General Trends in the Development of the Chiribaya Culture, South-coastal Peru

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The autonomoy of the coastal Moquegua or Ilo valley reaches its clearest apex with the emergence of the Late Intermediate material tradition known as Chiribaya. Chiribaya habitation sites of up to 14 hectares are found almost continuously along the slopes of the coastal valley, and, in fact, there are few if any alluvial fans that do not bear its distinctive remains. Through our recent research in Ilo, Chiribaya now appears to have had a fairly long period of development. A development characterized by a number of significant changes in its material traditions that are reflective of key economic and social trends Most obvious among these were the establishment of control over diverse resources, a certain degree of economic specialization, and the development of strong intersite social heirarchy.

The extension of Chiribaya remains outside the coastal valley is very limited. Several sites are known from the lower sierra portion of the Moquegua valley and other sites have been identified at a number of small spring-fed quebradas immediately north of Ilo. Chiribaya remains have also been reported in the principal coastal valleys from Arica, Chile in the south, to the Tambo valley in the north, though outside of the Moquegua Valley it is not always clear just what is identified as Chiribaya. Nonetheless, Chiribaya's coastal orientation is clear and its range is extremely limited.

During the past four years myself and other members of the

Programa Constisuyu have excavated several stratified habitation and mortuary sites located in distinct zones within the Moquegua Valley. The most important sites for this brief discussion here are San Geronimo located on the edge of the pacific; Chiribaya Alta located 5 kilometers from the coast; Chiribaya Baja, located 7 kilometers from the coast; and Yaral, located approx. 50 kilometers from the ocean at the lowest point of agricultural production in the sierra.

As a result of these excavations a number of stratified trash middens and superimposed burials give corroborative context to thousands of sherds and other trash remains as well as more than 1500 whole vessels and multitudes of other artefacts. This overwhelming quantity of material evidence points to at least three local fases in Chiribaya's ceramic tradition. These phases are, in turn, coordinated with some basic processes in Chiribaya's independent growth and internal unity.

Chiribaya Ceramics

Chiribaya ceramics are characterized by multi-colored designs on a red slip and most particularly by white dots on a black band along the rim. The heavy use of white dots in linear patterns is one of many unique characteristics that distinguish Chiribaya from other Late Intermediate traditions such as Mollo, Allita Amaya, Kollau, Churajon, San Miguel, and others.

Chiribaya forms are also readily identifiable. There is an almost exclusive use of rounded as opposed to straight-sided

bowls, and a heavy emphasis on ovoidal (egg-shaped) and globular jars. Further all Chiribaya ceramics have flat-bottoms (about 8cm in diameter), straight or convexly curved bodies, rounded non-flaring lips, and ribbon-shaped handles.

The most distinctive Chiribaya motif is a multi-colored, trapezoidal panel composed of two converging pairs of step-patterns oriented around a semi-circle. Alternating arrangements of these panels cover the bodies and necks of jars and other close-mouthed vessels. The step pattern and semi-circle are common to many other Late Intermediate and Middle Horizon traditions. The trapezoidal panel, however, is a unique combination. Other unique though simpler motifs include multi-colored bands arranged simply, in zig-zags, or, in combination with alternating semi-circles.

Designs unique to bowls also set Chiribaya apart from its contemporaries. Common use is made of the Late Intermediate semi-circle and bow-tie, or butterfly motifs, though Chiribaya makes equally heavy use of 8-pointed stars as well as 2, 3 and 4 pointed half-stars. Though eight-pointed stars are found on Wari vessels in the Arequipa region, I have yet to find them within other Late Intermediate traditions in the south-central Andes.

Based primarily upon the stratigrafic distribution of design elements I have initially classified Chiribaya ceramics into three fases: 1) the initial or Algarrobal phase; 2) the middle or Yaral phase; and 3) the late or San Geronimo phase. It is necessary to note that these phases are also well correlated

with other changes in ceramic production, including material and form, as well as with distinct changes in other artefacts and overall mortuary patterns.

The Algarrobal Phase

The initial (Algarrobal) fase contains the greatest variety in terms of raw materials (clay, temper, paints), design (primarily variations on the trapezoidal panel) and formal execution (variation in detail). It also bears the closest asociations with other Late Intermediate styles as well as Middle Horizon traditions. A few examples of these associations include: 1) the use of fewer colors; 2) protuberances on jar handles; 3) bow-tie motifs, eight-pointed star motifs, vertical step patterns or saw-tooth designs, and chains of cross-hatched diamonds; and 4) a higher percentage of straight-sided bowls.

Early phase ceramics are also found in context with two other distinct styles, each made of distinct materials with distinctive forms. One, "Osmore multi-color", appears similar to Churajon and Mollo in its use of black and white designs especially chains of cross-hatched diamonds (rhomboids) and vertical step-patterns. The second, "Ilo multi-color" makes some use of the Chiribaya trapezoidal panel though most designs are far simpler linear patterns. Because paste, design, and form appear coordinated, it suggests that these are distinct types in the sense that they probably represent distinct groups of potters. A number of unique vessels may also indicate other

potters. Of interest is that the vessels pertaining to Osmore multi-color and Ilo multi-color, as well as unique vessels, are found separately and in association with early phase Chiribaya ceramics.

This early phase takes its name from the District of Algarrobal where it was identified last summer. Ceramics pertaining to this phase have thus far been identified only from the site of Chiribaya Alta, located approx. 5 kilometers from the ocean.

The Yaral Phase

The middle Chiribaya phase (Yaral) is marked by a standardization of Chiribaya paste and designs, the elimination of protuberances on jars and the disapearance of straight-sided bowls. Finish and form are standardized with production concentrating on bowls and jars. Some -keros and larger narrow-mouthed vessels or cantaros were also made. Eight-pointed stars were replaced by pendant half-stars and jars were decorated exclusively with trapezoidal panels. In mortuary contexts, middle phase ceramics were not found with any other contemporary style.

The Yaral phase is named after the site of Yaral where it is the dominant phase present. Yaral ceramics have been found in quantities at all four Chiribaya settlements discussed here.

The San Geronimo Phase

In the final (San Geronimo) phase there was a virtual explosion in Chiribaya ceramic production both in terms of forms

produced as well as quantities. Paste, wall thickness, and shape, reach their highest degree of standardization in decorated as well as non-decorated wares. Bowls are transformed through the introduction of handles or a rim protuberance and were decorated almost exclusively with interior designs. Large narrow-mouthed and wide-mouthed chicha vessels became common in graves as do reduced versions of larger vessels. Specialized forms such as spouted-jars, pedastalled incense-burners and plainware boot-shaped pots also appear.

Designs undergo a simplification during this final phase as well. First, there is a virtual replacement of the trapezoidal panel by multi-colored bands and combinations of bands and semi-circles. Bowls maintain the semi-circle and half-star motifs but also make use of interior bands arranged in the shape of a cross. Nonetheless, final phase ceramics, though somewhat thicker, are made of the same pastes as middle phase ceramics with basically the same forms. Paints, however, are more fugitive. Interestingly final phase vessels are found in mortuary contexts with San Miquel vessels, demonstrating their contemporaneity.

This phase takes its name from the site of San Geronimo where it was first identified. Quantities of additional contexts have been found throughout the lower valley, though not at Yaral. In mortuary contexts as well as domestic middens, decorated ceramics occur in much greater quantities than in previous periods. Mortuary contexts, which are equally biased toward high-status burials all sites contain up to 30 vessels and

average between 10-15 compared with. 5-10 vessels in the middle phase and fewer still during the initial phase.

These general trends in Chiribaya ceramic production express several important aspects of Chiribaya's growth: 1) its more-or-less independent line of development; 2) a growing unification among the settlements sharing the tradition; and 3) a probable increase in ceramic production as a specialized activity.

The geographic distribution of Chiribaya ceramics demonstrates 1) an early concentration on the coast; and 2) an apparently later unification of populations in distinct environmental zones, a process which seems to have provided less economic risk and a greater potential for growth through the direct access to a variety of complementary resources.

The Middle Phase spread of the Chiribaya material tradition suggests- the unification and/or establishment of potentially specialized settlements located in three distinct zones: 1) the agricultural zone of both the coastal and lower sierra valley floors; 2) the maritime zone at the river mouth; and 3) the lower limits of the lomas.

Chiribaya settlements along the coastal valley floor maintain immediate access to both natural and cultural hydrological resources. The occupation of previously inhabited sites seem to have taken advantage of earlier agricultural systems. The Chiribaya component of Yaral, for instance, is superimposed on

an earlier Tumilaca occupation at the lowest point of agricultural production in the sierra. In the coastal valley, the Tumilaca or Cabuza sites of Algodonal and Loreto Viejo, recently excavated by Bruce Owen, have substantial, later Chiribaya components and are closely associated with a substantial canal and terrace system.

It is most likely that this canal was constructed during the initial occupation of these and other sites adjacent to the canal. Given that the Ilo valley is no more than 400 meters wide at its extreme and is prone to seasonal flash-flooding, high canal fed terraces were probably essential to stabilize agricultural production. Other large sites, including the 14 hectare site of Chiribaya Baja appear to have developed agriculture in the widest portion of the valley utilizing lower canals.

The site of San Geronimo, located merely 100m from the ocean at the mouth of the Moquegua River, had a more maritime orientation, though its economic specialization is suggested by much more than its location. Excavations in a 200 m^2 area of the site uncovered 8 large stone-lined storage pits in addition to 87 stratigrafically related graves. The storage pits in this area measured from 1.5 to 3 meters in diameter with a depth of 1.5 meters. Those with preserved contents contained quantities of small dried fish, most likely anchovies. This evidence combined with large quantities of fish and shellfish remains in the trash middens is a quick indicator of the intensity of maritime exploitation.

The gravelots from San Geronimo are also very telling. Almost all male burials contained combinations of hooks, weights, floats, harpoons, cotton cords and other fishing paraphernalia. In addition, many tombs contained model wooden boats, one tomb employed whale ribs as a roofing material in place of the normal stones and a number of tombs included offerings of whole fish in addition to shellfish.

The location of Chiribaya Alta, differs from all other Chiribaya sites in that it is not located on the valley bottom. Though only 5 kms from the ocean, Chiribaya Alta is located on the valley rim at the foot of the lomas along the primary entry into the valley. The pampa surrounding Chiribaya Alta is referred to by locals as the Pampa del Descanso, a name taken from its use as a resting place for herds between their travels from the lomas to the waters of the valley floor.

In contrast to San Geronimo, almost no fishing implements were found in Chiribaya Alta gravelots. However, unlike other sites, camelid cranea were consistently present in tombs of all periods and additional camelid interments are found in looters pits across the site.

Though suggestions of animal husbandry by coastal peoples have met with a great deal of skepticism, there is a range of evidence which suggests that Chiribaya maintained continual access to herds. First, Chiribaya has a very rich textile tradition. Fardos consistently contain 2 or more shirts and often contain bags, smaller square textiles, handwoven belts

with long braids, hand-knotted 4-pointed hats, and other items. All of these textiles are fabricated of wool and are often brilliantly dyed. A ready supply of wool is well-indicated. Second, the consistent presence of camelid feet in graves at all Chiribaya sites as well as the abundant cranea included in Chiribaya Alta graves, shows year 'round access to these animals. Third, there is an extreme abundance of camelid bone in all middens, including San Geronimo, indicating, once again, an abundant if not constant supply of this resource and its major contribution to the Chiribaya diet.

The current lomas vegetation of the immediate area is scarce to say the least, but abundant land snails in Chiribaya middens suggest that the lomas was once rich and probably of considerable duration. The Ilo area was known among the Spaniards as one of the richest lomas zones along the coast and the seasonal use of the area by highland herders is a focal point of local histories. For many, however, the step from seasonal residence to permanent residence is a large one although the isolated, coastal guanaco populations in the Tacna area indicate the latter possibility.

What I postulate for the Chiribaya population is direct control of camelid herds reinforced through control over coastal grazing territories. I would also suggest that some animals were permanently resident within a short distance of the coastal settlements. Further, it would appear that the Chiribaya Alta population maintained specialized access to herds dating from the initial phases of its settlement noting the importance of this activity from the very beginnings of its development.

Overall, some degree of productive specialization is clear among Chiribaya settlements, though I doubt in any case that this was an absolute specialization. At Chiribaya Baja, for example, a large household contained a storage pit similar to those of San Geronimo, and it too contained dried anchovy-like fish. Other features at his site also suggest smoking of anchovies, suggesting some involvement in maritime activities.

As mentioned earlier specialization was probably not limited to food production but most probably included certain forms of craft production such as ceramics, metalworking and perhaps some textiles. The utilization of these craft items in mortuary portrayals of social status across Chiribaya settlements suggests one way in which these sites were joined both ethnically as well as economically.

The analysis of extensive mortuary contexts from Chiribaya Alta and San Geronimo, two likely centers of specialized groups, suggest the presence of a large elite status group that cross-cut individual Chiribaya site boundaries. The elaborate mortuary treatment which characterizes this group is most notable during the final phase of the occupation. Characteristically these tombs were rectangular approx. 1 meter long, 40 centimeters wide and about 80 centimeters deep. The tombs were constructed of stone with mortar and sealed by larger stones and a mud cap. At San Geronimo, these tombs contained an average of 10-15 whole vessels in addition to wool bags with coastal coca, wood vessels, spoons, basketry, tools, musical instruments, metal,

turquoise and Spondylus adornments, camelid feet, and foods. A small litter, constructed of two 1 and a half meter poles and a small, 40cm square cane platform was often placed on top of the tomb. That this group was not exclusive to San Geronimo and Chiribaya ALta is evident from similar though fewer contexts recovered from less extensive excavations at Chiribaya Baja and other sites in the lower valley.

The nature of this high-status group and its relation to the rest of the population is still cloudy, obscured primarily from a distinct bias toward larger settlements and perhaps Chiribaya's mortuary practices. One aspect is clear, however, that is its strong involvement with the maintenance of Chiribaya ceremonial live. Wood keros, for instance, are always present in preserved male contexts, and decorated chicha vessels are common to all. The inclusion of musical instruments such as drums, whistles and cane flutes are also indicative. Perhaps most interesting, however, is an axe-like staff that in preserved contexts was decorated by a thin human braid. That this staff played more of a social or ideological role than a utilitarian role is brought out by the fact that the bit is just as often made of wood as of copper.

The permanent nature of this status group, is brought out quite clearly by the mortuary treatment of children. Children received the same treatment as adults, to the point of sexual distinctions based upon associated tools. Children with more than 25 vessels were encountered at San Geronimo with the only

distinguishable difference being a higher percentage of miniature vessels.

The pattern that is coming forward is that individual Chiribaya settlements were strongly linked through a permanent social heirarchy that was more than likely maintained through control over specialized production, the distribution of these products, and through participation in an elaborate ritual system, the mortuary ritual being just one incidental example.

To bring this very general overview to a close, I am sure the audience wonders how Chiribaya came to an end. This is by no means clear, though its end seems to be abrupt, prior to the late Horizon and prior to the final phases of the Late Intermediate Period. Chiribaya ceramics are found in association with San Miquel ceramics, representative of the first half of the late Intermediate Period in northern Chile. Chiribaya is not found in association with Gentilar, however, the Chilean component of the final half of the Late Intermediate. In the Ilo valley there is a complete replacement of Chiribaya ceramics by a late highland style known as Estuquina. To indicate the abruptness of this replacement, Estuquina ceramics are never found with Chiribaya decorated ceramics, though Estuquina offerings were found within a Chiribaya cane house and an Estuquina burial was found in a storage bin in the house floor. It appears that Chiribaya met with a cataclysmic end, and end which may be tied to the seasonal flash flooding in the valley. Dr. Moseley and other members of the Programa Contisuyu have recently recorded a major flooding event around A.D. 1350. This

event ties in closely with the ceramic contexts just mentioned. A likely scenario is that this event weakened Chiribaya sufficiently to create a power vacuum along the coast and causing a political rearrangement throughout the entire valley.

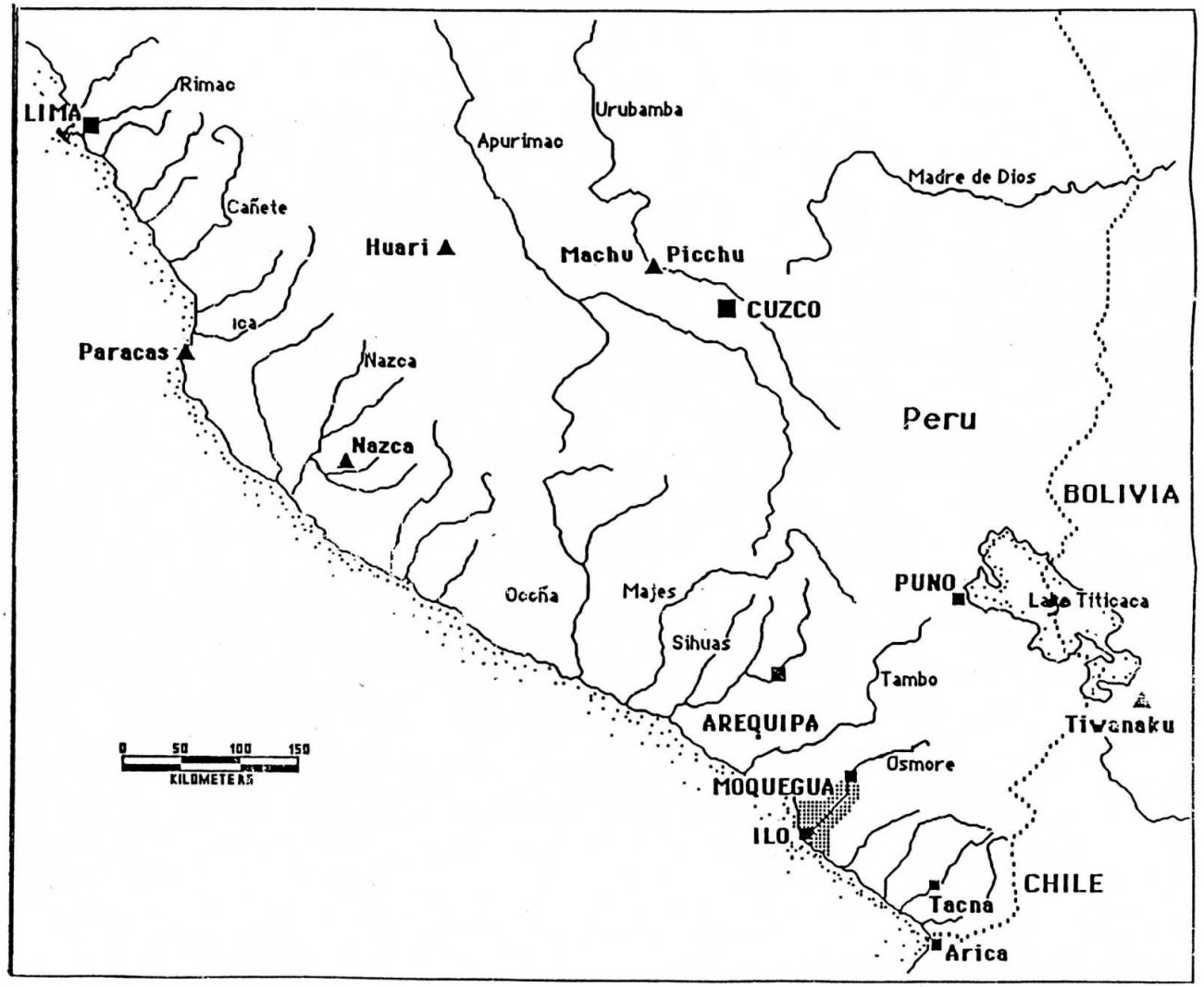


Figure 1: Location of the Ilo Valley

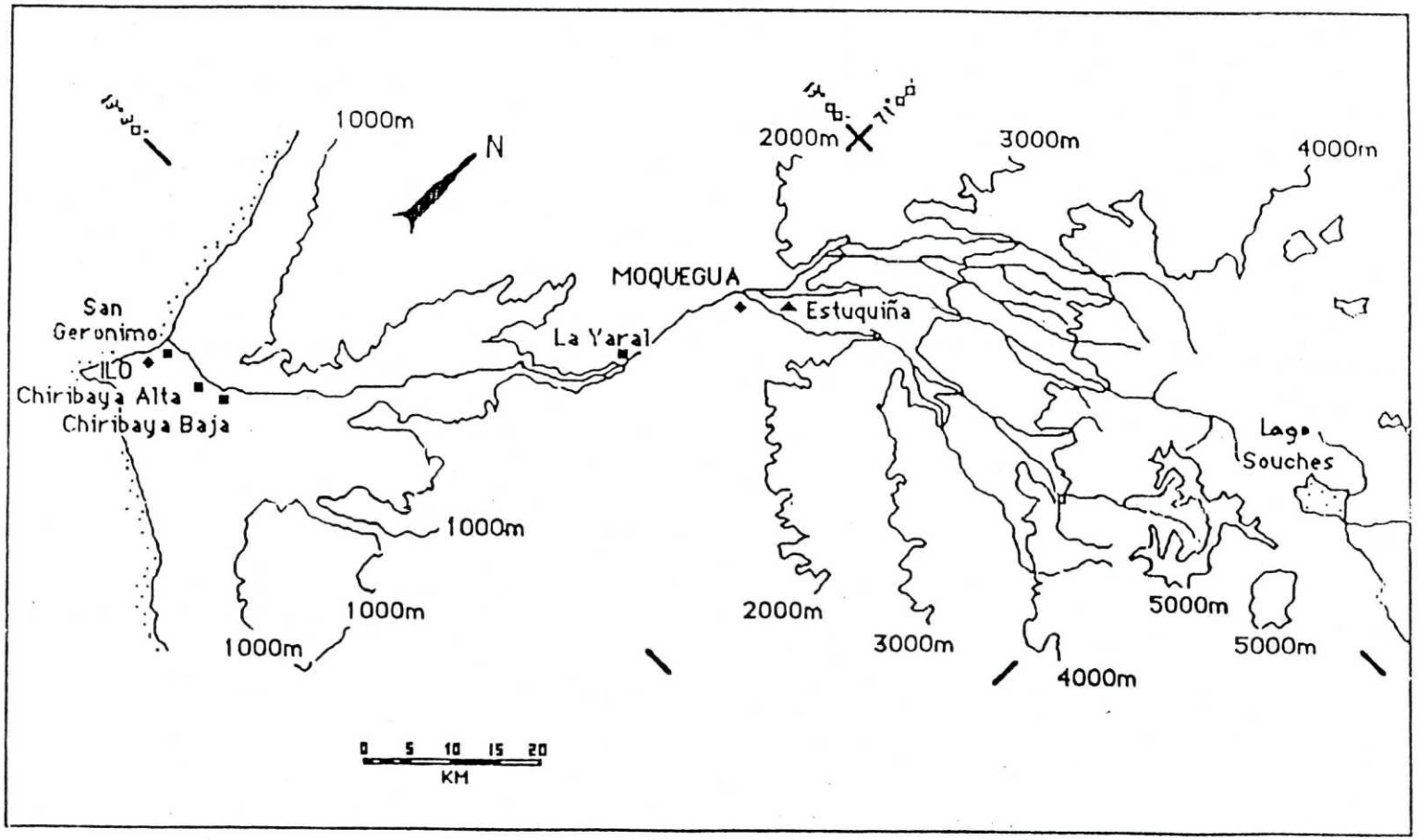


Figure 2: Location of Principal Sites Mentioned

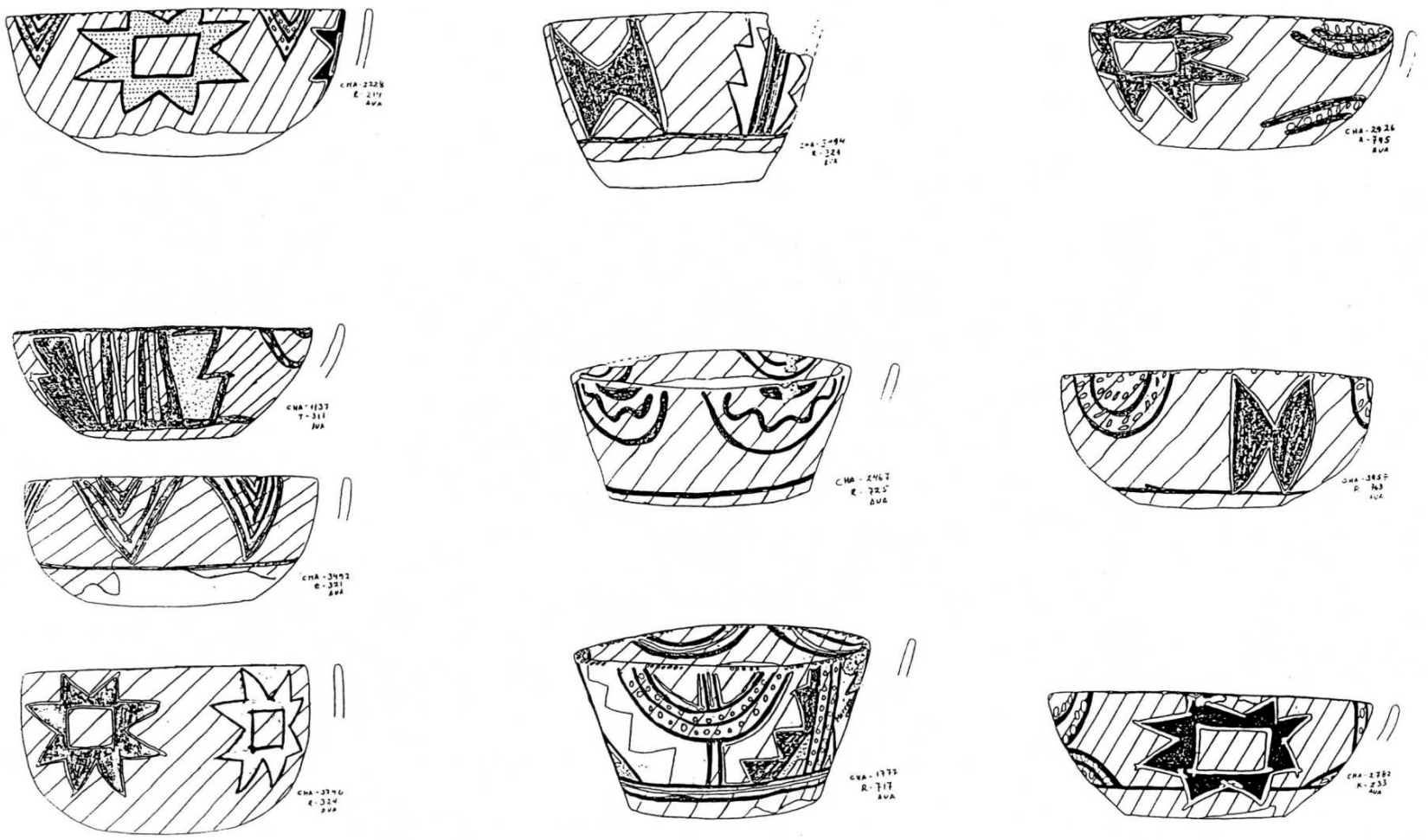


Figure 3 : Algarrobal Phase Bowls

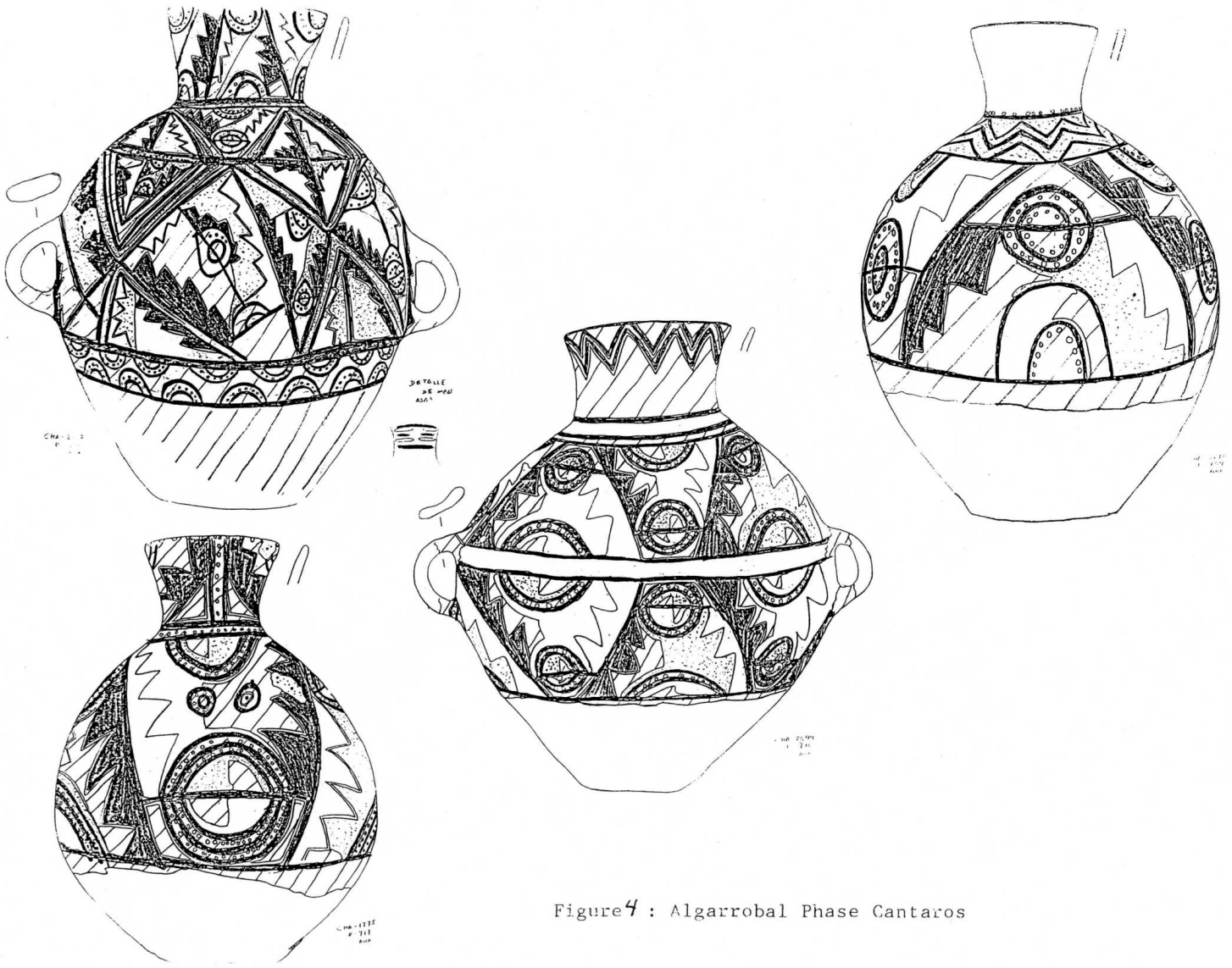


Figure 4 : Algarrobal Phase Cantaros

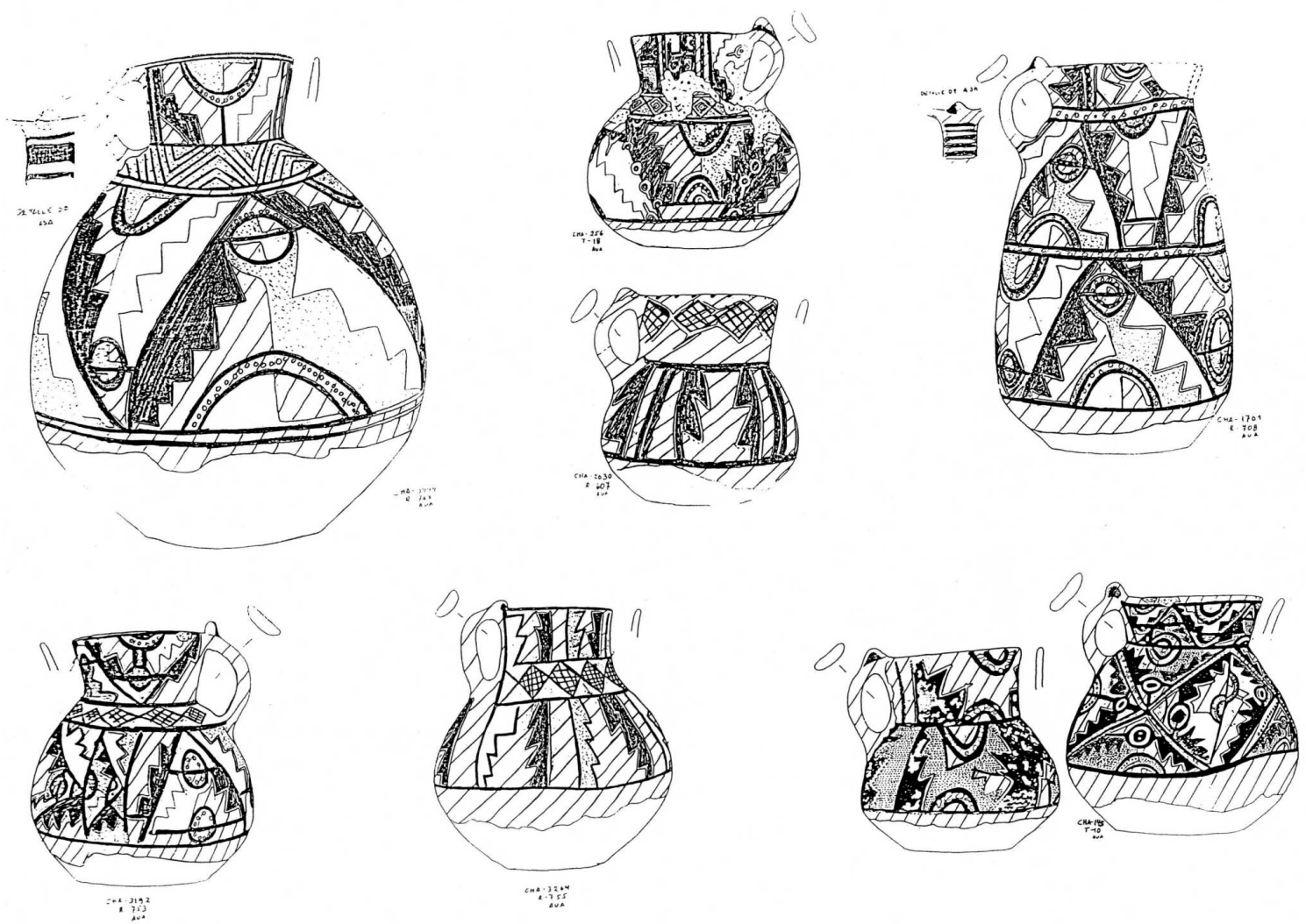


Figure5 : Algarrobal Phase Jars

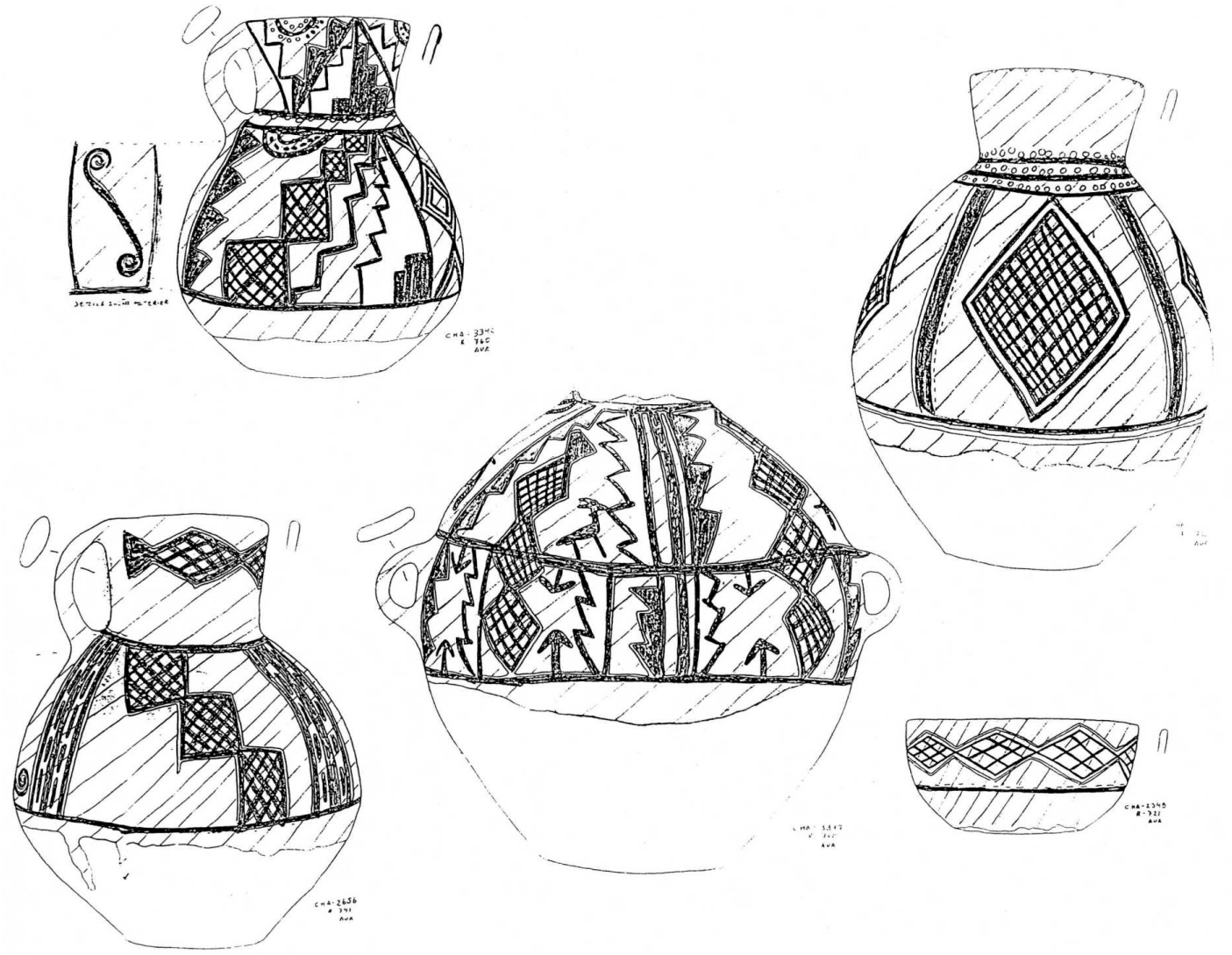


Figure 6 : Osmore Multicolor Vessels

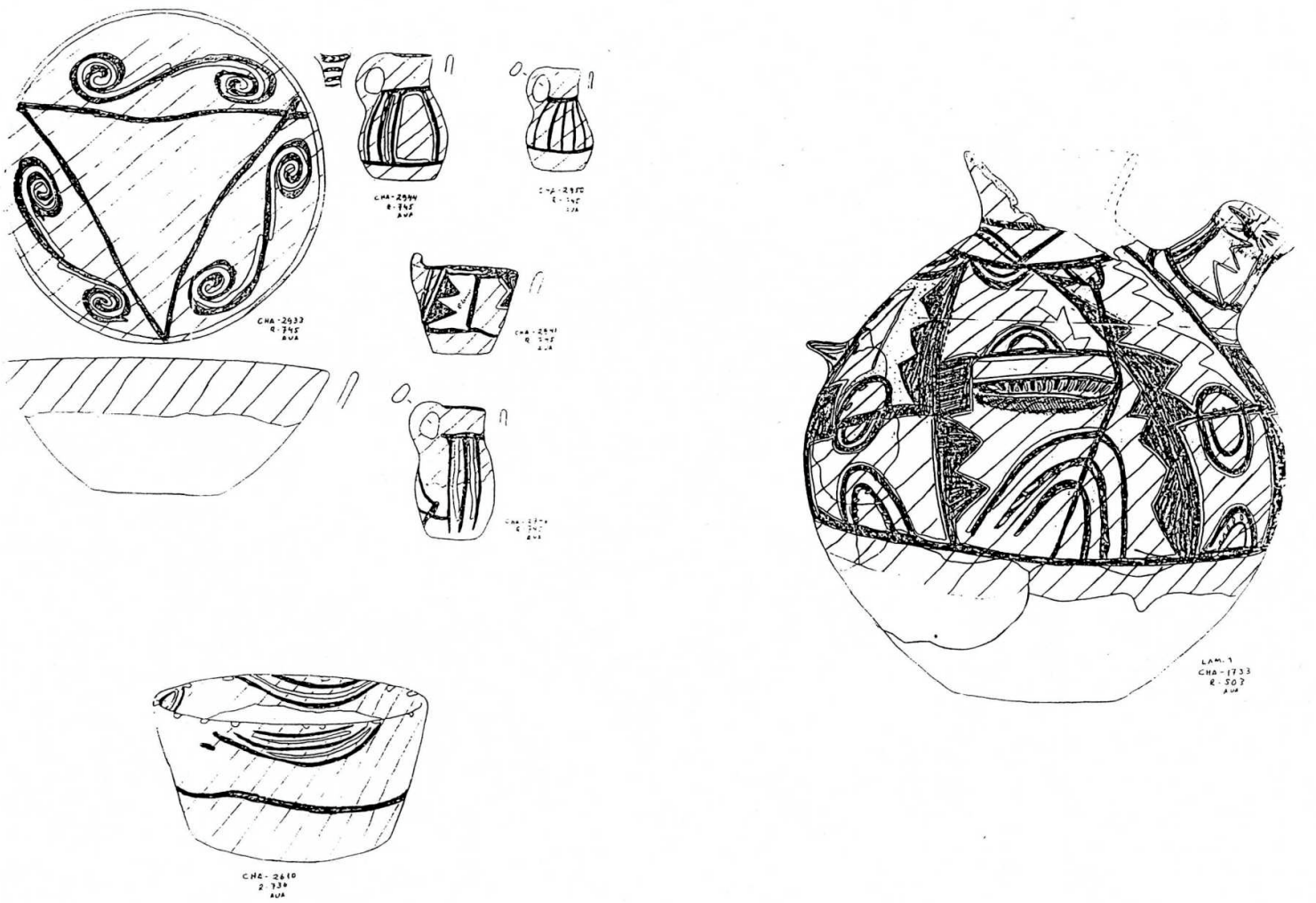


Figure 7 : Ilo Multicolor Vessels

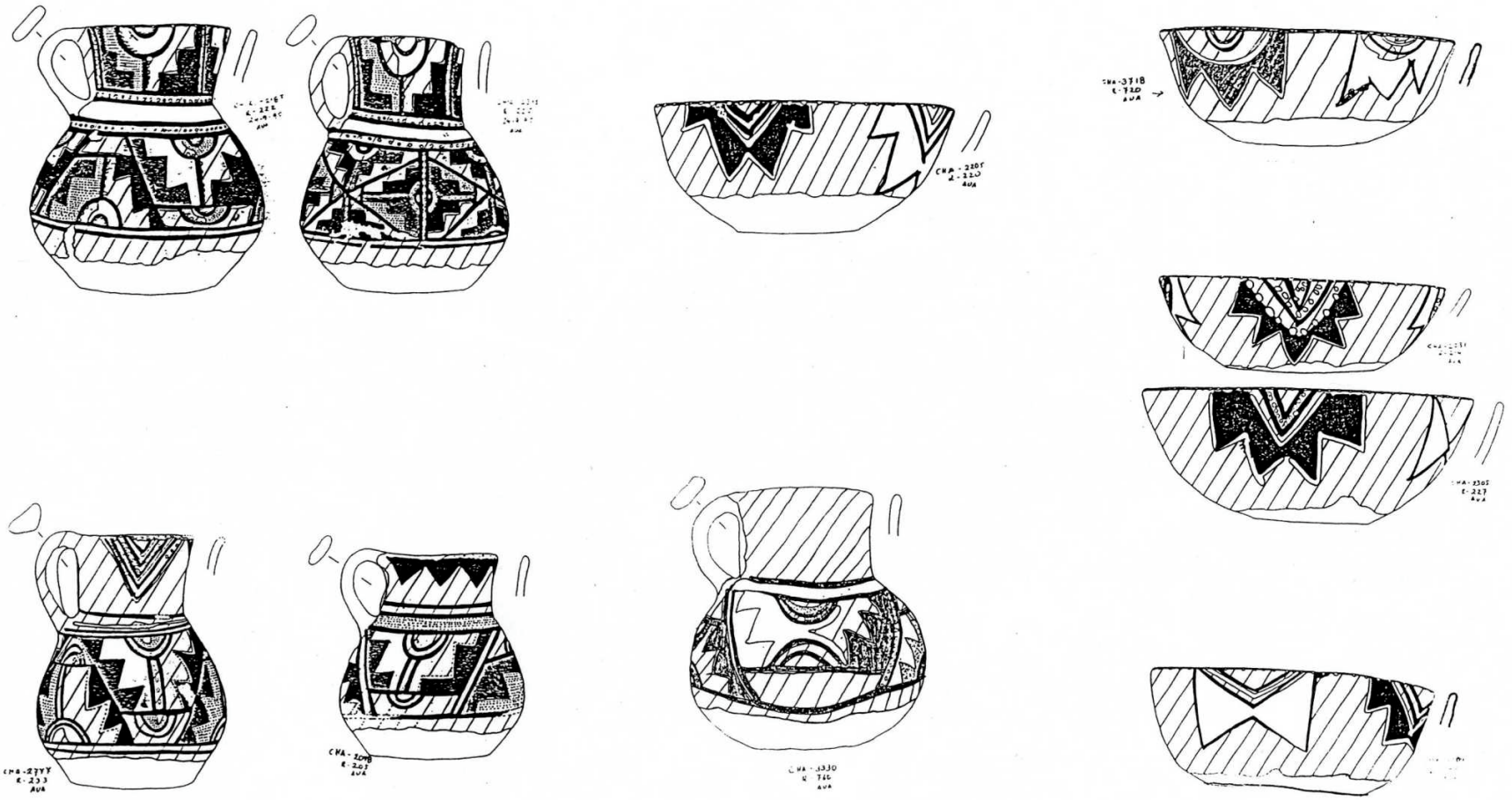


Figure 8 : Yaral Phase Jars and Bowls

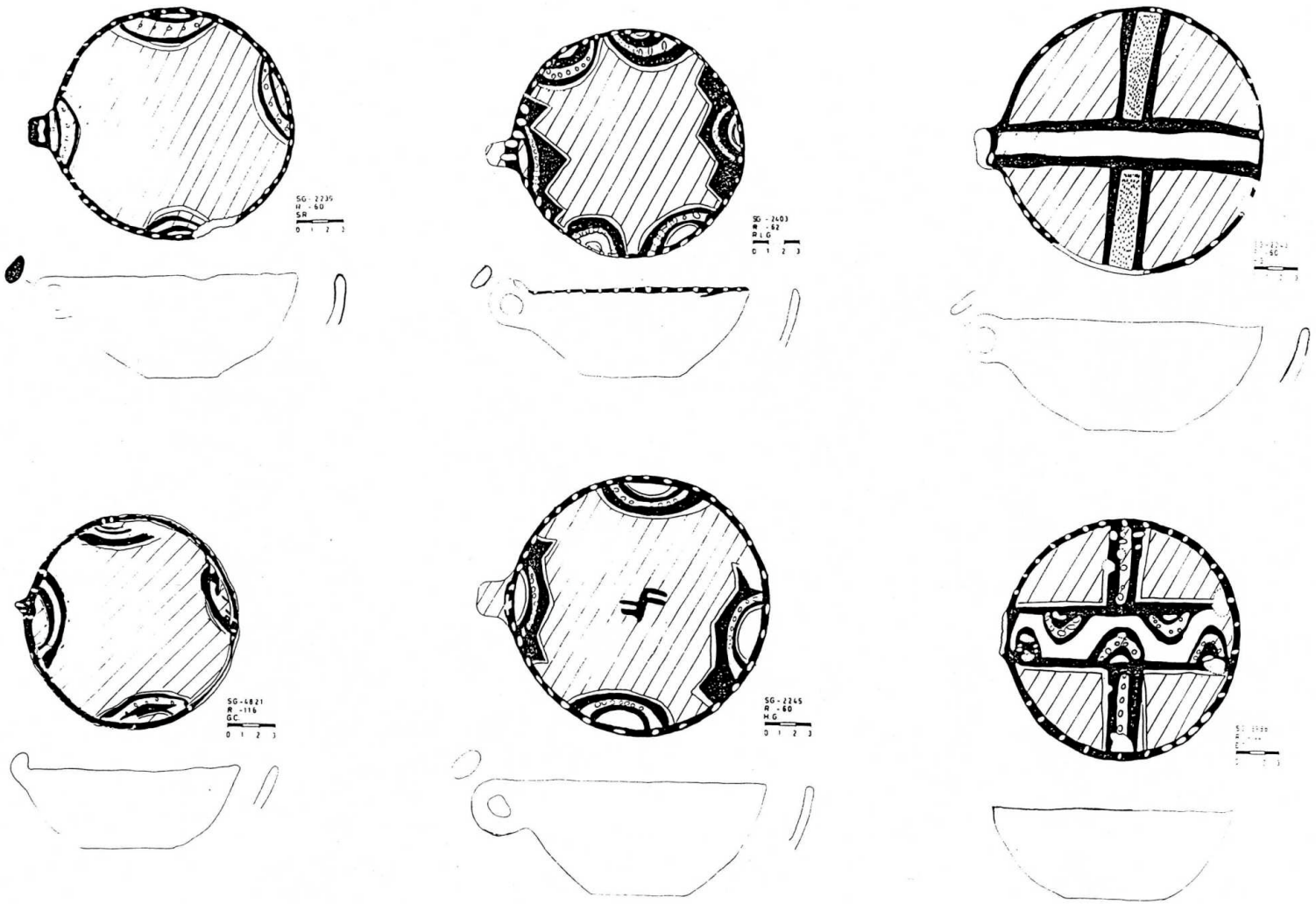


Figure 9 : San Geronimo Phase Bowls

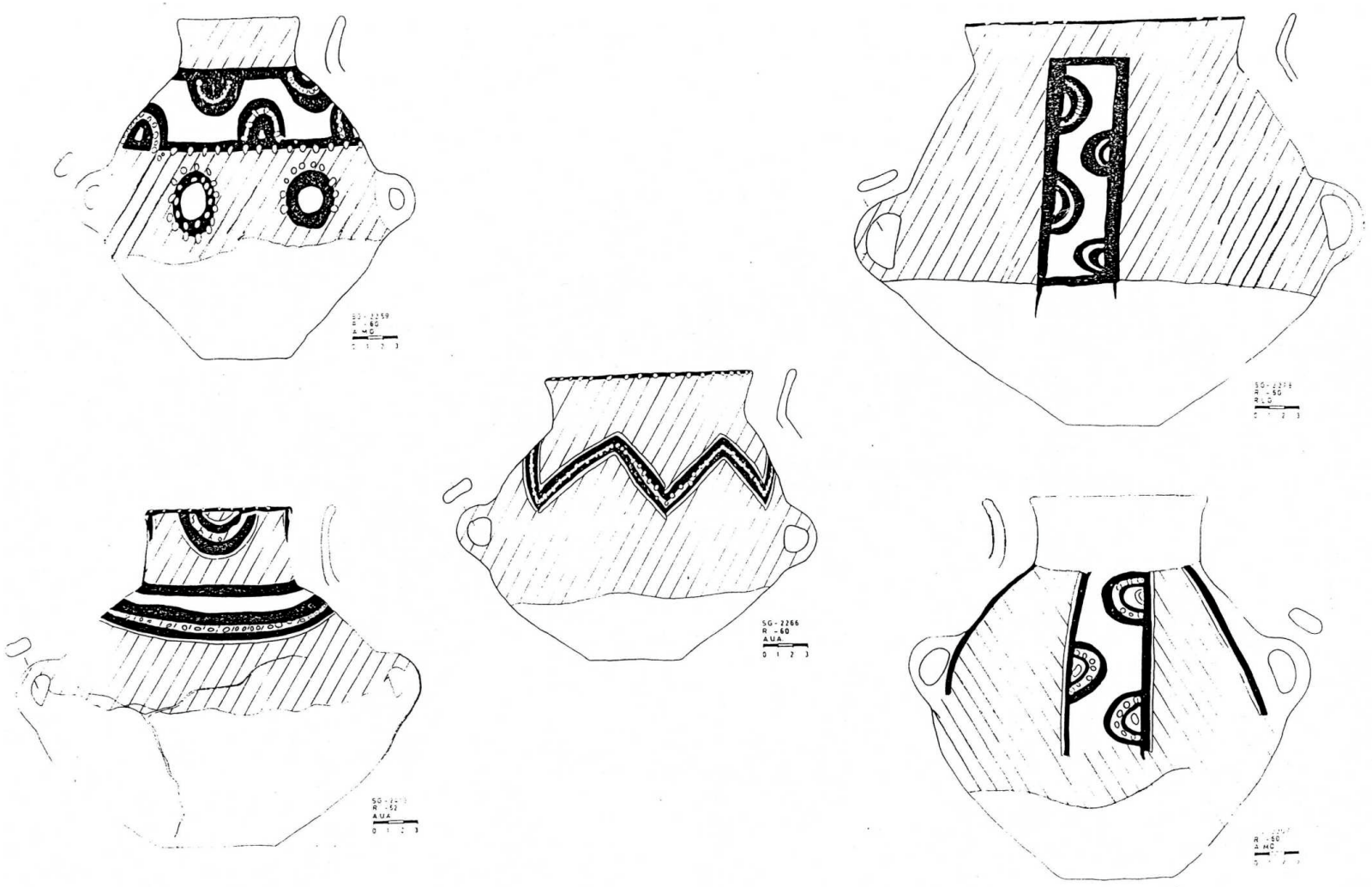


Figure 10 : San Geronimo Phase Cantaros and Chombas

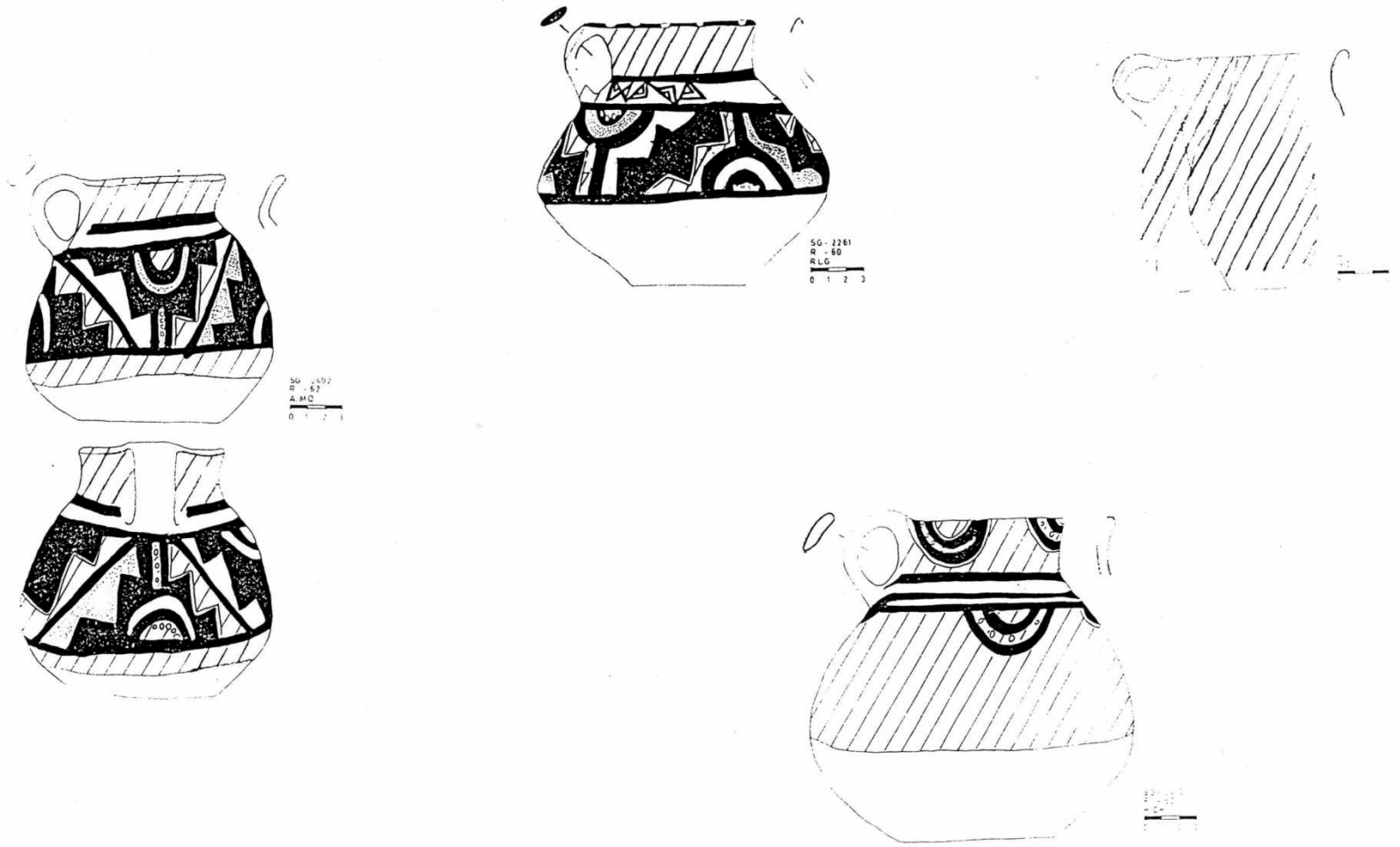


Figure 11 : San Geronimo Phase Jars

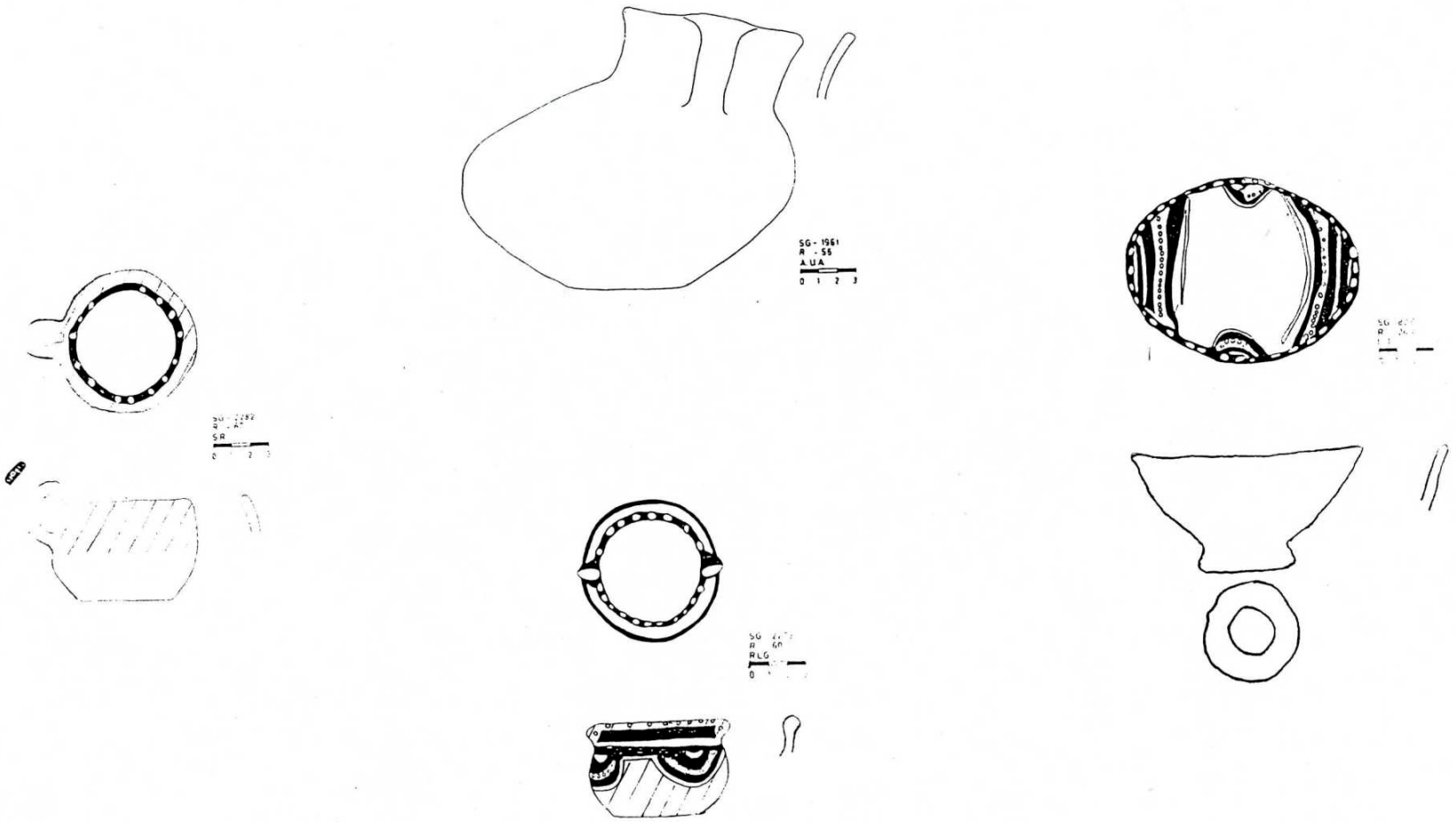


Figure 12 : Miscellaneous San Geronimo Phase Vessels

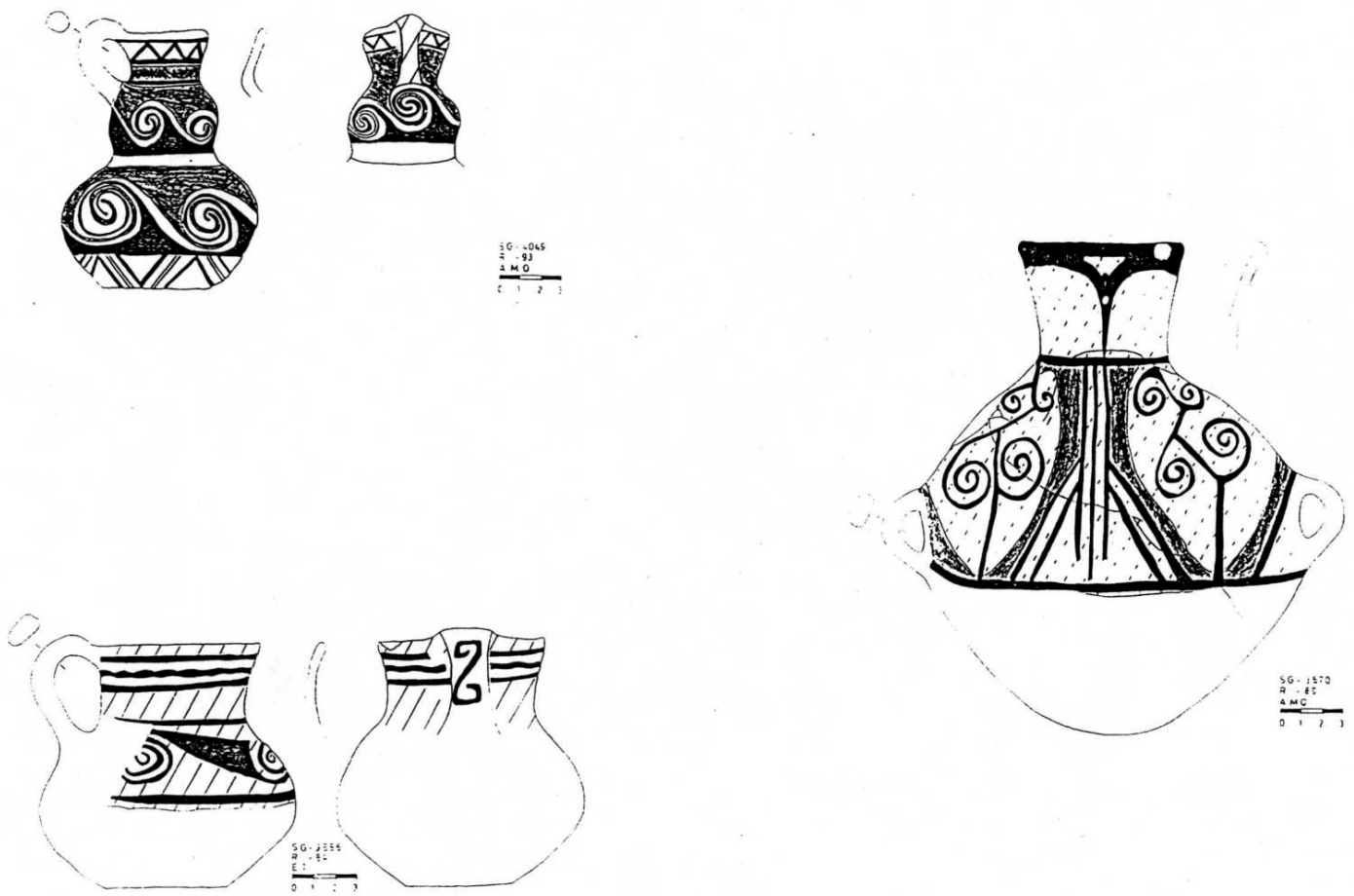


Figure 13 : San Miguel vessels recovered from San Geronimo, Ilo

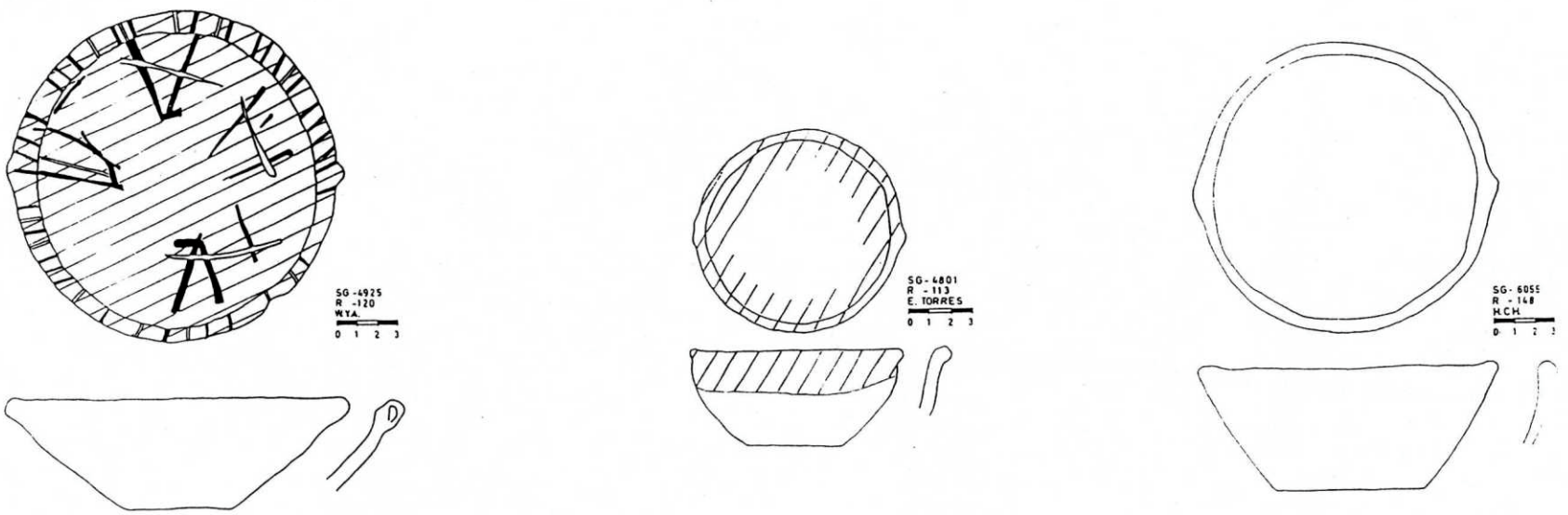
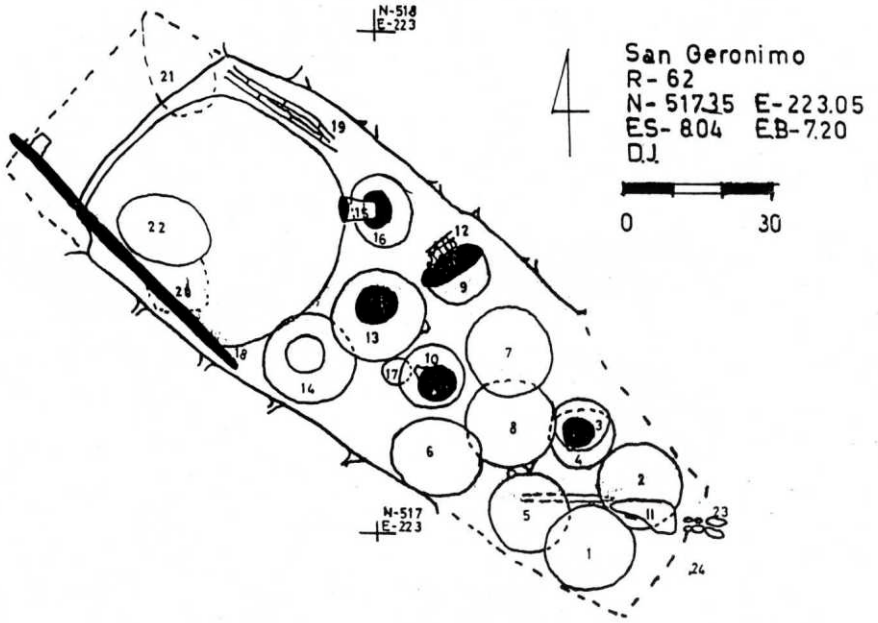
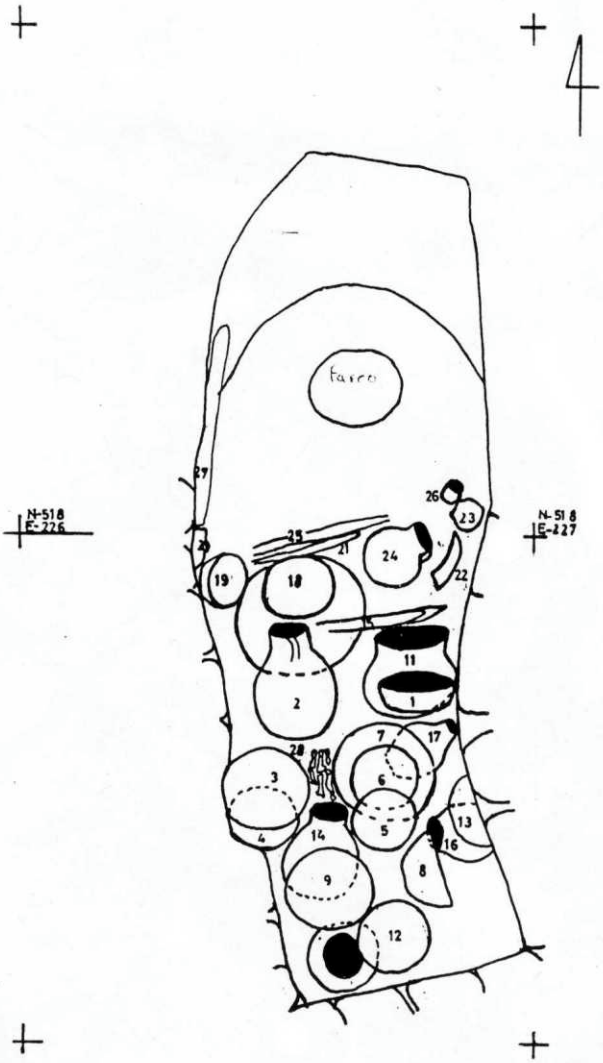


Figure 14: Porobaya Multi-color (L) and Estuquina (C,R) bowls



Codig	Espe	Descrip	N	E	Elev	Otros
1	2400	Cuenco	516 98	223 42	763	
2	2001	Cuenco	517 10	223 50	761	
3	2402	Jarra	517 20	223 40	762	
4	2403	Cuenco	517 20	223 40	762	
5	2404	Cuenco	517 05	223 30	758	
6	2405	Cuenco	517 15	223 10	756	
7	2406	Cuenco	517 35	223 25	756	
8	2407	Cuenco	517 22	223 25	756	
9	2408	Cuenco	517 52	223 15	764	
10	2409	Jarra)	517 30	223 10	761	
11	2416	C.Camelid	517 05	223 52	761	
12	2411	Red Tron	517 60	223 12	745	
13	2410	Cantaro	517 45	223 01	761	
14	2413	Cantaro	517 35	222 95	761	
15	2412	Kero	517 65	222 98	759	
16	2414	Cantaro	517 65	222 98	759	
17	2415	Cesta	517 33	223 03	761	
18	2436	Acha	517 55	222 50	766	
19	2437	Caña	517 85	222 80	746	
20	2438	Bolsa	517 50	222 60	741	
21	2439	Bolsa	517 90	222 60	741	
22	2441	Esqueleto	517 60	222 65	766-724	2442-Gorro
23	2440	Pie	517 02	223 65	761	2443-Manta
24		Liticos				2445-Lamin

Figure 15 : High-Status Male Burial



San Geronimo
R-60
N-518.20 E-226.47
E.S-8.48 E.B-7.26
D.J.

0 30

Codig	Espe	Descrip	N	E	Elev	Otros
1	2239	Cuenco	517 70	226 75	726	
2	2251	Jarra	517 70	226 53	770	
3	2241	Cuenco	517 50	226 45	769	
4	2248	Cuenco	517 45	226 45	768	
5	2247	Jarra M.	517 45	226 70	774	
6	2245	Cuenco	517 55	226 70	768	
7	2244	Cuenco	517 57	226 70	768	
8	2243	Cuenco	517 80	226 80	776	
9	2250	Cuenco	517 30	226 60	764	
10	2259	Cantaro	517 18	226 63	762	
11	2266	Cantaro	517 70	226 75	768	
12	2249	Cuenco	517 30	226 65	764	
13	2252	Cuenco	517 45	226 85	768	
14	2257	Cantaro	517 35	226 60	765	
15	2265	Madera	517 80	226 65	763	
16	2161	Jarra	517 40	226 85	758	
17	2263	Cantaro	517 55	226 70	761	
18	2280	Chomba	517 80	226 55	767	2280 Punta
19	2268	Cuenco	517 90	226 40	764	
20	2270	Hueso	517 85	226 35	764	
21	2272	Palo	517 96	226 55	758	
22	2171	Cuenco	517 95	226 82	760	
23	2273	Ollita	518 05	226 85	757	2279Peine
24	2276	Jarra	517 95	226 72	754	
25	2281	Palos	517 98	226 60	754	
26	2282	Taza	517 10	226 85	752	
27	2284	Palo	518 20	226 35	769	
28			517 55	226 55	736	

Figure 16 : High-status Female Burial