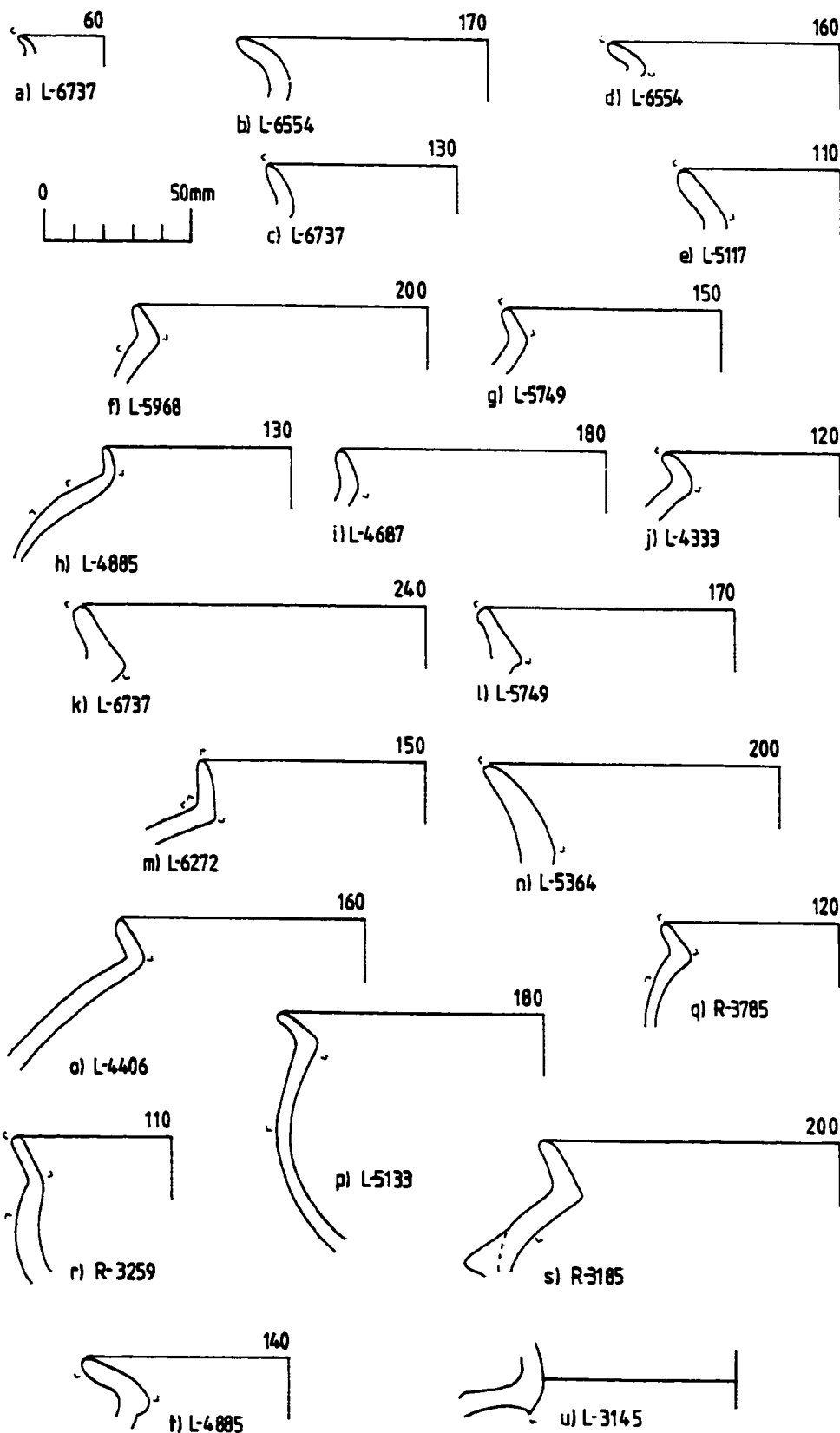


Figure 125. Red-slipped jars. Phase I (a-d,k); Phase II (f,g,l,m); Phase III E (e,n); and Phase III L (h-j,o-u). The last three (s-u) are all unusual, and R-3185 (s) is the only flanged jar in the sample.



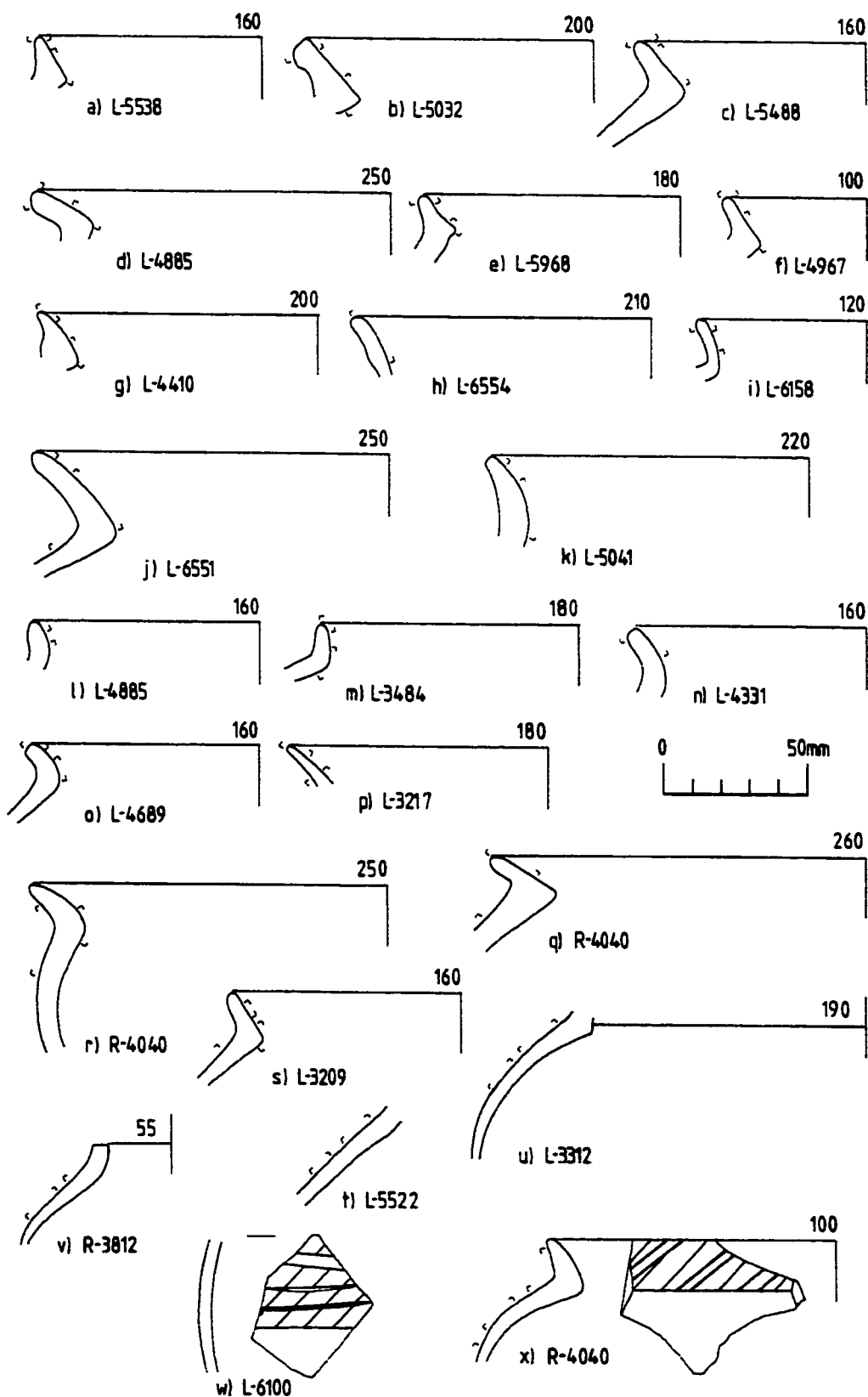


Figure 126. Horizontally banded jars. Phase I (h); Phase II (e,i,j,w); Phase III E (a-c,f,k,t); Phase III L (d,g,l-s,u,v,x). The rim of v has been removed and the neck smoothed flat.

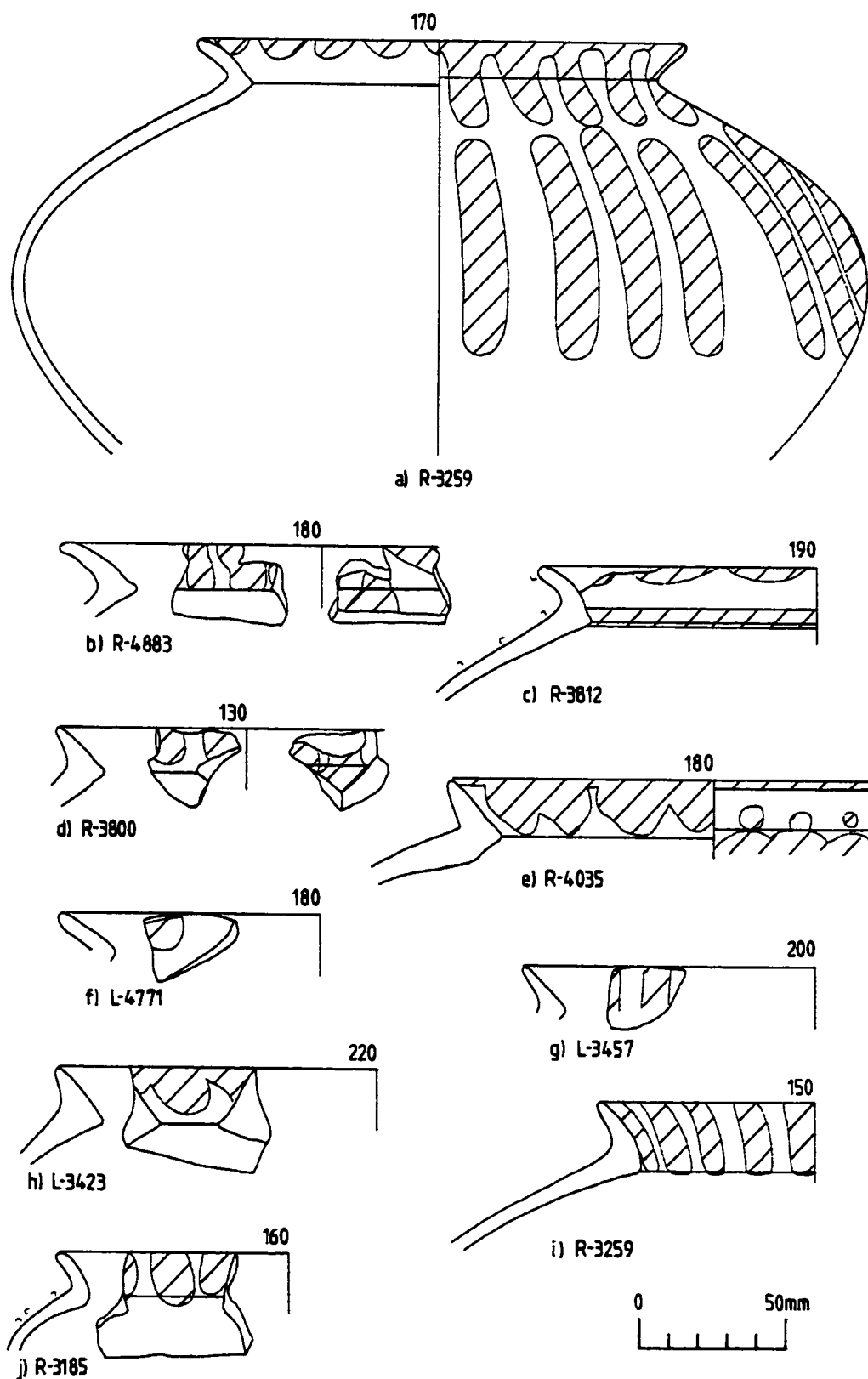


Figure 127. Finger-painted jars. Average form (a); common reverse-S rim (b); variant rim forms (c-j).

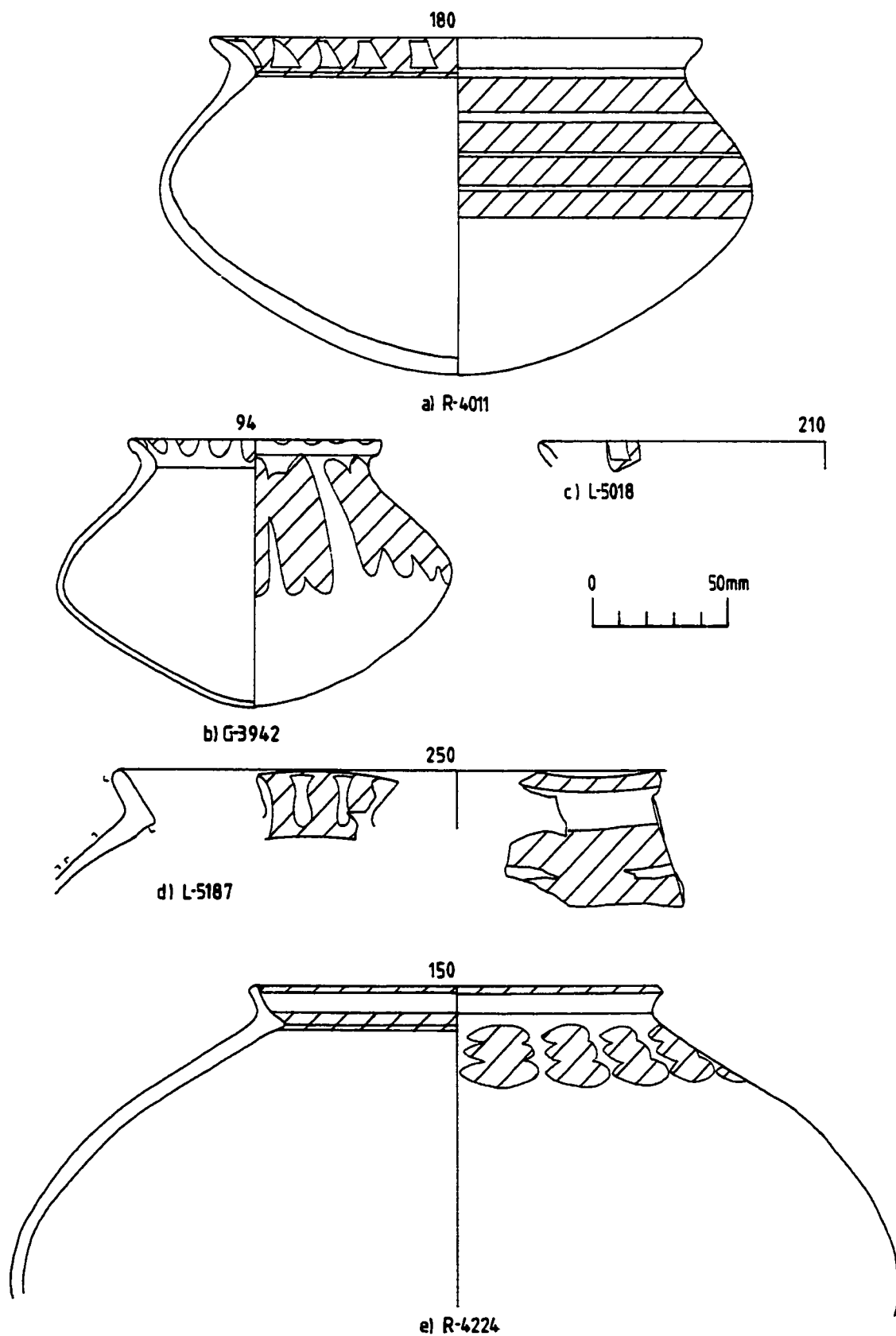


Figure 128. Finger-painted jars (cont.). Variant rim forms. G-3942 (b) has an unusual beaded lip. L-5187 (d) and R-4224 (e) are imports.

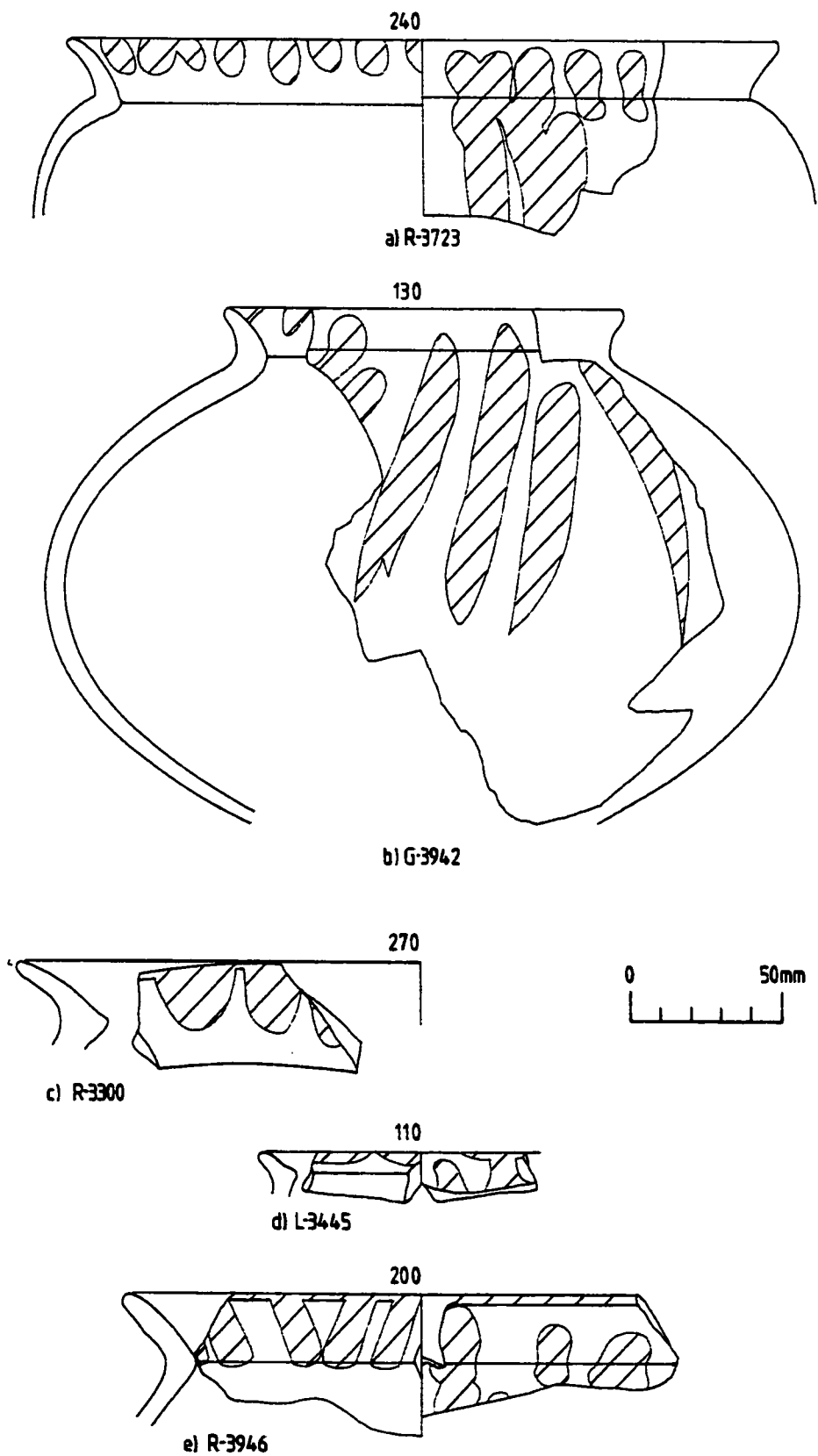


Figure 129. Finger-painted jars (cont.). Most open vessel (a); least squat vessel (b); longest rim (c); lowest lip (d); highest lip (e).

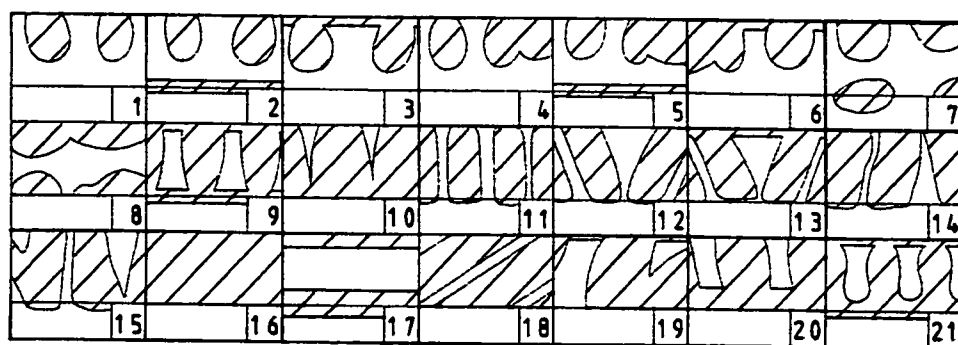


Fig.130

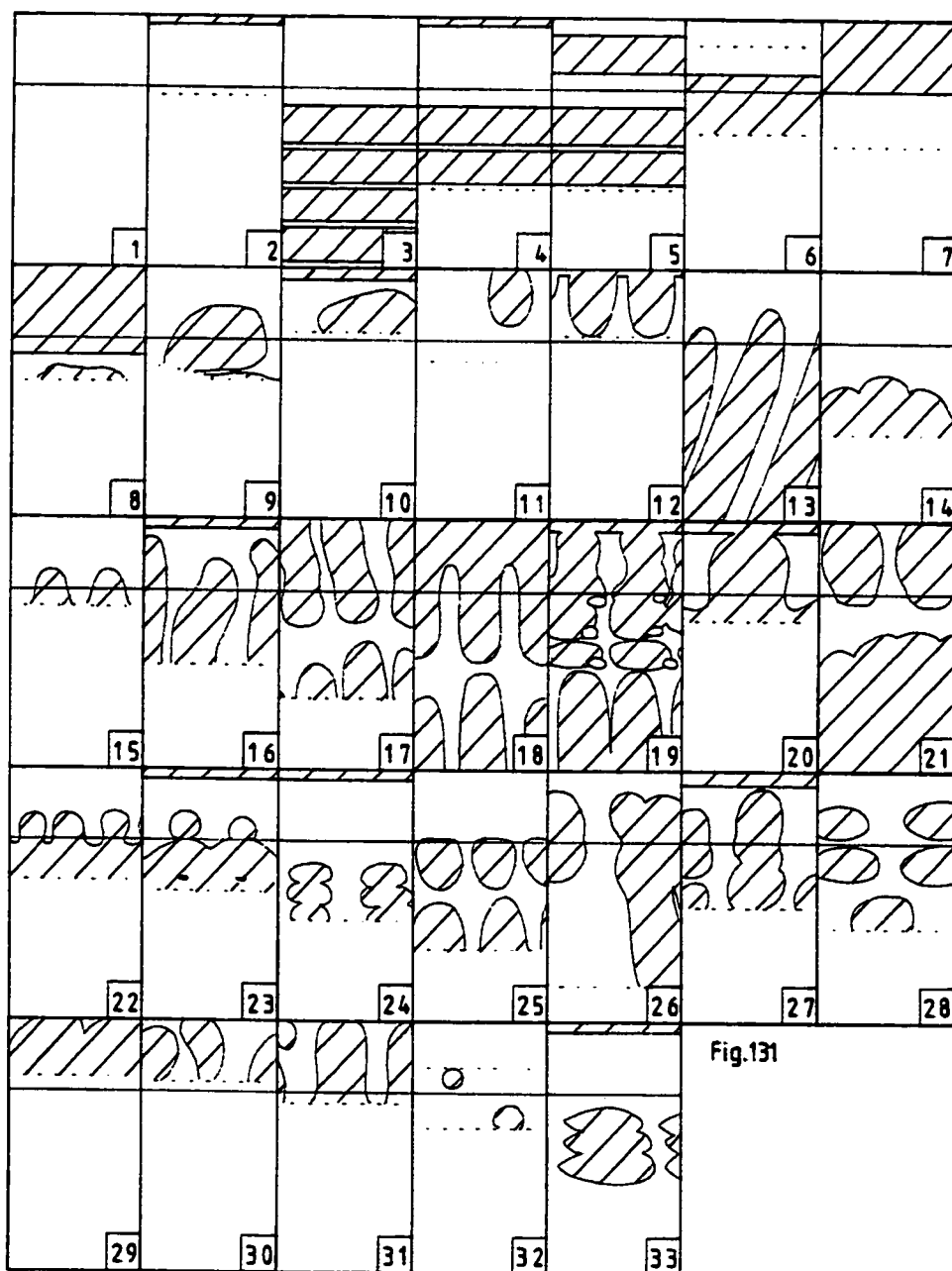


Fig.131

Figures 130 and 131. Finger-painted jars (cont.). Tables of designs found on rim interiors (Figure 130) and vessel exteriors (Figure 131).

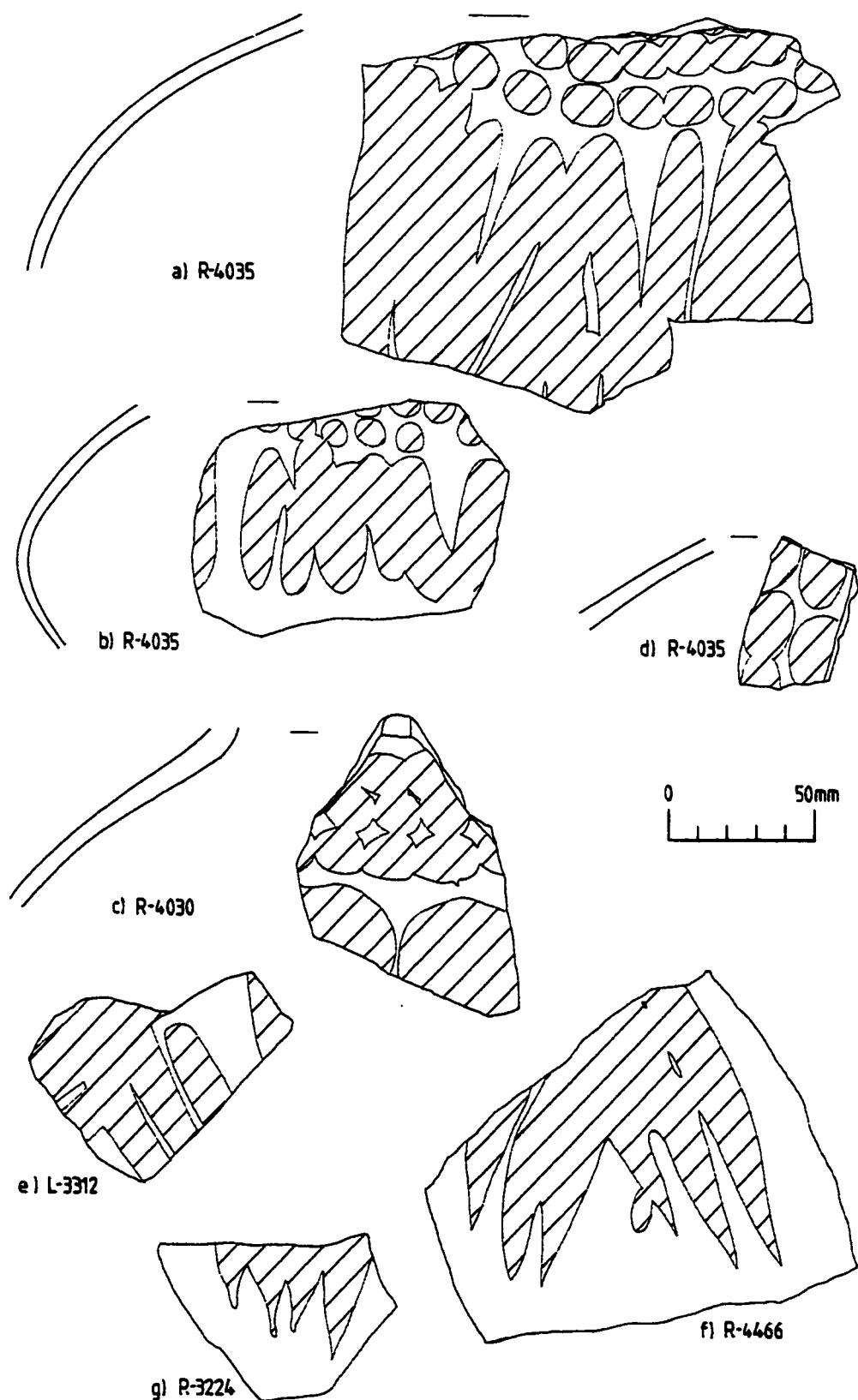


Figure 132. Finger-painted jars (cont.). Body sherds showing other variant combinations of ovals and long strokes (a-c); upright large ovals (d); crossed groups of long strokes (e,f); and paint dribbles at the end of long strokes (g).

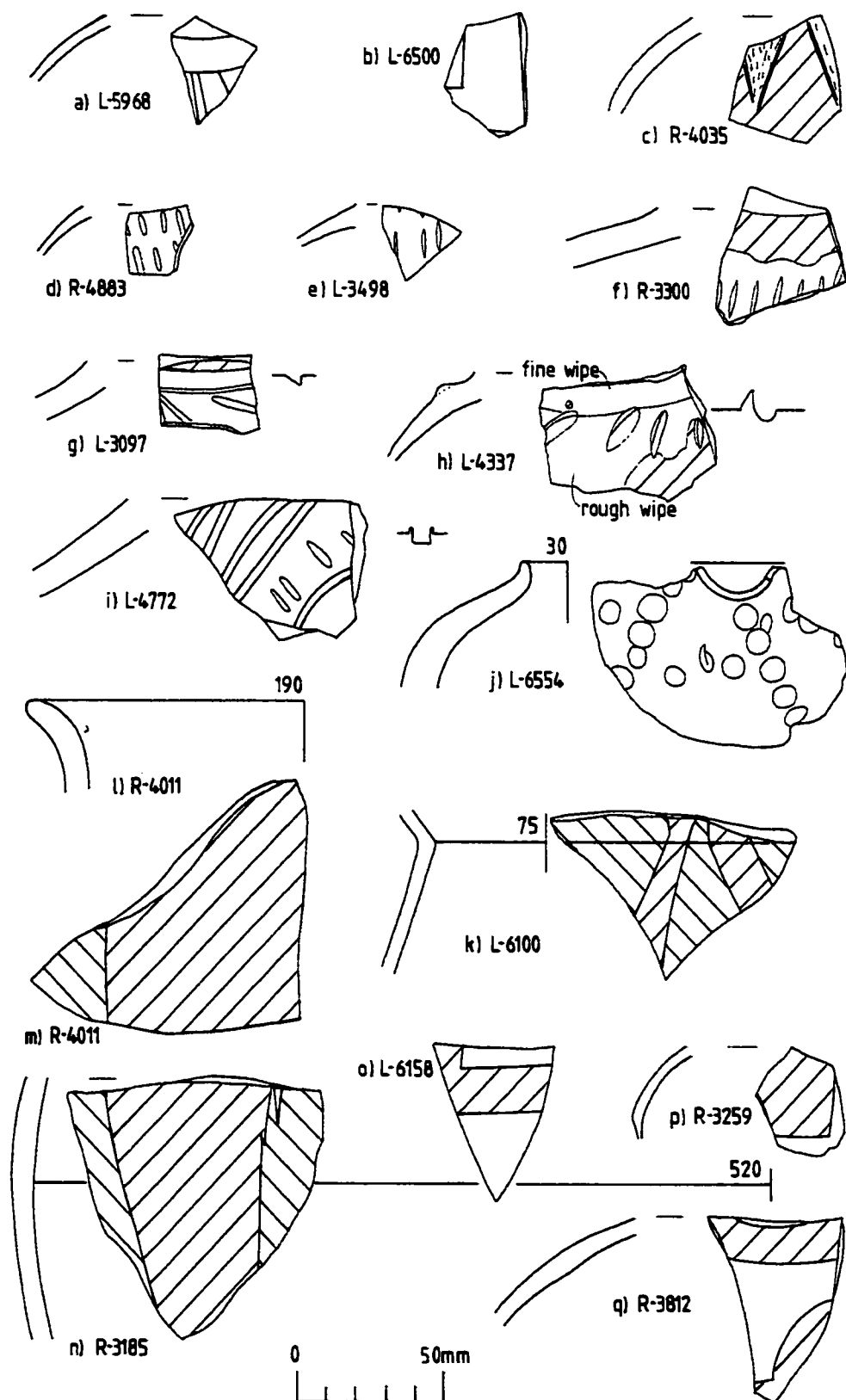


Figure 133. Engraved and incised jars, and miscellaneous decorated jars. Engraved jars of Phase II (a,b); incised jars of Phase IIIL (c-i); finger-pressed jar of Phase I (j); red-on-cream of Phases II (k) and IIIL (l-n); red-on-brown of Phases II (o) and IIIL (p,q).

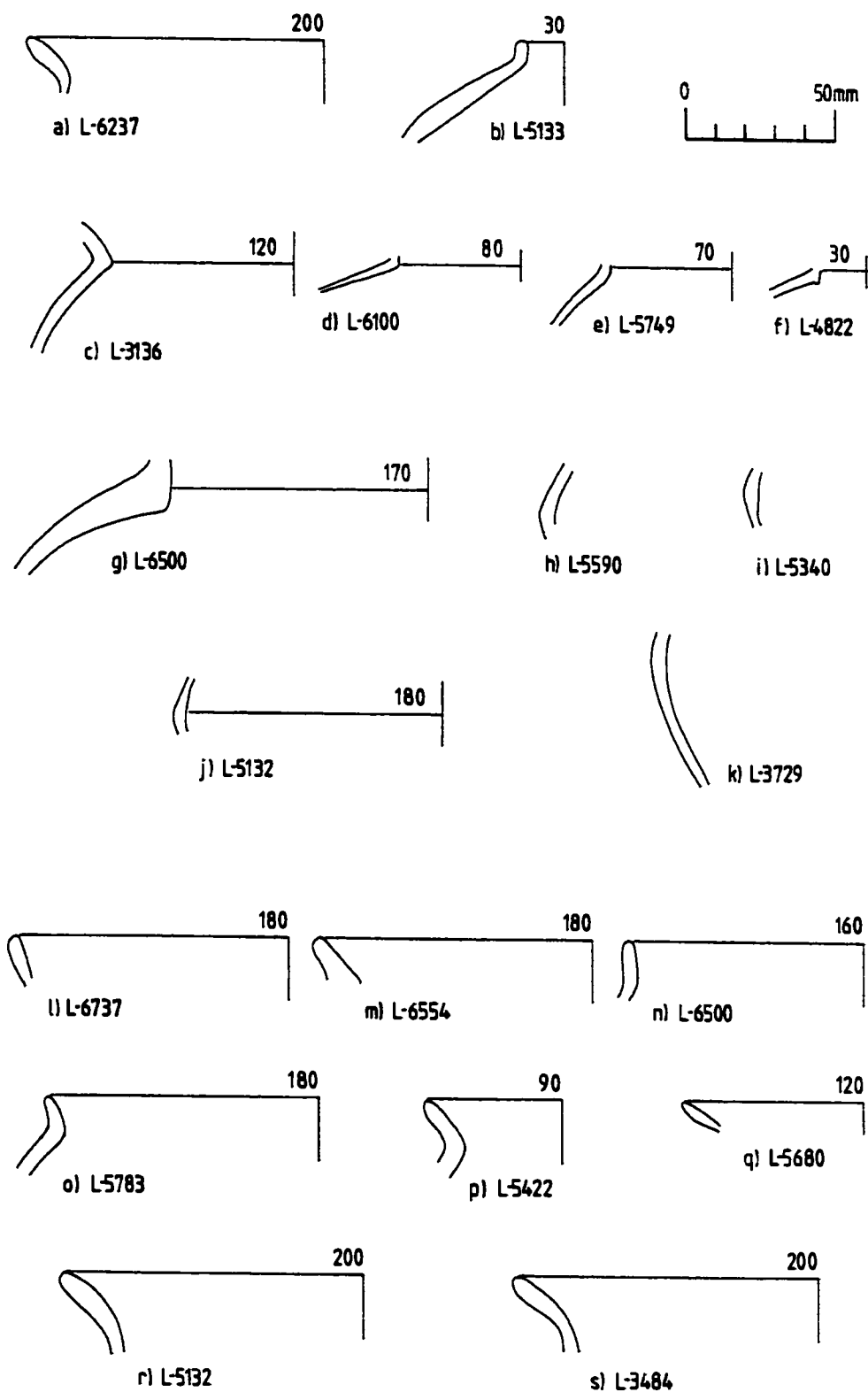


Figure 134. Undecorated jars. Both rim surfaces polished (a-k); rim interior only polished (l-s). Phase I (a,l,m); Phase II (d,e,g,n); Phase III E (b,h-j,o-r); Phase III L (c,f,k,s).



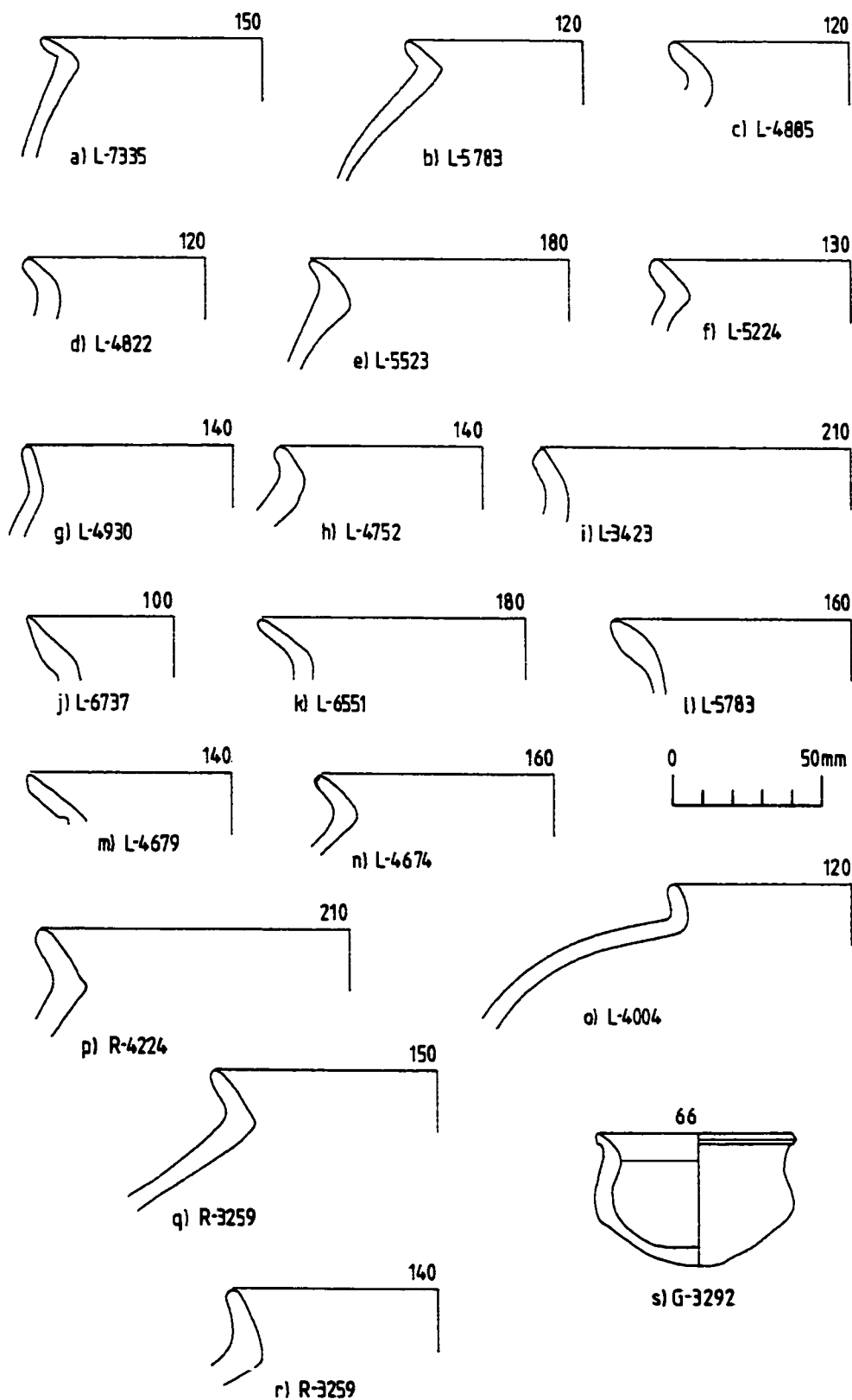


Figure 135. Undecorated jars (cont.). Rim surfaces are both unpolished. Phase I (a,j,k); Phase IIIIE (b,e,f,l); Phase IIIIL (d,g, h-i,m-s).

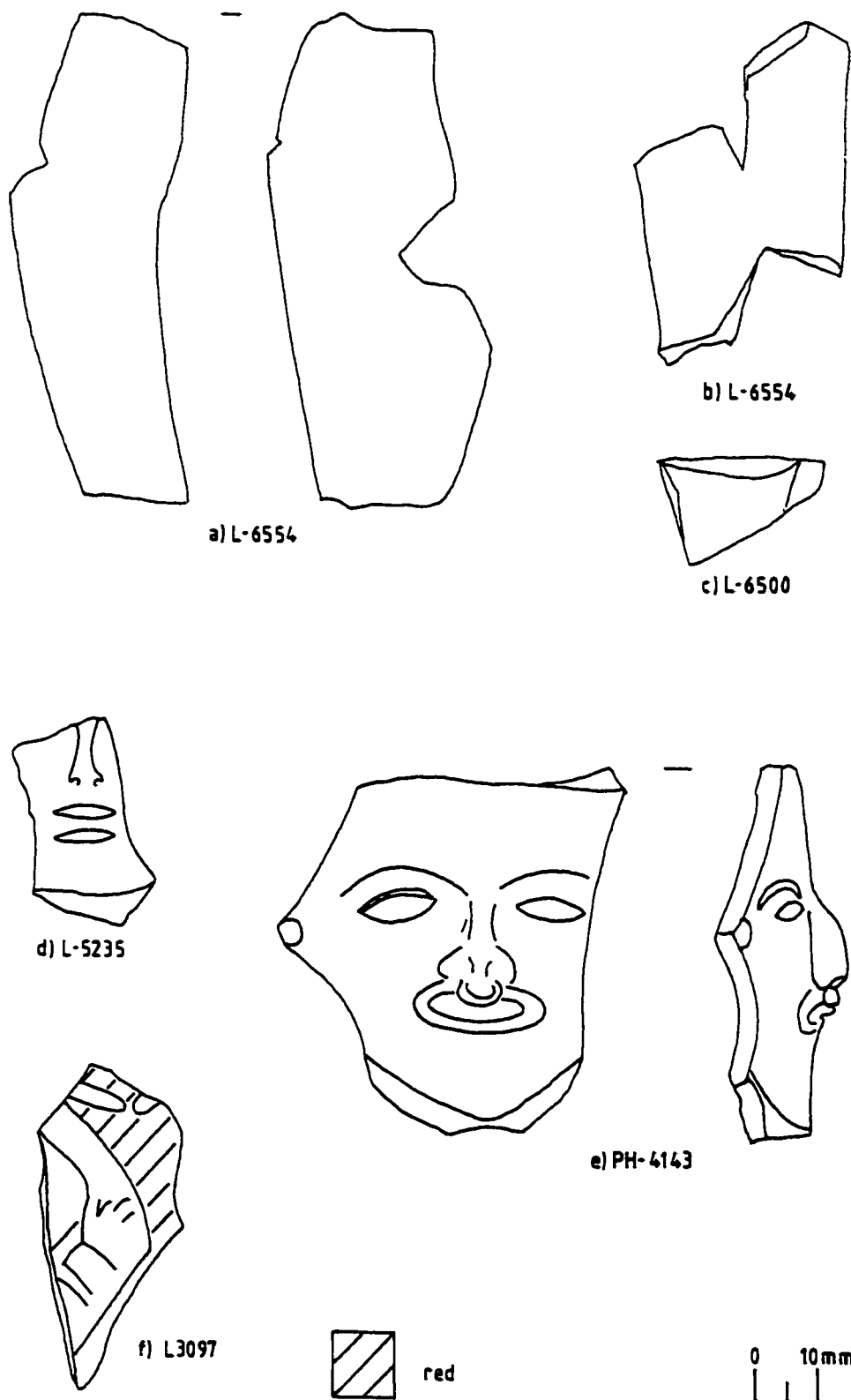


Figure 136. Ceramic figurine fragments of Phases I (a-c), IIIE (d) and IIIL (e,f).

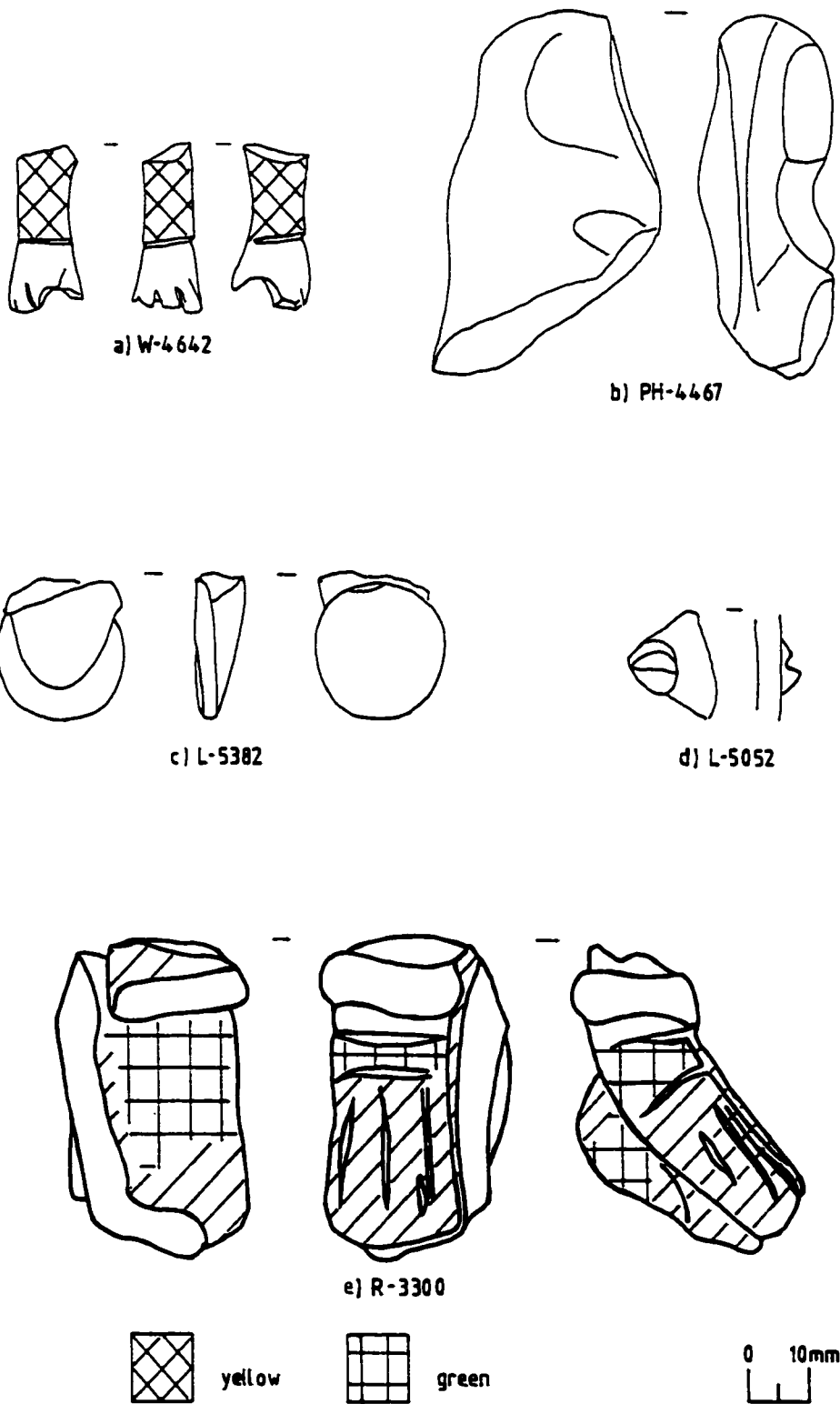


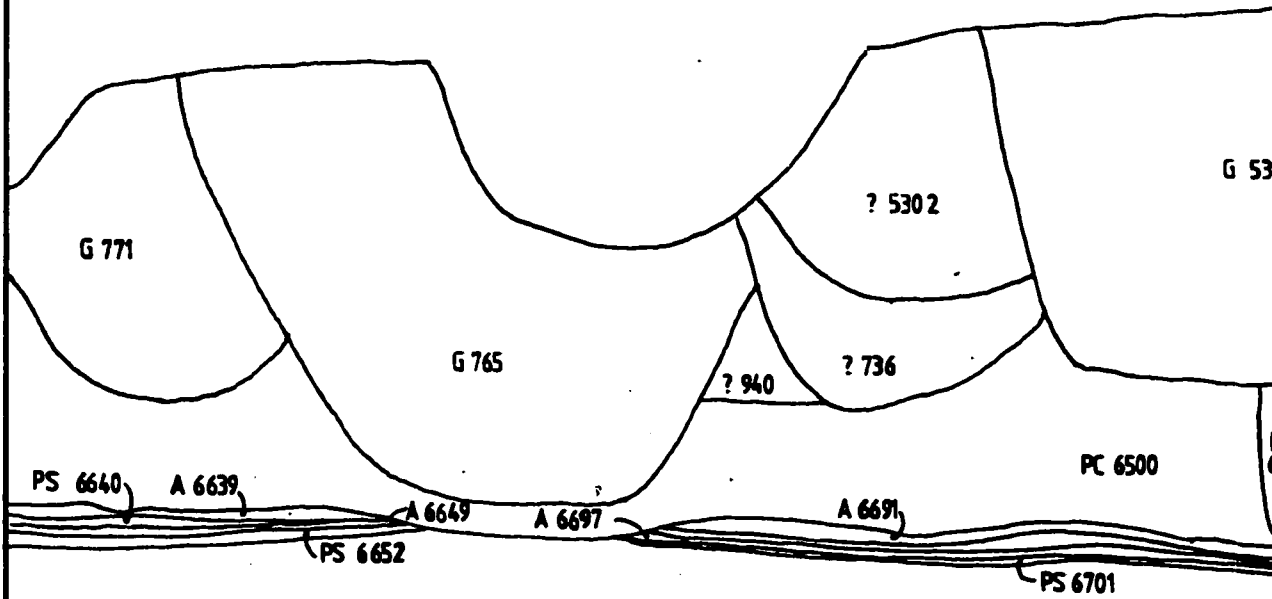
Figure 137. Ceramic figurine fragments of Phases IIIE (c,d) and IIIL (a,b,e)

A	Ash Layer
AP	Ash Pit
F	Fire Pit
FL	Floor
FD	Figurine Deposition
G	Human Burial
LF	Linear Feature
M	Midden Layer
O	Occupation Layer
OH	Open hearth
PC	Platform Cap
PH	Post-hole
PH?	Possible Post-hole
PS	Clay Prepared Surface
R	Rubbish Pit
RP	Rectangular Pit
SD	Structured Artefact Deposition
VA	Possible Volcanic Ash
W	Wall
WA	Layer of Wash
?	Uninterpreted Feature
No letter code	Other/Uninterpreted Layer
*	Material not identified

————— Edge of context

- - - - - Uncertain edge

Figure 138. Key to site sections.



OMJPLP-141B-T3  
SECTION 1

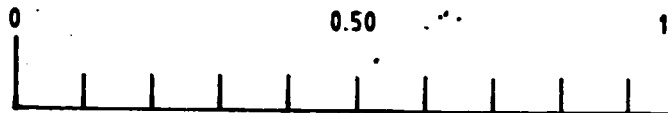
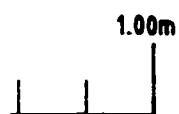
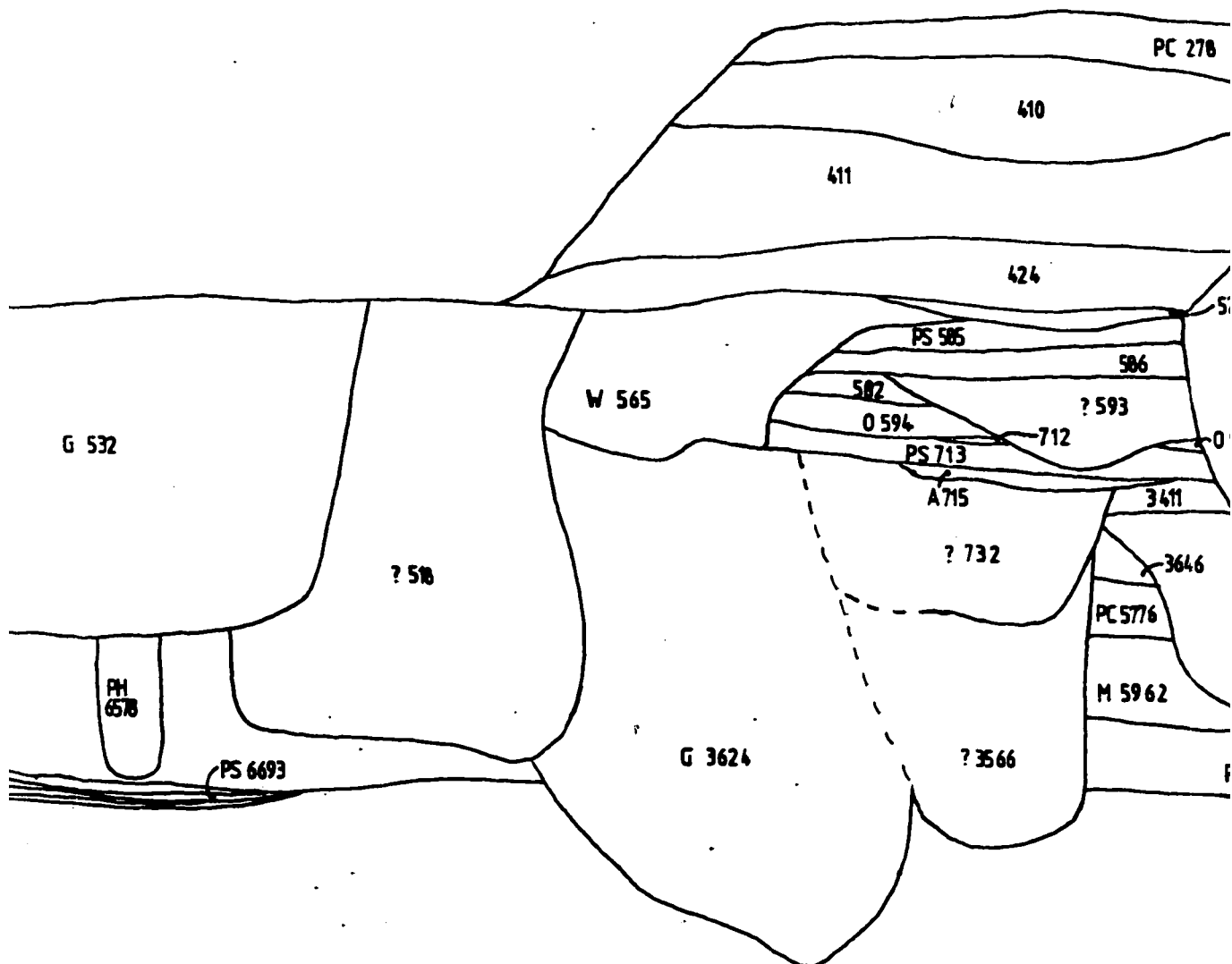


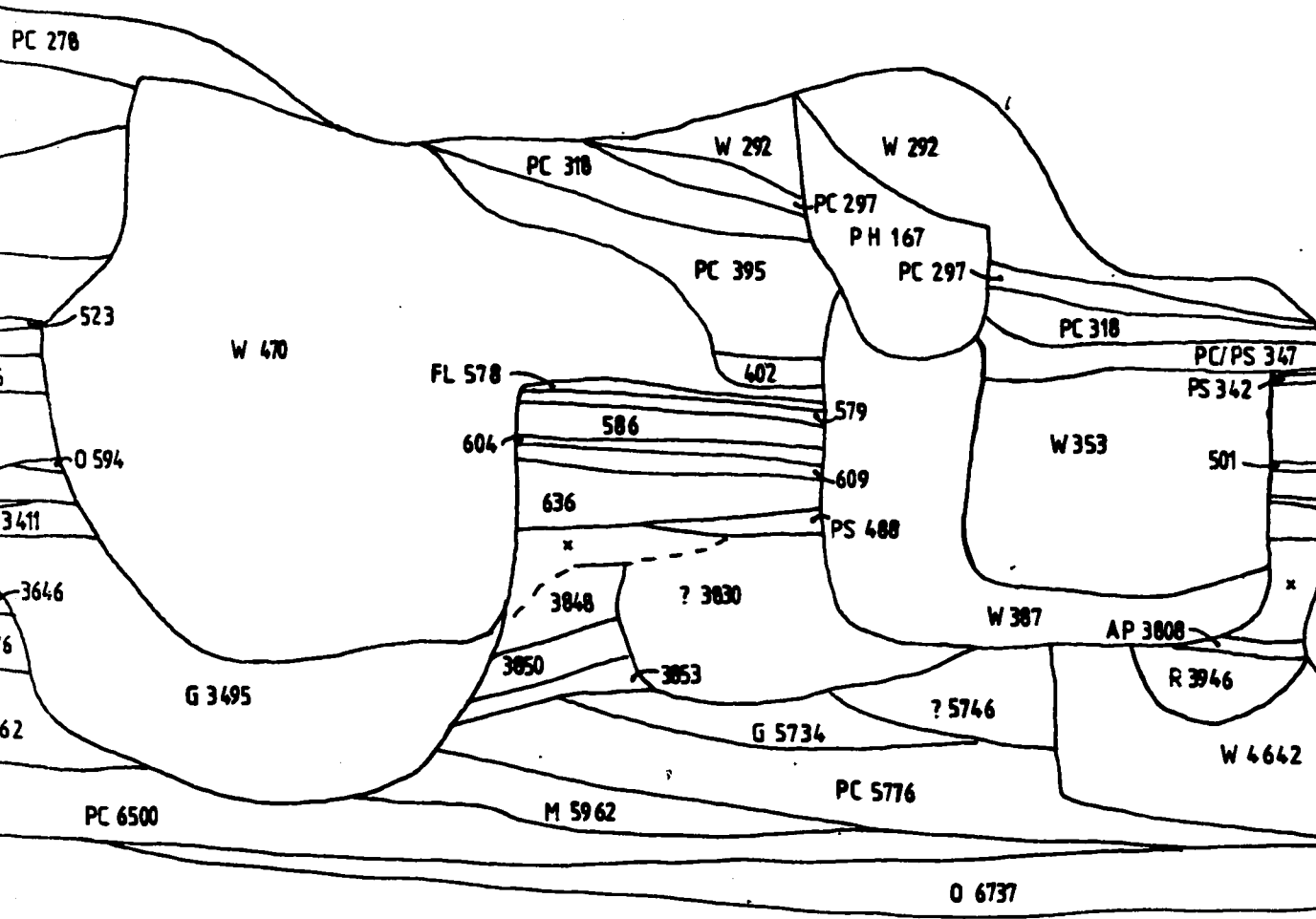
Figure 132 OMJPLP-141B-T3, Section 1.



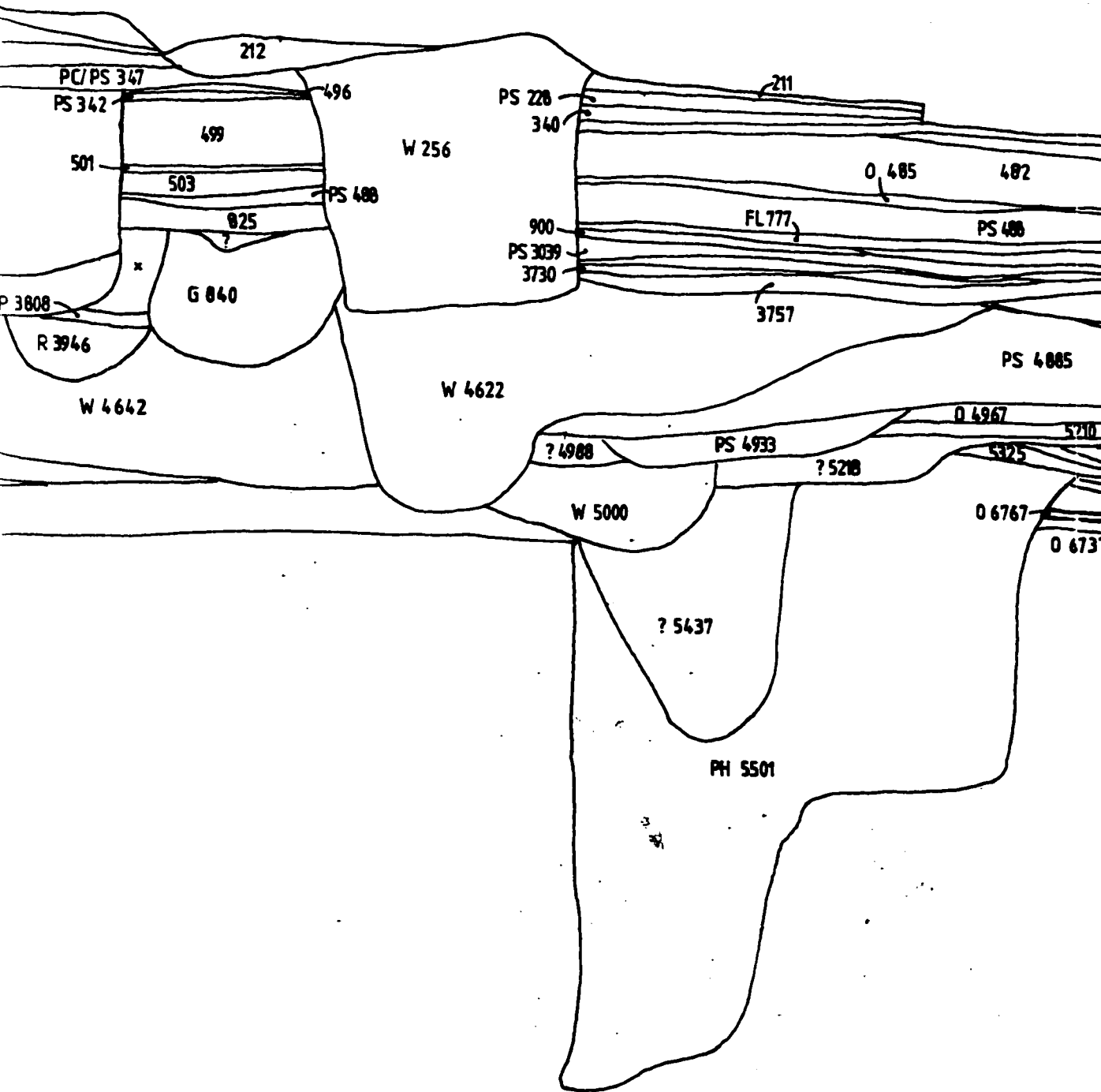




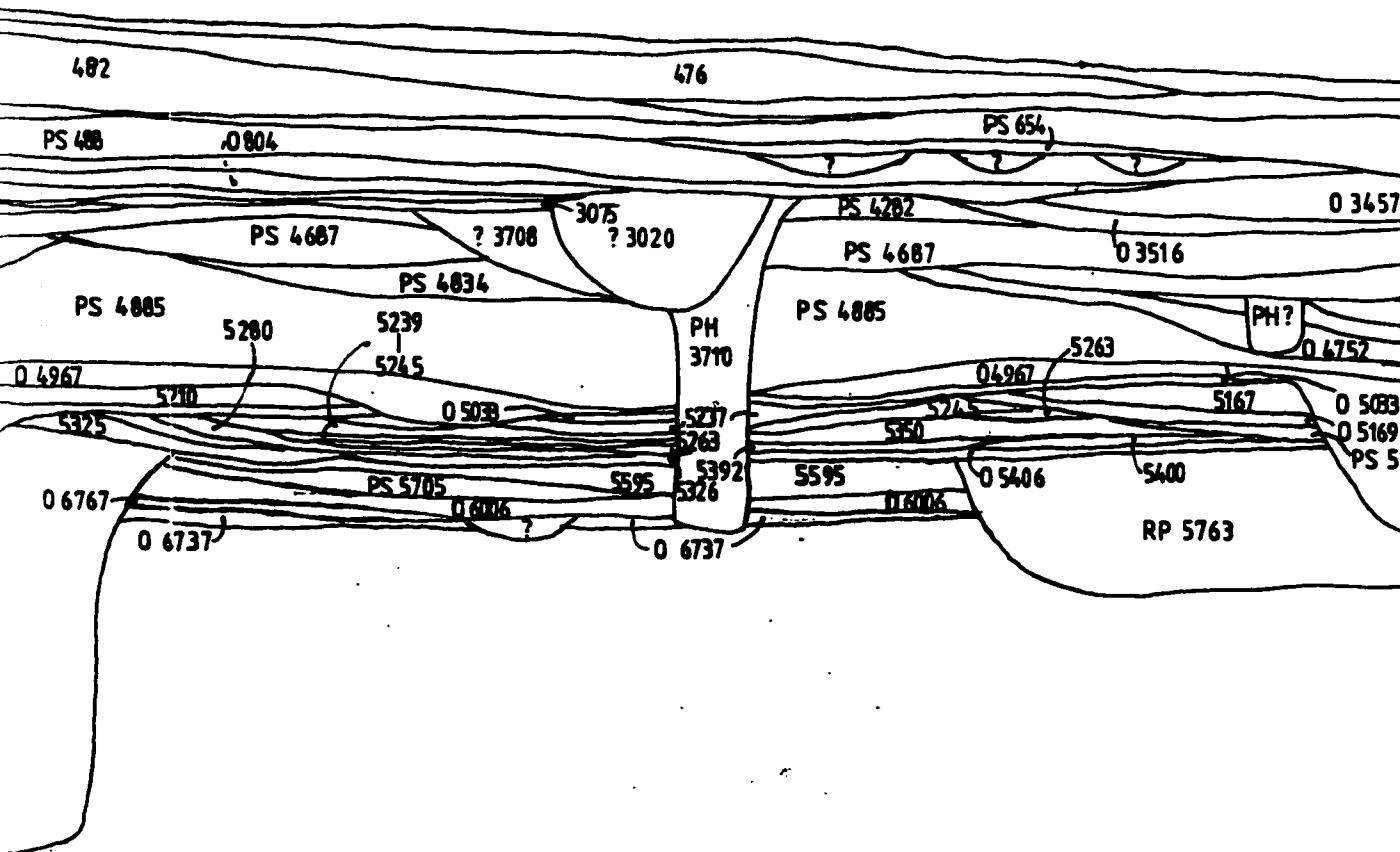




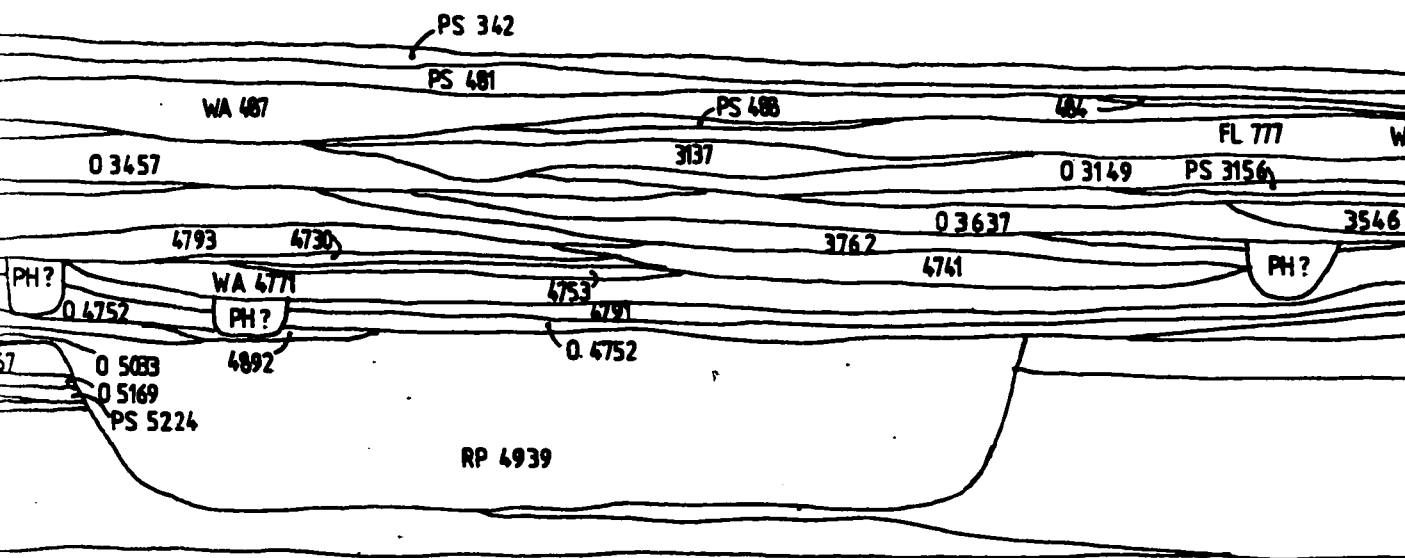














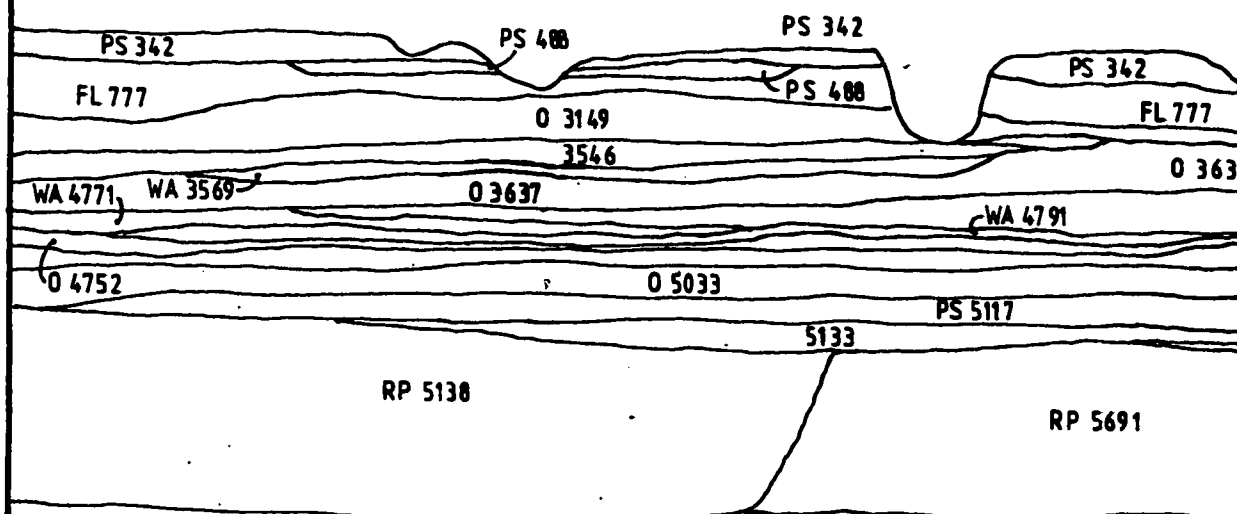


A hand-drawn map showing a network of roads. The roads are represented by lines, with a main horizontal road at the top and several branching roads. A path is highlighted with a thick line, starting from the left, passing through a junction, and then following a road labeled 'PH?'. Other labels include 'FL 777', 'WA 3140', 'PS 3142', 'O 3149', 'PS 3156', 'WA 3487', '3546', 'PH?', '3546', 'O 3637', 'WA 4771', 'O 5033', '4912', 'RP 5138', '3762', 'O 3637', and '4741'. The map is drawn on a background of horizontal lines.



18.5W/7.5S

—5masl —



OMJPLP-141B-T3  
SECTION 2

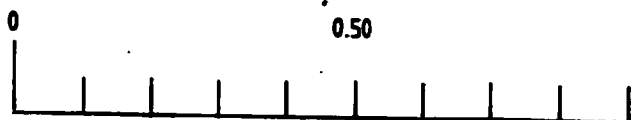
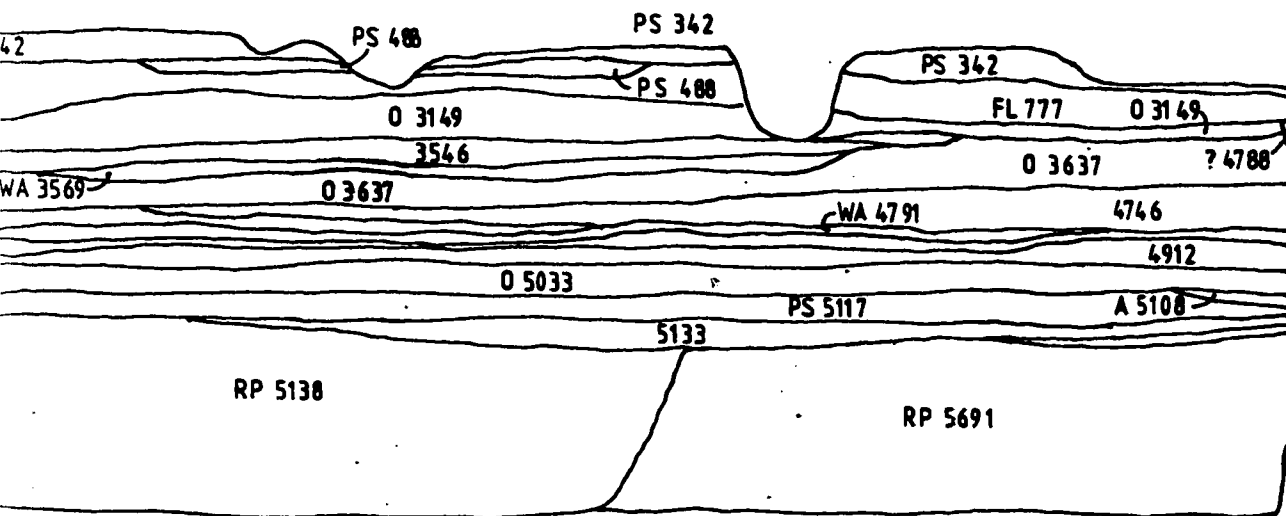


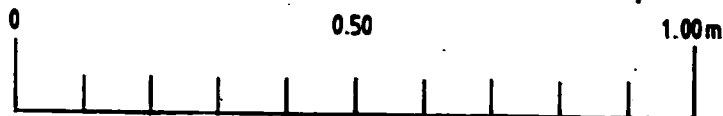
Figure 140. OMJPLP-141B-T3, Section 2



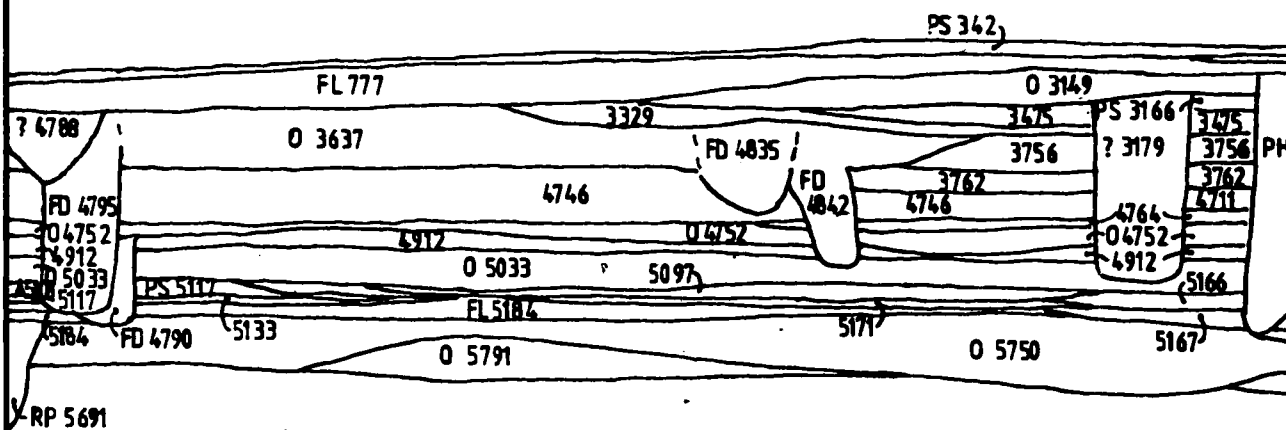


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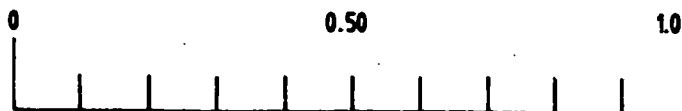
SECTION 2





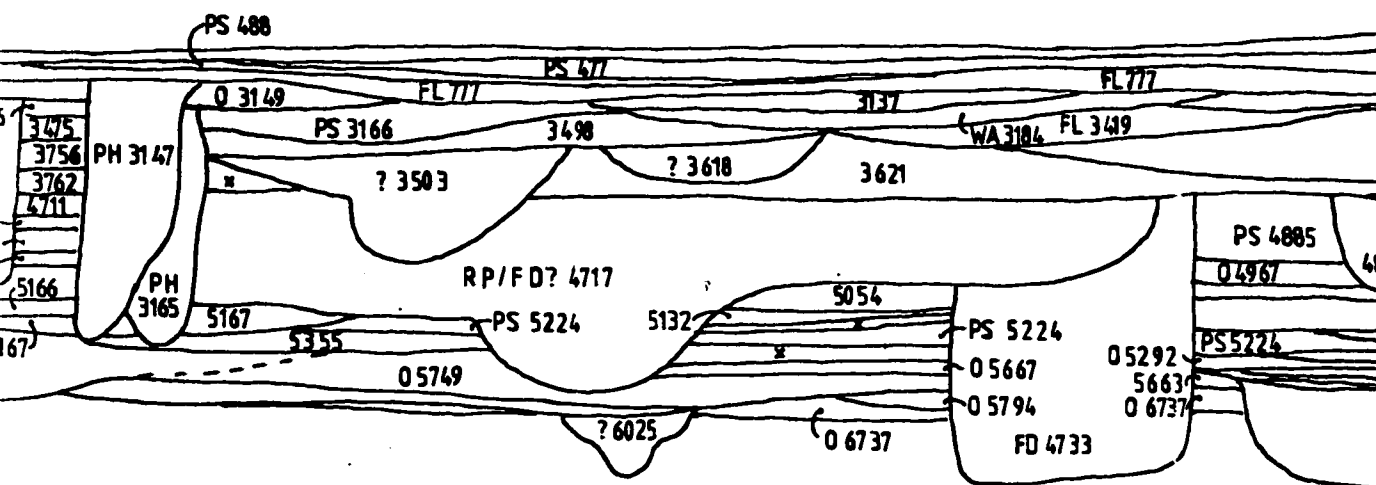


OMJPLP-141B-T3  
SECTION 3



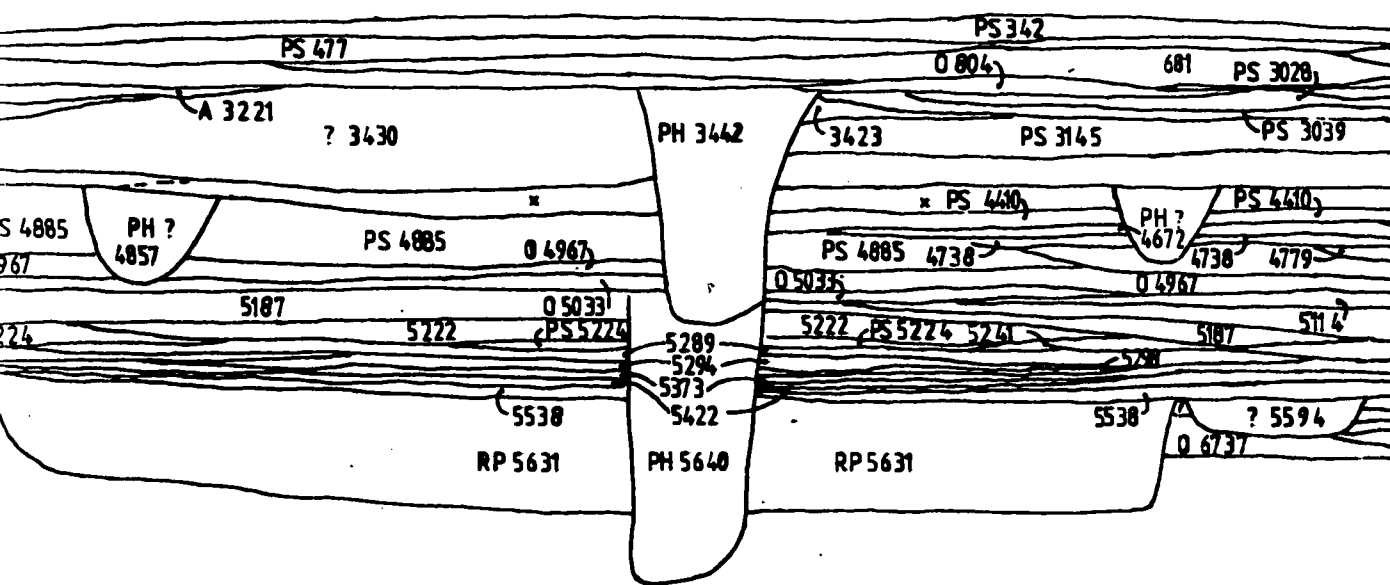




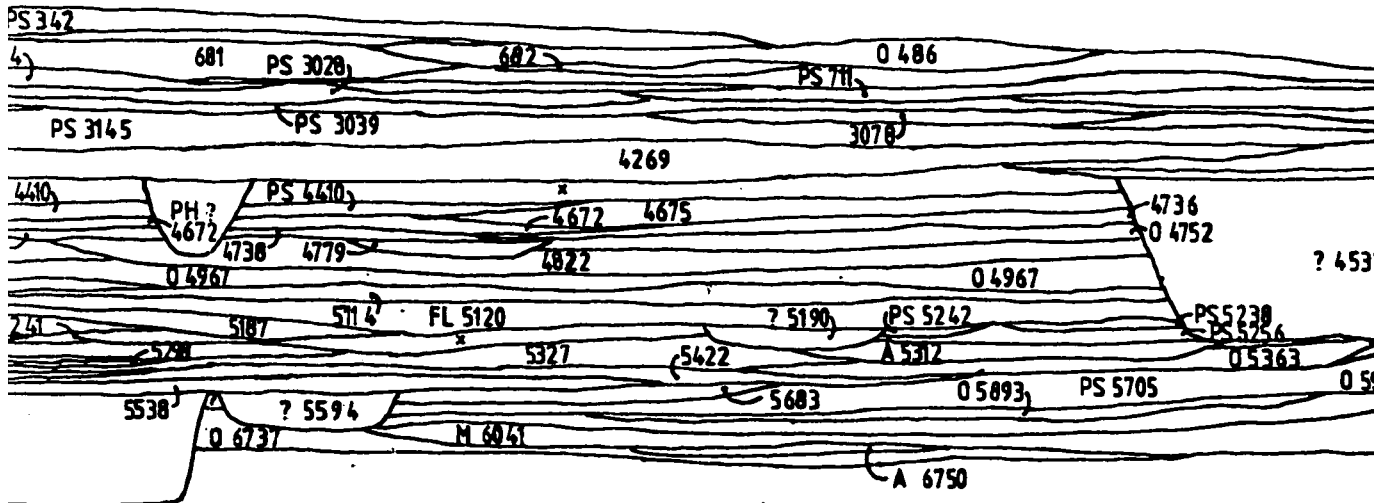


100m

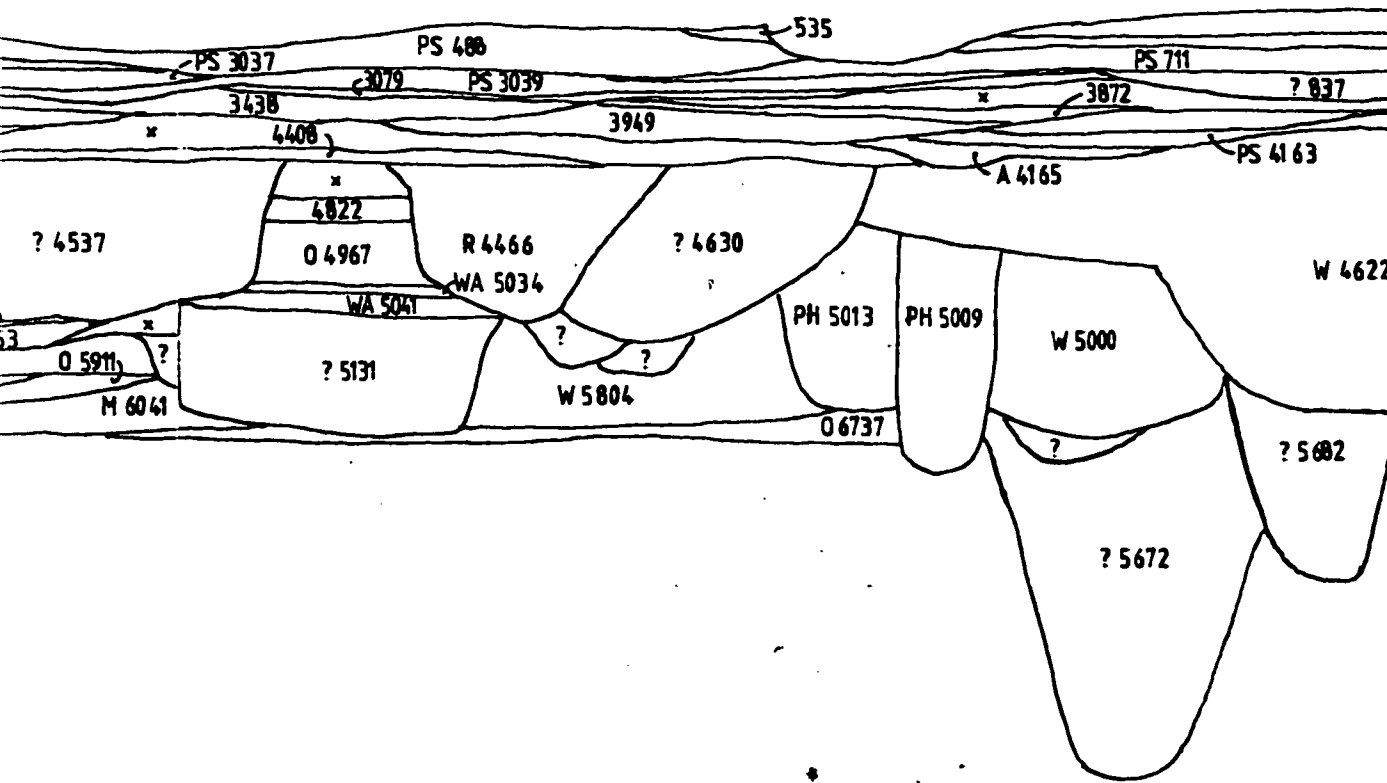






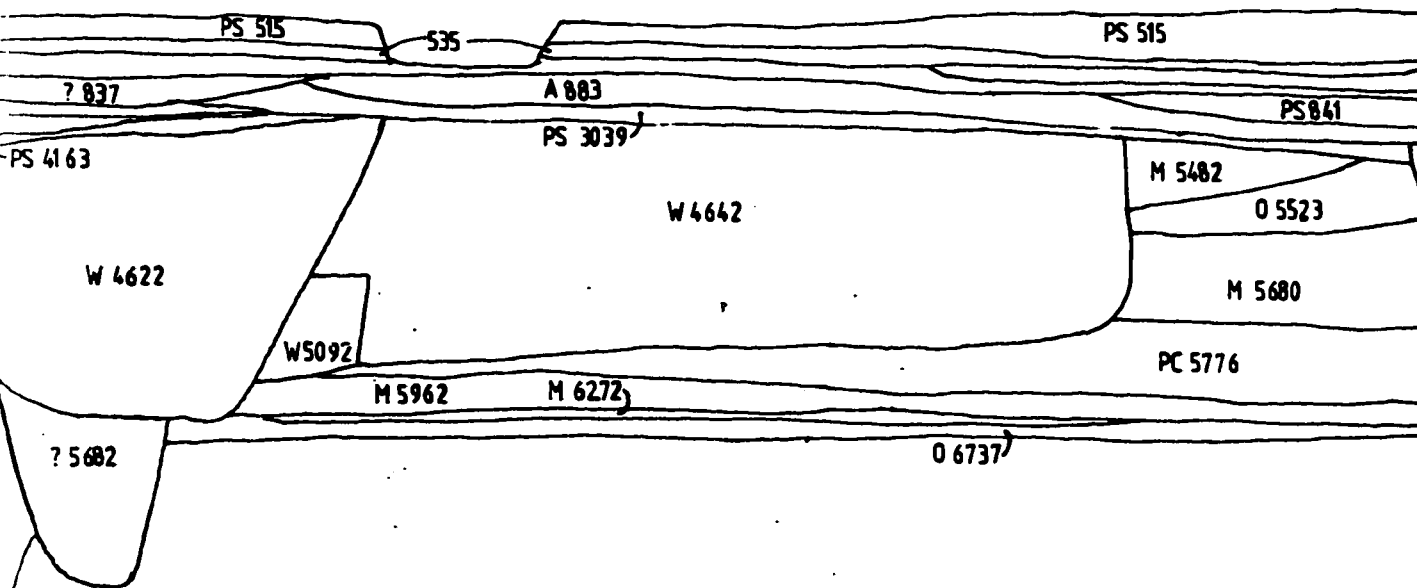






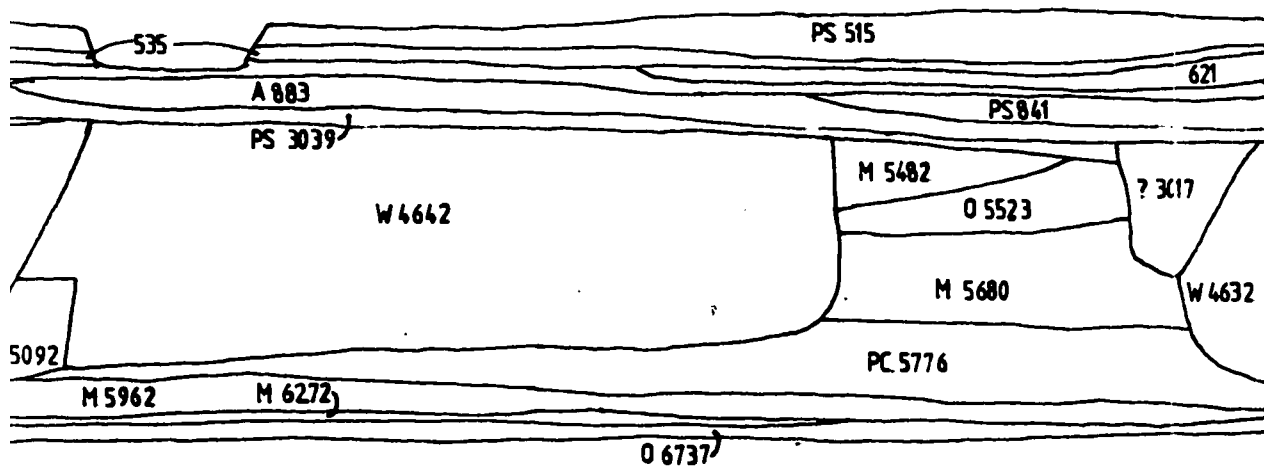








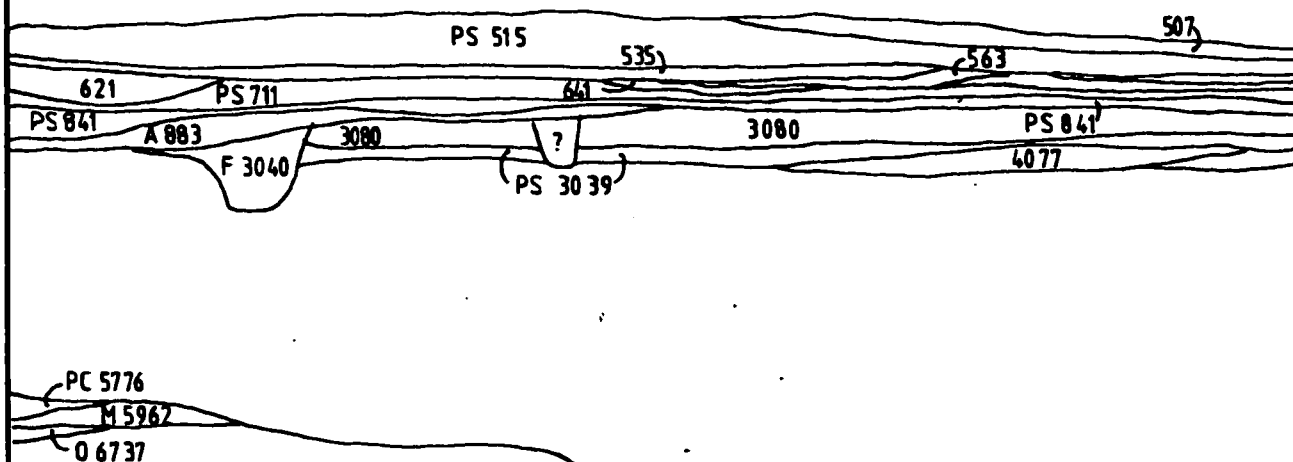
20W/5N





20W/5N

—5masl —



OMJPLP-141B-T3

SECTION 4

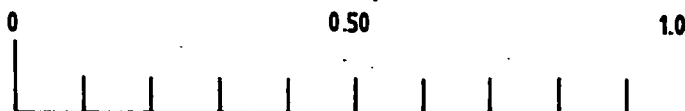
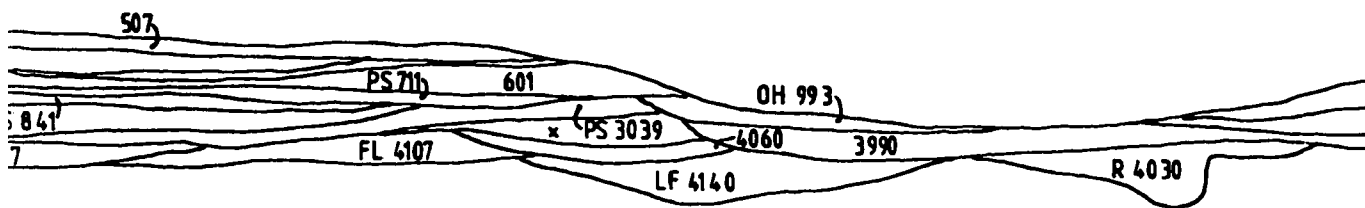


Figure 142. OMJPLP-141B-T3, Section 4.





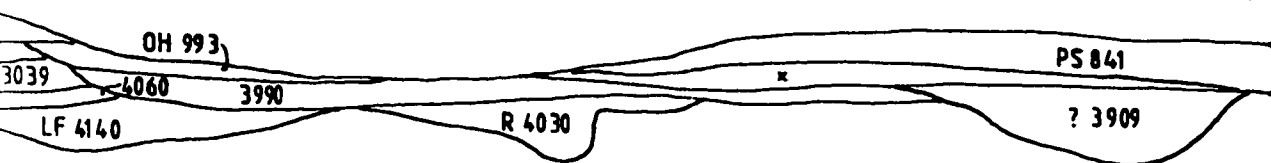
W 4632



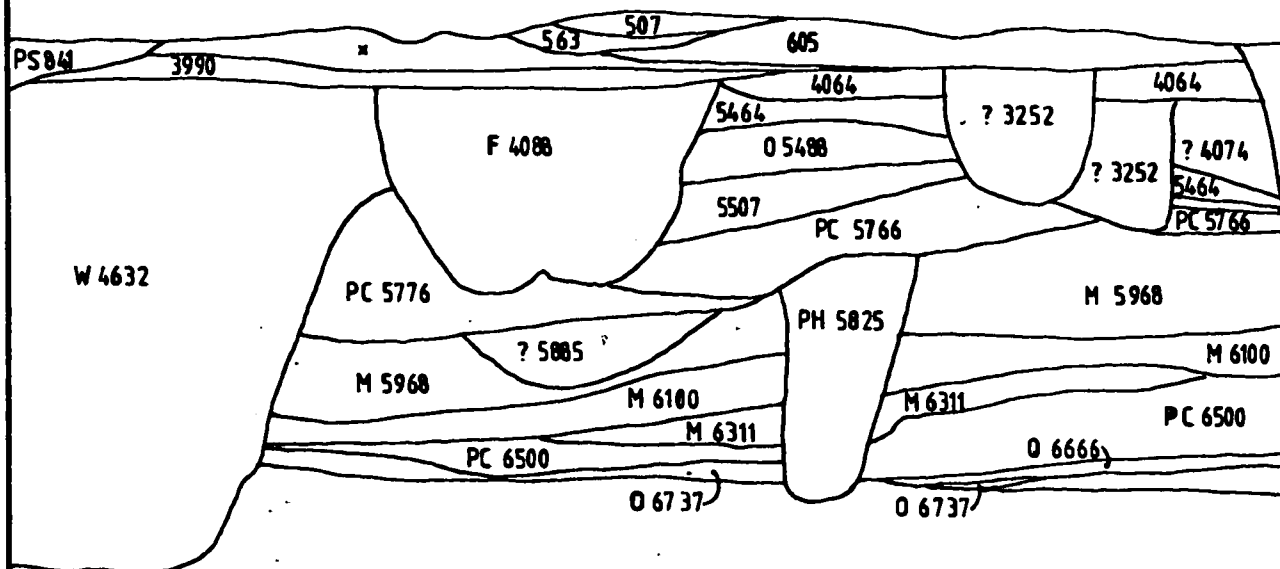




17W/8N







OMJPLP-141B-T3  
SECTION 5

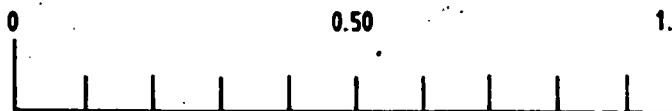


Figure 143. OMJPLP-141B-T3, Section 5.



