

Virtual Valdivia

Abstract

The Valdivia culture of coastal Ecuador dates between 4400 and 1450 BC. It is one of the earliest settled and ceramic producing traditions in the Americas. For all this, however, archaeological understanding of this important time period is limited. This is due, in part, to a problem encountered in many regions around the world, namely that archaeological data is frequently siloed, either in gray literature or in monolingual publications that are inaccessible due to cost or restricted distribution.

The purpose of this database is to provide a centralized repository for data concerning ceramics from the Valdivia culture. Virtual Valdivia will host the data that underlays archaeological interpretation, encouraging archaeologists to undertake meaningful inter-site analyses and help build a regional understanding first, of ceramic variation and secondly, of the social practices in existence during this time period.

The current data is derived from excavations at the site of Buen Suceso, and focuses on Phases VI and VII of the Late Valdivia period. Additional data will be added from grey literature, such as unpublished theses and dissertations and site reports as author permission is obtained. If you are interested in contributing your data please contact the database editor.

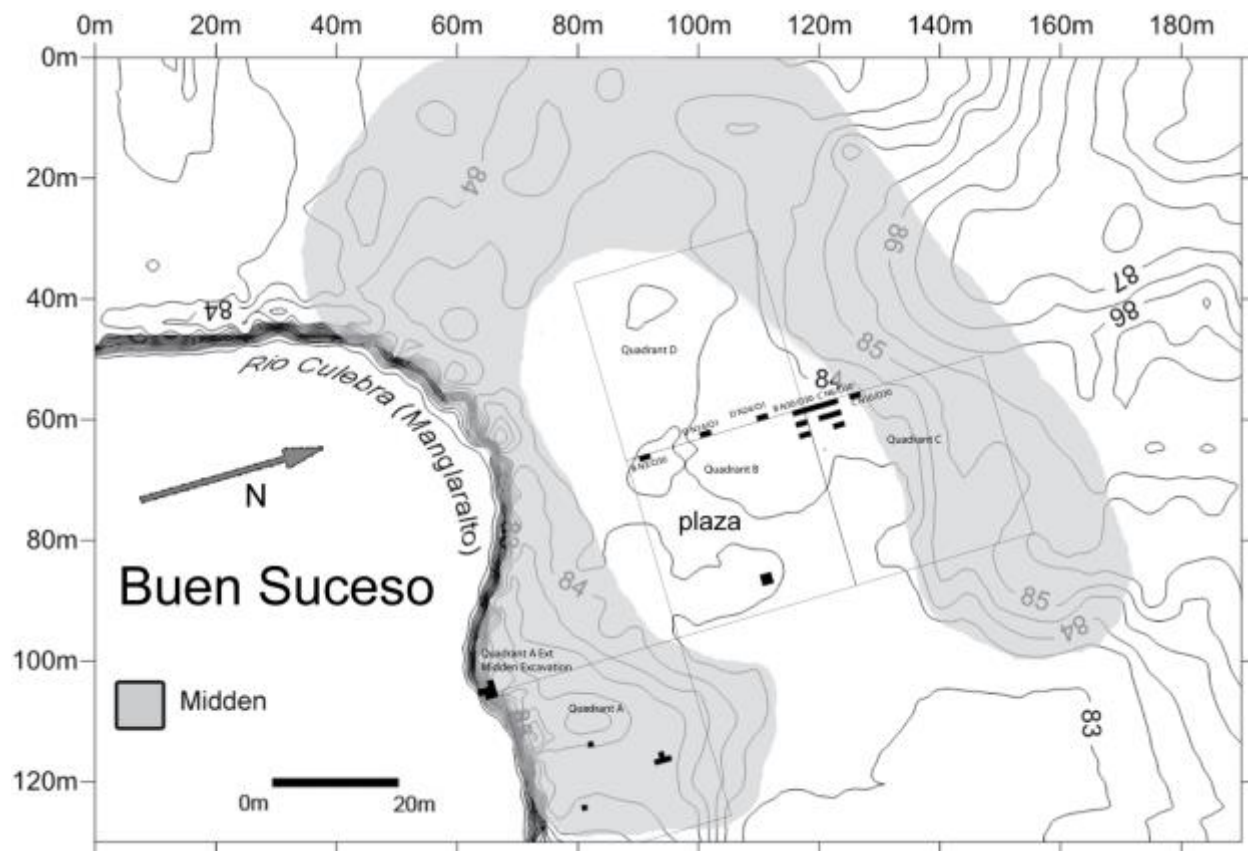
Descriptive Attributes

Artifact Record: the two letter prefix of each artifact record indicates the site that the artifact came from (see below). “BS” indicates ceramics from Buen Suceso.

Site: The archaeological site where the artifact came from.

Buen Suceso

Buen Suceso is a Late Valdivia site located 9km inland along the Manglaralto Valley in the Santa Elena Province of coastal Ecuador. The site was excavated by Sarah Rowe for her dissertation research in 2009 and 2010. Unusual amongst other Late Valdivia sites, Buen Suceso is characterized by a circular-shaped midden surrounding a cleared plaza area, reminiscent of Early Valdivia phase settlements. The site measures approximately 130 meters by 100 meters and presents an elevation difference of approximately 2.5 meters from the highest points on the top of the encircling midden to the low points located within the large central depression. This size is similar to that noted for Early Valdivia sites elsewhere (eg. Stahl 1984, Marcos 2003). Radiocarbon dates and ceramic analysis from Buen Suceso indicate approximately a 300-year occupation centered around 2000 BC, during Valdivia Phase VI and Phase VII (Rowe 2014).



Buen Suceso site map.

The 2009-2010 excavations concentrated on two areas of the site, a deep midden excavation located on the southeast arm of the ring midden (labeled “Midden SE” in the database), and a discontinuous trench excavation extending from the center of the site to the interior limit of the ring midden to the north (labeled “Trench 1” in the database). See also descriptions of the “Area” variable.

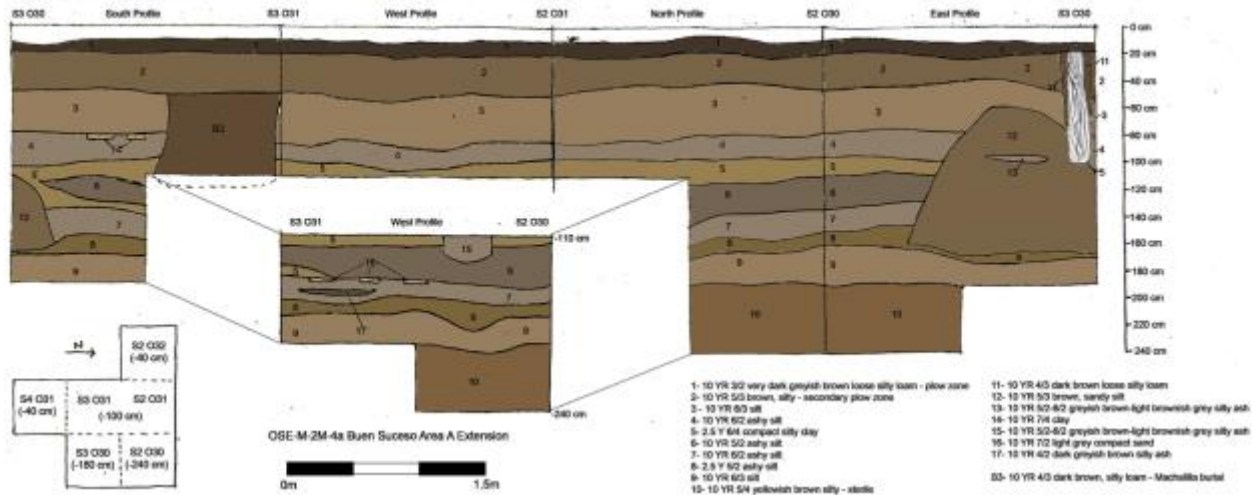
AREA:

Midden SE

The midden deposit is a raised horseshoe-shaped ring defining the site’s outer boundary. The midden is characterized by higher artifact densities and soils with higher ash content than the areas inside or outside of the midden. A 2x2m pit was excavated in the southeast corner of the site.

A datum stake, measuring 85.2 meters above sea level, was placed on the ground surface adjacent to the midden excavation unit and was used to record all midden excavation levels. Two meters of midden deposits were excavated before reaching sterile soil. In the absence of changes to natural stratigraphy, these two meters were excavated in 10cm arbitrary levels (see also the discussion of the “Level” variable). Throughout the midden the soil had high ash content, varying only slightly between grey and yellowish grey. Because of the slight color

differences between soil types, texture was often a better indicator of a new stratigraphic layer. Soil changes between the stratigraphic layers were often not immediately apparent during excavations and would only appear as the soil was left to dry for a brief period.



Stratigraphic profile of the Midden SE excavation.

Post-excavation analysis revealed a total of twenty excavation levels (see, “Level”) grouped into nine layers of cultural material (see, “Layer”) as well as nine additional features located within various levels. This post-excavation analysis showed that the two uppermost layers were primary and secondary plow zones; materials from these layers have been excluded from this database.

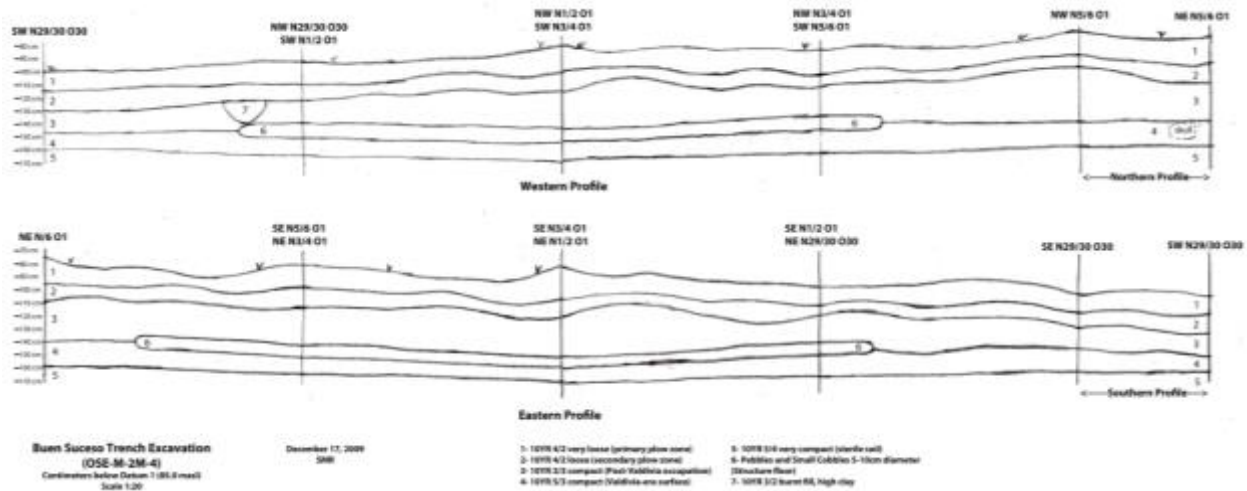
Trench 1

The second area excavated at Buen Suceso was the north half of the site, including the central open area extending out to the midden ring. The excavation team placed a discontinuous trench extending from the center of the suspected plaza north to the edge of the surrounding midden. Eight 2x1 meter units were placed at intervals along a single axis to record stratigraphic changes across the site. A datum stake measuring 85.0 meters above sea level was placed at ground level adjacent to the trench excavation units to record all excavation levels for this portion of the excavation. The discontinuous trench, stretching across 40 meters, has a change in elevation of one meter from the edge of the midden to the center of the site.



Schematic plan of Trench 1 excavation units.

Stratigraphy is remarkably uniform across the entire site (see Figures 18 to 22). Five soils compose the entire site, with the exception of feature matrices, including a structure floor and the various layers contained in the encircling midden (see Table 3). As in the midden excavations, Layers 1 and 2 are plow zones. Layer 3 is a compact silt with lots of organic material, comprised primarily of Valdivia artifacts and soil washed down from the raised midden into the center of the site. Layer 4 is the actual living surface of Buen Suceso, the ground on which the Valdivia people would have walked. Layer 5 is sterile soil immediately underlying the lived surface. Layer 6, noted in the stratigraphic profile, is the living floor of Structure 1 (see, “Layer”).



Stratigraphic profile of main group of Trench 1 excavation units, illustrating the stratigraphic sequence found across all Trench 1 excavations.

UNIT:

Unit designations indicate the 2 meter by 1 meter excavation zones utilized within the Trench 1 excavations. Unit designations are not used for the Midden SE excavation.

LEVEL:

Excavations at Buen Suceso were conducted according to 10 centimeter levels in the absence of any stratigraphic changes, and later grouped into stratigraphic layers for analysis of site layout and artifacts (see, “Layers”). Thus, for example, a stratigraphic layer measuring 45 cm in depth would have been divided into five levels during excavation (four levels for the initial 40 cm, and a fifth level for the final 5 cm of stratigraphic depth). Level designations also include special features, such as pits, that are associated with specific levels (“12F1” is one such example, located within the Midden SE excavation area).

LAYER:

Layers are stratigraphic designations that include multiple excavation levels. Layers are distinguished from one another by changes in the color or texture of the soil.

Table: Correlation of Midden SE excavation Levels and soil Layers.

Soil Layer	1	2	3	4	5	6	7	8	9
Excavation Level	1 & 2	3,4,5	6,7,8,9	10 & 11	12	13 & 14	15 & 16	17 & 18	19 & 20

Vessel Type: all Valdivia vessel forms fall into one of two categories, bowls and jars.

Phase Number: phases and periods are assigned to excavated contexts by the scholars who conducted the field research. These phases and periods are derived from the work of Hill (1972/1974) and discussion of the absolute dates pertaining to each phase can be found in Marcos and Michczynski (1996) and Zeidler (2003). The following phases, periods, and corresponding calibrated absolute dates are utilized in this database:

Phase	Period	Duration (years BC)
VIIIb	Terminal	1600-1450
VIII	Terminal	1800-1600
VII	Late	1950-1800
VI	Late	2100-1950
V	Late	2250-2100
IV	Late	2400-2250
III	Middle	2800-2400
IIb	Middle	3000-2800
IIa	Early	3300-3000
Ib	Early	3800-3300
Ia	Early	4400-3800

Vessel Shape: The following vessel shapes have been identified among current Valdivia samples. This is not a comprehensive list of all Valdivia vessel shapes, but rather a comprehensive list of the shapes found in this database. Thus, this list will be updated as necessary.

Everted Flare Rim Jar: Everted Flare Rim jars are globular jars topped by outward flaring necks. These vary between straight, everted necks extending outwards at a 45-degree angle from the body of the jar, to a slightly curved neck. In the shape classes defined by Anna Shepard these can be considered “inflected contours of independent restricted vessels” (Shepard 1956: Figure 22).

Cambered Rim Jar: Cambered Rim Jars are s-shaped in profile, with highly decorated upper portions on top of globular jars. These upper portions can mimic the various bowl shapes, but in the absence of the portion of the jar below the camber they are still distinguishable from the rims of bowls because the lips of cambered rim jars have a broader, triangular shape than do bowls. In the shape classes defined by Anna Shepard, these can be

considered “complex contours of simple and dependent restricted vessels” or “independent restricted vessels” (Shepard 1956: Figure 22).

Insloping Neck Jar: Insloping Neck Jars have rim forms that slope inwards from a globular body. In the shape classes defined by Anna Shepard these can be considered “simple contours of simple and dependent restricted vessels” (Shepard 1956: Figure 22).

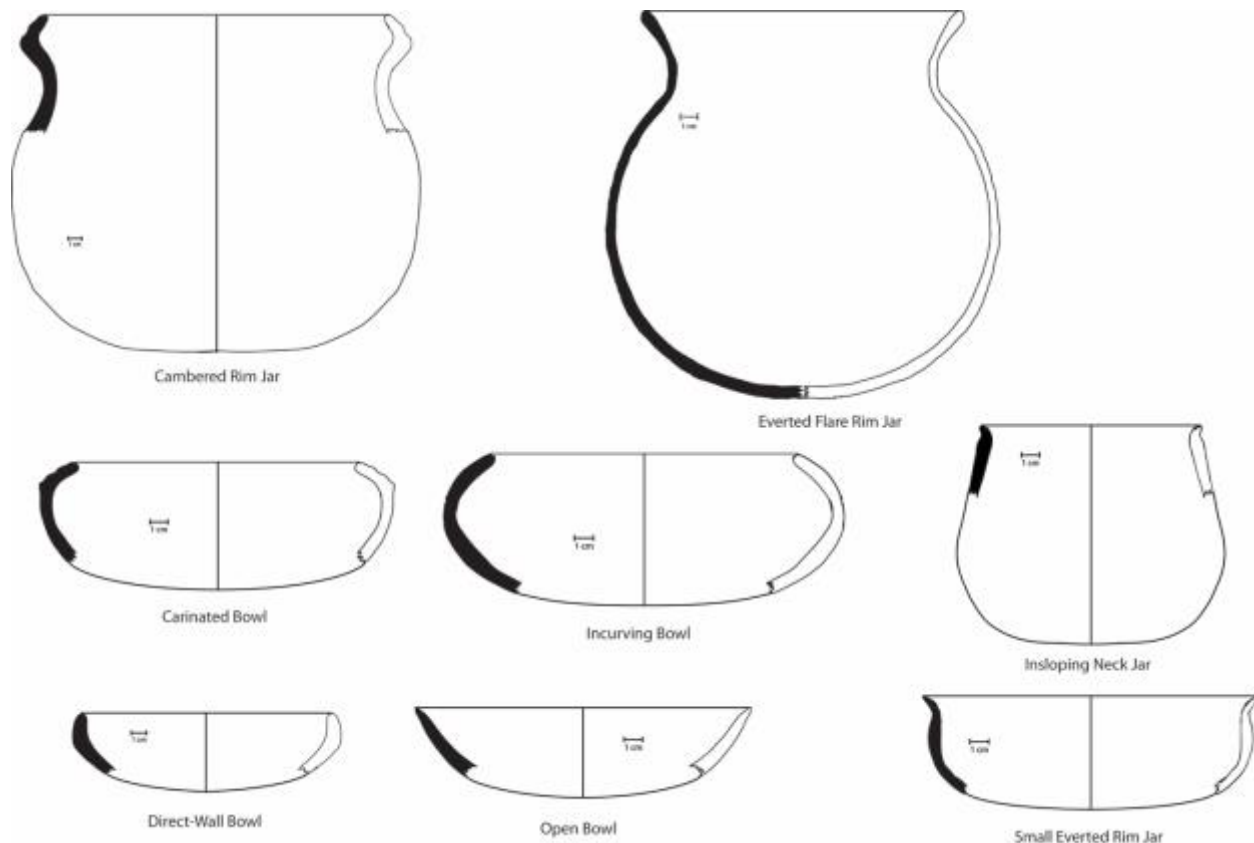
Small Everted Rim Jar: Small Everted Rim Jars are globular in shape, slightly incurving, with a sharply everted rim just below the lip. In the shape classes defined by Anna Shepard these can be considered “inflected contours of independent restricted vessels” (Shepard 1956: Figure 22). Small Everted Rim Jars may be considered a liminal vessel form, between jars and bowls. Given that many sherds do not include enough of the vessel wall to fully determine body shape, the similarity of this vessel form and Everted Flare Rim Jars (namely, the flared, everted rim) has resulted in the inclusion of this vessel shape in “jar” category.

Carinated Bowl: Carinated bowls display a sharp shoulder marking the juncture at which the shoulder begins to restrict the vessel opening. In the shape classes defined by Anna Shepard (1956: Figure 22). Carinated Bowls can be considered “composite contours of simple and dependent restricted vessels.”

Incurving Bowl: Incurving bowls curves inwards to varying degrees, either curving slightly close to the rim, or beginning this curve near the midpoint of the vessel height, creating an almost crescent shape for the whole vessel. In the shape classes defined by Anna Shepard these can be considered “simple contours of simple and dependent restricted vessels” (Shepard 1956: Figure 22).

Direct-Wall Bowl: Direct-Wall Bowls have walls and rims that intersect at angles close to 90 degrees. In the shape classes defined by Anna Shepard, these can be considered “simple contours of unrestricted vessels” (Shepard 1956: Figure 22).

Open Bowl: Open Bowls flare out from the base, some to such a degree that they are almost triangular in shape. In the shape classes defined by Anna Shepard these can be considered “composite contours of unrestricted vessels” (Shepard 1956: Figure 22).




Rim Diameter (cm): The rim diameter for each sherd was measured by inverting the sherd and placing the rim on a diameter measurement board. Rim measurements were recorded in centimeters. Sherds representing 5 or more percent of the entire rim are included in the database. Minimum rim percentages may vary by assemblage but will never be less than 5%.






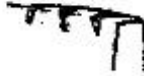


% of Rim: The percentage of the entire vessel rim represented by the artifact.

Rim Angle: Rim angles for each sherd were calculated from the drawn rim profiles, using a protractor to measure the angle at which the sherd fell away from the plane of the vessel opening. These angle measurements were recorded to the nearest multiple of 5 degrees.



Vessel shape variables include the following categories: Lip Treatment, Rim Mod, Neck Form, Body Shape, and Base Shape. These variables and their specific attributes are derived from Marcos (1978:81-84).








Lip Treatment:

Description	Example
Moderate to thin symmetrical, sharp edge	

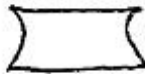


Moderate to thin symmetrical, rounded edge	
Asymmetrically tapered edge, flat interior	
Asymmetrically tapered edge, flat exterior	
Evenly rounded	
Blunt	
Indented	
Impressed	
Undulated	


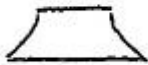

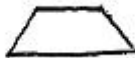

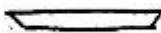
Rim Mod: Rim Modification. Categories 7 through 9 (Everted rim, Inverted rim, and Straight rim) of Marcos's (1978) methodology are excluded as they are less precise measures of Rim Angle, which forms a separate variable in this database.

Description	Example
Direct rim (no modification)	N/A
Folded rim, plain	
Folded rim, piecrust	

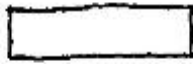

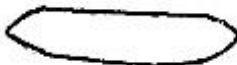

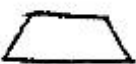
Thickened rim, exterior	
Thickened rim, interior	
Thickened rim, piecrust	
Thickened rim, maize impressed	
Thinned rim	
Thickened rim, both sides	
Insteped rim	


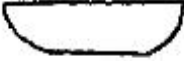
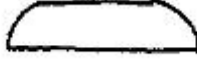


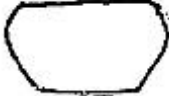
Neck Form: This attribute describes the shape of the vessel neck, located below the rim but above the body. Only jar forms have necks, and thus only jar forms include this data attribute.

Description	Example
No neck (bowl)	N/A
Concave walls	
Convex walls	
S-shaped walls	





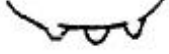
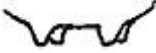
Rectangular walls	
Concave trapezoidal; narrow top, broad base	
Concave trapezoidal; broad top, narrow base	
Trapezoidal; narrow top, broad base	
Trapezoidal; broad top, narrow base	
Short trapezoidal; broad top, narrow base	

Body Shape: This variable describes the overall vessel shape below the rim (or below the neck, in the case of jars). Some sherds have no attribute data recorded for this variable, indicating that an insufficient amount of vessel wall was included on the sherd in order to make a reliable estimate.

Description	Example
Unknown	Insufficient portions of the vessel body were present to make a determination.
Rectangular	
Globular	
Lentiform	
Trapezoidal; broad top	
Trapezoidal; narrow top	

Biconvex section	
Trapezoidal convex wall; broad top	
Trapezoidal convex wall; narrow top	
Deep globular	
Pear shape	
Inverted pear shape	

Base Shape: This variable describes the base of the vessel. Frequently, recorded artifacts were not found with an intact base and thus no attribute data is provided.

Description	Example
Unknown	Insufficient portions of the vessel base were present to make a determination.
Flat or slightly convex to concave bottom	
Rounded bottom	
Dimple bottom	
Rounded bottom, deep	
Rounded bottom, with tripod	
Rounded bottom, with tetrapod	

External Polish: The presence of polish on the exterior of the vessel was recorded as either present (“polished”) or absent (“unpolished”).

External Slip: The presence of slip on the exterior of the vessel was recorded as either present (“slipped”) or absent (“unslipped”).

External Slip Color: Slip color on the exterior of the vessel was assessed on a nominal scale using the following values: None (indicating that no slip was present), Dark Grey/Black, Dark Brown, Red, Light Brown/Cream, Light Grey.


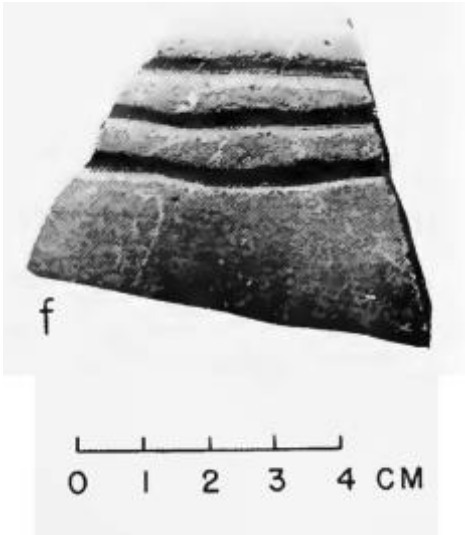
Internal Polish: The presence of polish on the interior of the vessel was recorded as either present (“polished”) or absent (“unpolished”).

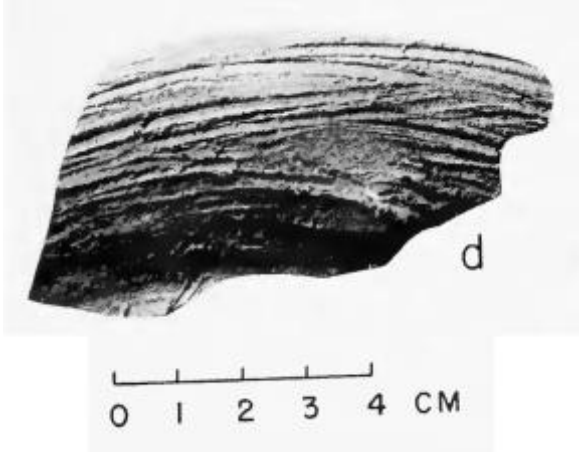
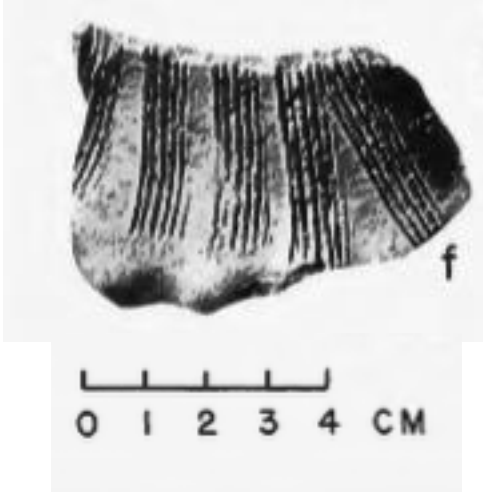
Internal Slip: The presence of slip on the interior of the vessel was recorded as either present (“slipped”) or absent (“unslipped”).



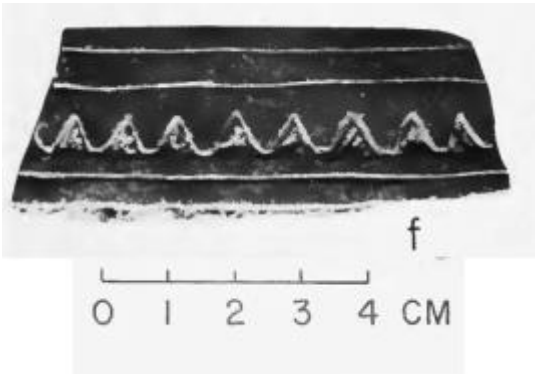
Internal Slip Color: Slip color on the interior of the vessel was assessed on a nominal scale using the following values: None (indicating that no slip was present), Dark Grey/Black, Dark Brown, Red, Light Brown/Cream, Light Grey.

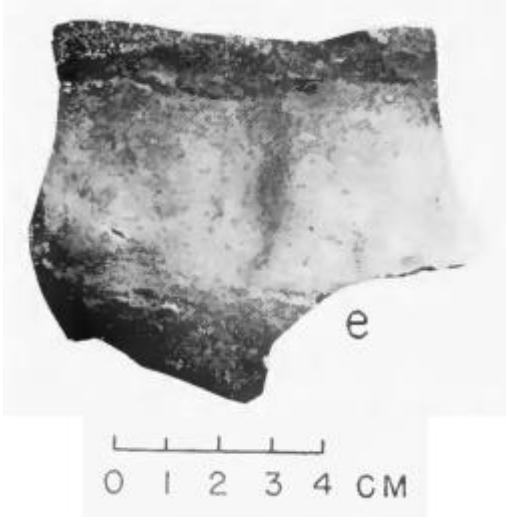

Design: Designs recorded in this database are derived from the categories presented in Meggers et al. (1965). A single sherd could have more than one design element. Design elements include:



Design Element	Example	Description	Caption
No decoration	N/A	No additional decoration, other than possible polish or slip finish, is present on the sherd	N/A


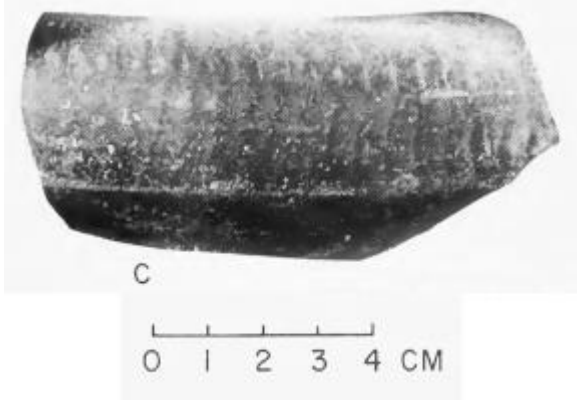
<p>Applique-Fillet</p>		<p>Narrow, thin strips of clay were applied to the exterior surface and pressed to the vessel at intervals to create an alternating pattern of raised and depressed areas (Meggers et al. 1965:45).</p>	<p>Applique-Fillet sherd example (redrawn from Meggers et al. 1965:Plate 26s).</p>
<p>Broad-line Incised</p>		<p>Broad-line designs were created by carving designs into wet clay. As the name implies, these lines are wider than those of the "Incised" types. Broad-line designs are predominantly rectilinear, sometimes with rounded corners or undulations (Meggers et al. 1965:46).</p>	<p>Broad-line Incised sherd example (redrawn from Meggers et al. 1965:Plate 31f).</p>

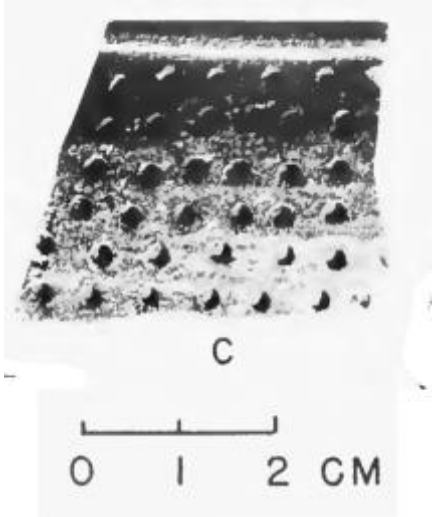

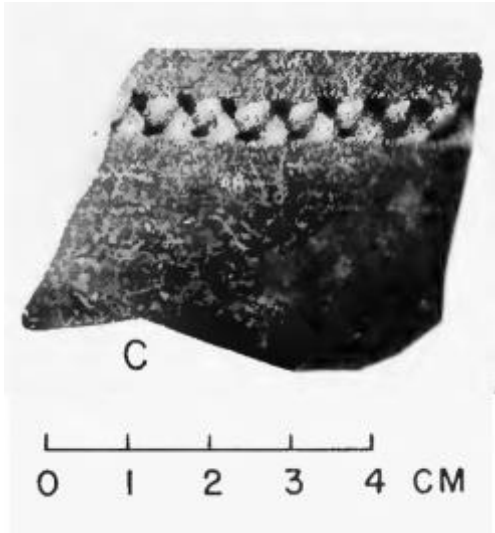
<p>Brushed</p>		<p>Brushed designs were made by dragging some type of comb lightly over the exterior surface of a vessel while the clay was still wet. This generally creates an all-over textural effect, but occasionally occurs in bands or stripes (Meggers et al. 1965:51).</p>	<p>Brushed sherd example (redrawn from Meggers et al. 1965:Plate 43d).</p>
<p>Combed</p>		<p>Combing is characterized by generally parallel grooves running in straight or wavy lines over the surface of the vessel, as if someone had drawn a comb through the wet clay (Meggers et al. 1965:54).</p>	<p>Combed sherd example (redrawn from Meggers et al. 1965:Plate 48f).</p>

<p>Corrugate d</p>		<p>Unsmoothed, overlapping coils producing varying projecting rows along the body of the vessel (Meggers et al. 1965:56).</p>	<p>Corrugate d sherd example (redrawn from Meggers et al. 1965:Plate 53a).</p>
<p>Cut and Beveled Rim</p>		<p>As suggested by the name, this decorative type is characterized by notches cut out of the rim ((Meggers et al. 1965:57).</p>	<p>Cut and Beveled rim sherd example (redrawn from Meggers et al. 1965:Plate 56e).</p>
<p>Excised</p>		<p>Broad, carved designs, often displaying fine lines in the bed of the carving, characterize these excised decorations (Meggers et al. 1965:58).</p>	<p>Excised rim sherd example (redrawn from Meggers et al. 1965: Plate 59f).</p>

<p>Finger Grooved</p>		<p>Finger grooved designs were created by pressing fingers into the surface of wet clay and drawing them downward (Meggers et al. 1965:61).</p>	<p>Finger Grooved sherd example (redrawn from Meggers et al. 1965:Plate 65e).</p>
<p>Folded/Pie Crust Rim</p>		<p>Folded rims were created by folding out and pressing down the edge of clay onto the exterior surface of the vessel, creating a pinched edge. In some variations the rim was also pressed down at intervals by the finger, creating a wavy surface imitative of a pie crust (Meggers et al. 1965:91).</p>	<p>Folded pie crust rim example (redrawn from Meggers et al. 1965:Plate 95o).</p>

<p>Handles</p>		<p>Small lug handles linking the lip of the vessel to the top of the shoulder. Originally described as a variant of Incised decoration by Meggers et al. (1965:65), but occurring in combination with other decorations.</p>	<p>Example of sherd with handle (redrawn from Meggers et al. 1965:Plate 72f).</p>
<p>Incised</p>		<p>Incised lines drawn into wet clay, often pushing up a ridge of clay on both sides of the incision and creating a roughened surface. These incisions are clearly defined and generally clustered, often in parallel or zig-zag designs (Meggers et al. 1965:63).</p>	<p>Incised sherd example (redrawn Meggers et al. 1965:Plate 67a).</p>

<p>Nicked Rib or Nubbin</p>		<p>Applique ribs or nubbins were typically applied to the exterior of the rim, often with notch marks cut into them (Meggers et al. 1965:69).</p>	<p>Nicked rib sherd example (redrawn from Meggers et al. 1965:Plate 85I).</p>
<p>Pebble Polished</p>		<p>Pebble polished ceramics are characterized by vertical ripples in the fabric of the clay made by deeply rubbing polishing stones during the finishing process. These marks can range from slight ripples to deep grooves around the exterior surface (Meggers et al. 1965:70).</p>	<p>Pebble polished sherd example (redrawn from Meggers et al. 1965:Plate 91c).</p>

<p>Punctate</p>		<p>Punctations vary in form and depth, including circular, ovoid, rectangular, and trianguloid. This indicates that a wide variety of tools were used to make these punctates (Meggers et al. 1965:80).</p>	<p>Punctate sherd example (redrawn from Meggers et al. 1965:Plate 100c).</p>
<p>Red Zone Punctate</p>		<p>Broad-line incisions define zones that are filled with punctuation, on red slipped vessels (Meggers et al. 1965:81).</p>	<p>Red zone punctate sherd example (redrawn from Meggers et al. 1965:Plate 105d).</p>
<p>Rocker Stamped</p>		<p>Rocker stamping was executed in broad horizontal lines by rocking and dragging a broad ended tool, which produced a series of interlocking trianguloid depressions</p>	<p>Rocker stamped sherd example (redrawn from Meggers et al. 1965:Plate 107c).</p>

		(Meggers et al. 1965:82).	
Shoulder or Neck Nodes		Shoulder or neck nodes are made by drawing down a portion of clay into a node, generally located along the shoulders of Carinated Bowls or at the limit between the upper portion and the neck of Cambered Rim Jars. These were not illustrated in Meggers et al. (1965) but are present in other Valdivia assemblages.	Shoulder node example (redrawn from Rowe 2014:719).

Temper Type: Material inclusions are added to clay in order to increase resistance to thermal stress. Common temper types are fibers (grass), grit (including sand), grog, and shell. Tempers were identified through microscope analysis of fresh breaks. Grit tempers of various sizes are most common for Valdivia pottery.

Inclusion Size: This variable was based on an ordinal measurement of temper inclusions in the past. Those inclusions 1 mm or less in diameter were recorded as “small”, those 1-2 mm as “medium”, and those greater than 2mm as “large”. No visible inclusion was recorded as “no visible inclusion”.

Maximum Wall Thickness (cm): The thickest point of the sherd in profile, measured in centimeter.

Minimum Wall Thickness (cm): The thinnest point of the sherd in profile, measured in centimeter.

Average Wall Thickness (cm): The average between the maximum and minimum wall thicknesses, measured in centimeter.

Wall Thickness Difference (cm): The difference between the maximum and minimum wall thickness, measured in centimeter.

Reference: The source from which the data is derived (generally a thesis, dissertation, or site report).

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