THE UNIVERSITY OF CALGARY

It's All In The Stones: Identifying Early Formative Period Transition Through the Incised Stone Figurines of Valdivia, Ecuador.

by

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A DISSERTATION

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES

IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE

DEGREE OF DOCTOR OF PHILOSOPHY

DEPARTMENT OF ARCHAEOLOGY

CALGARY, ALBERTA

5 April, 2001

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Abstract

The Early Ecuadorian Formative is noted for the development of ceramic technology in that part of South America. Ceramic materials are recovered from the lowest levels of the cultural occupation known as Valdivia, an occupation predated so far only by the preceramic Las Vegas culture. The eight-phase Valdivia temporal span is subdivided into three periods of Early, Middle, and Late Valdivia, that make up the Early Formative period. Ceramic style and design can be seen to evolve throughout this period, as do the ceramic figurines of the Middle and Late periods. The Early Valdivia Period is notable for the presence of stone carved figurines and the lack of ceramic figurines at a time when ceramic vessels became widespread. The development of stone figurines, and their eventual replacement by ceramic figurines occurs at the transition from Early to Middle Valdivia. This is a time when a major shift occurs in Valdivia settlement patterns, agricultural intensification, and ritual performance, although the changes in ceramic vessels are consistent with long term development. This dissertation will show that it is through the changes in figurine use and material of manufacture that these changes in cultural activity can best be identified. The move from figurines of stone to ceramic indicates a change in ideology that may be the result of external influence or internal growth, but which definitely is represented in the artifact record through stylistic modification.

Acknowledgements

Many people have contributed to the completion of this dissertation in numerous ways. I hope that most of them knew how appreciative I was of their efforts during the research and writing process when it counted most, and that if there is anything of value in the work that follows, it is largely due to the contributions of the people listed below. Theirs was the support that enabled the achievement of a dream. Any mistakes, omissions or other lapses in procedure or presentation are mine alone.

I would like to begin by thanking the members of my examination committee, Dr. J. Scott Raymond, Dr. Patrick Carmichael, Dr. Richard Callaghan, Dr. Dan Mato, and Dr. James A. Zeidler. They had the unenviable task of sifting through all my suppositions, suggestions, and conclusions, and then determining whether I had substantiated them. I appreciate their comments, suggestions and questions.

Two of the committee members in particular must be singled out for their support. Scott Raymond first introduced me to the stone figurines of Valdivia but his support extended even further. Through course-work and discussion my views on Andean archaeology, and archaeology in general, were both challenged and enhanced. When I had doubts about my research, or my own ability, I always felt better about myself after speaking with Scott; a gift for any professor to have. I am grateful for the time we spent together. Equally as supportive was Patrick Carmichael who approached my research from a different perspective, providing contrasting viewpoints which kept me focused on the research problem at hand, and who also took an early interest in my graduate career. With Patrick's help I was able to achieve my goal of visiting Loma Alta where most of my database figurines were recovered. In a short span of time we managed to make a memorable trip through Valdivia country; not to mention our unforgettable visit to Isla Puná.

My research fieldwork in 1999 and 2000 was supported by the Department of Archaeology, University of Calgary, through the Martha Biggers Anders Award (1999), Jack Carter Award (1999, 2000), and Graduate Research Scholarships (1999, 2000). Without this funding, research would not have been possible.

In Quito I was allowed access to several museum and private collections of figurine materials that greatly expanded my database. Thanks must go to Dr. Patricio Moncayo E. and Lic. Lupe Cruz DH at the Museo Weilbauer - PUCE (Pontifica Universidad Católica del Ecuador) who provided access to the materials from La Clementina, Sr. Ivan Cruz, and Sr. Alexander Hirtz. Entry to the private collections was facilitated by Dr. Karen Stothert whose contributions to this study resulted in very productive field seasons.

Also in Quito I enjoyed the friendship and companionship of Dr. John Topic and Dennis Davies. It was John who first introduced me to archaeology in the highlands of Ecuador along with Dr. Theresa Topic, and who supervised my early Andean studies. Dennis shared the Ecuadorian experience during his own graduate research and later accompanied me on my first field season to the coast for this study.

In Guayaquil research was conducted at: the Museo del Banco Central with the help of Maritza Freire, Grelia Palacios, and Inés Orellana; Museo del Banco del Pacifico with thanks to Cecilia Pérez Huerta and William Burgos G. *'restaurador,'* who worked on the original Loma Alta collections; Museo Nahim Isaías B., at Filanbanco where Javier Véliz Alvarado and Dr. Luis Plaza Febres-Cordero offered me complete access to the figurines.

In Cautivo, on the Santa Elena Peninsula, I was fortunate to spend two field seasons with Karen Stothert who introduced me to the archaeology of coastal Ecuador, benefiting from her 30 years of experience. In the first year I had the pleasure of spending time with her husband Neil Maurer and daughter Molly. They welcomed me into their family group and introduced me to fellow graduate student Ben Carter who accompanied us on our travels around the peninsula. The second season was even more illuminating as we toured

the area, excavated preceramic sites, and repaired the vandalised field station. I cannot thank Karen enough for her support, friendship, and encouragement. This project might still be in the research stage if not for her contributions. I am constantly encouraged by her drive and commitment to Ecuadorian archaeology.

There are many people in the Department of Archaeology at the University of Calgary who have contributed time and effort to not only my research, but also to my stay in Calgary: in the department office Lesley Nicholls, Linda Berreth and Joanne Braaten have always provided support when needed; Judy Klassen assisted with the analysis of figurine stone materials; Santiago Mora helped me improve my Spanish while discussing theory and graduate life; and Janet Blakey, Brian Vivian and Jennifer Tischer rounded out our, "The Marshalltowns," trivia team sharing social activities and friendship. To all of them, and my fellow grad students, I am grateful for the time we shared.

I have often considered my time in Calgary, away from my family in Ontario, comparable to being in the field for an extended period, where making a least one good friend can make all the difference between success and failure. The line between friend and family can be very fine. I was extremely fortunate to be able to rely on the support and friendship of Jennifer Tischer, who not only read early drafts of papers and chapters, but also shared many of the same daily frustrations of course work. As one professor observed, ours "was a friendship forged on the front lines of grad school." He was right. Spending almost four years away from home, it was Jennifer who showed me that there was life in and around Calgary worth seeing, and that spending seven days and nights a week in my office was too much for anyone. It also fell to her to deal with the dark moments of self-doubt that periodically arose, requiring admonishments that only true friends can provide. As our friendship continues to grow I no longer remember that point at which my 'friend' became part of the 'family,' just that it happened. Thank you Jennifer for the coffee, the mountains, the badlands, the muskeg, the helicopters, and the smiles.

While this dissertation marks the completion of the past several years of research, it has taken longer to complete the entire process. From the beginning I have received the support and encouragement of my wife Vera and our daughters Devon and Morgan. For the past ten years they have displayed both faith in my abilities and understanding that I could not do what I needed to do from the comfort of my own home. Circumstance dictated that I would not be there for birthdays, senior proms and other special events that normally make up family life. When I became discouraged, there was never any doubt expressed but that I should finish, or any suggestion that I was not where I should be. Theirs was the sacrifice that allowed me to pursue study and research in Calgary and Ecuador to achieve this goal. By telephone and e-mail we were constantly in touch with the day to day operations of family life, but it was an unnatural situation nevertheless. I hope that the end does in some way justify the means. I will always be grateful for their selflessness and their dedication.

To my parents, Doreen and the late Sam Blower, who thought their children could have a better life in Canada and the opportunity for a university education by leaving their own past behind, I can only say thank you. I hope this in some way makes your own sacrifices worthwhile.

To my father,
who taught me
"to thine own self be true"

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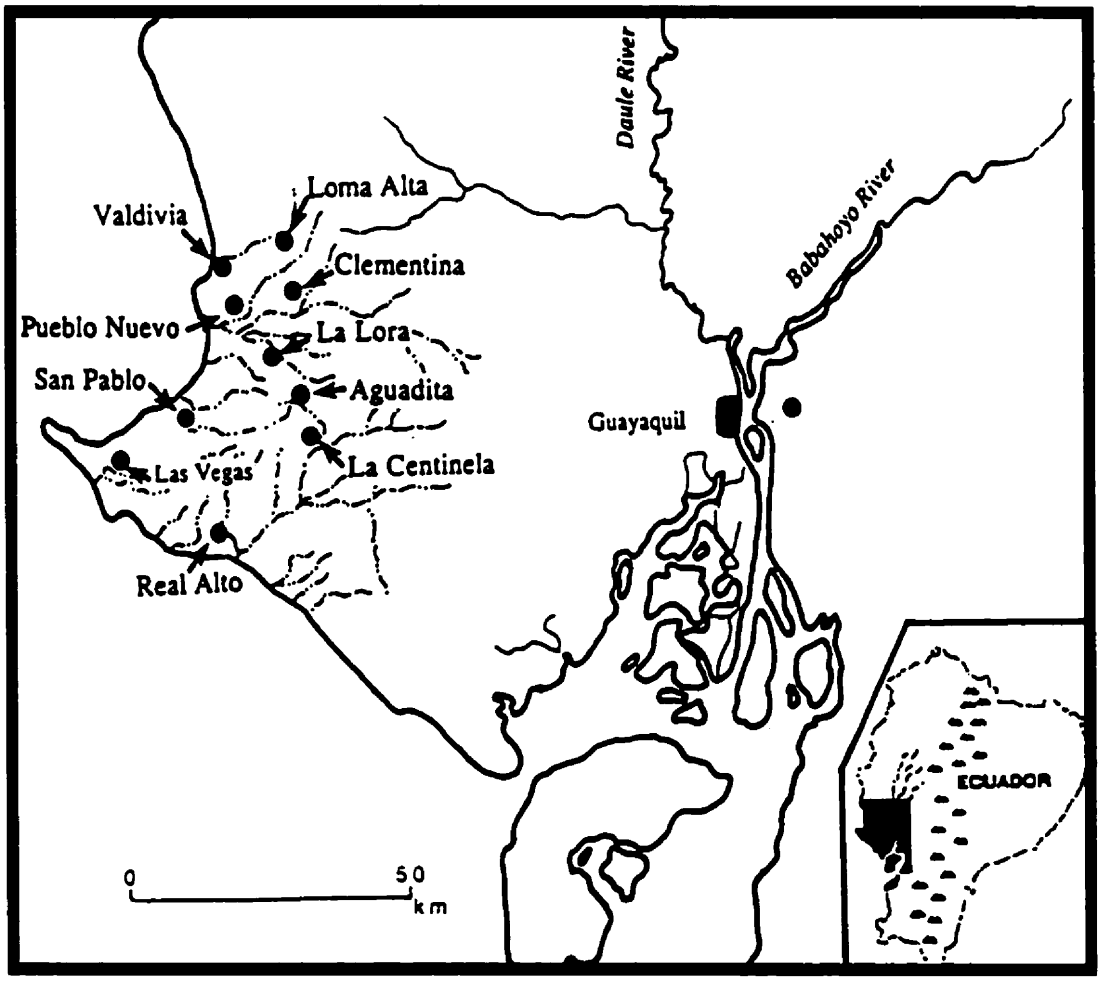
Chapter One

INTRODUCTION

> Unfortunately, most archaeological assemblages are not characterized by extensive numbers of complete artifacts. Particularly if one's research goal is to search for patterns of inter- or intraregional variability in design structure, it is not likely that one's data will be dominated by whole pieces. This lack of whole pieces is in part due to the fact that two primary sources for data appropriate to this goal are (1) regional surveys that may rely on surface collections, and (2) museum collections of previously excavated or collected artifacts from sites or locations within one or more regions. (Conkey 1981:35)

The incised stone figurines of Valdivia occur in the early half of a sequence that lasted from approximately 3300 to 1500 B.C. on the southwest coast of Ecuador (Map 1.1). This early stone figurine complex not only represented ideological constructs, but also, through their eventual transformation, heralded the change in ideology that accompanied the development of Valdivia culture. There is no doubt that the rise of Valdivia and its subsequent spatial patterning, agricultural progress, and ceremonial development was precocious, or that the definition of periods and phases based upon ceramic development identifies the subtleties of change in the material culture over time. However, the reasons for change are not quite as clear, and these changes are not illustrated as prominently in the ceramics as they are through the transition from stone to ceramic figurines.



Map 1.1 Southwestern Ecuador showing locations of the principal Valdivia sites and the Las Vegas site (OGSE-80) (from Raymond 1993:27).

Changes in Valdivia ceramic style identify various stages of development that chronologically separate iconographic images and technical execution from one phase to another (Damp 1982; Hill 1975). In many ways the stone and ceramic Valdivia figurines are representative of particular periods within the phases of ceramic development. However, by approaching the classificatory periods through ceramic change the potential of the figurine data is reduced and made secondary. How different would the Valdivia chronology be if it were based on figurines rather than ceramics? Can both ceramic and stone figurines be used interchangeably to fit within the parameters of the other classification? I think not entirely, as it is obvious that figurine development does not parallel pottery development. The fully formed ceramic figurines did not appear until the end of Valdivia 2, although, unfired clay examples of faceless figurines appear prior to Valdivia 3.

This is not meant to suggest that the ceramic-based classification system is faulty, but that the change is more prominent and identifiable through the figurine data. I suggest that there is a degree of variability within the development and transformation of stone figurines, and the transition to ceramic figurines, that indicates a major event took place between the Valdivia 2 and 3 phases, the Early and Middle Valdivia periods. This process, represents a change in ideology as illustrated by the figurines. I also suggest that this change is not solely a manufacturing transition from stone to ceramic figurines but affected the entire cultural pattern.

A change in population patterns and the positioning of settlements during Middle Valdivia (Schwarz and Raymond 1996), the transition of larger Valdivia sites such as Real Alto into ceremonial centres with a smaller resident population during the Middle to Late Valdivia period, the change in household size and spatial separation, and the increase in maize agriculture, all demonstrate a change in domestic and social relationships (Marcos and García 1988:37; Raymond 1993:29-30; Schwarz and Raymond 1996:28; Zeidler 1984).

This suggests that the incised stone figurines of the Early Valdivia period represent the end of one form of ideology that is then replaced, or at least significantly altered, by another form as a cultural fluorescence occurs. How this change occurred cannot be answered as easily as it is identified. Figurine development does isolate this change, and archaeological investigation confirms the chronology of figurine transition between Valdivia 2 and Valdivia 3, at which time other significant cultural changes are taking place.

The importance of the figurines to ideology may be as the representation of a specific act, as aids to ritual activity, markers of developmental achievements, or childhood paraphernalia. The physical form and stylistic adornment of the artifact provide partial information on the intended use; context and interpretation must provide the rest. The act of carving a figurine is in itself a paradigm that must be understood if purpose and meaning are to be attempted. Questions concerning functionality versus decoration must be investigated. Do incisions in stone alter to any significant extent the purpose of the stone, especially when contemporary non-incised versions of the figurines exist, or do the incisions merely embellish the original intent of the object?

The figurines of Valdivia were not the first physical manifestations of people and the world around them, or the world they imagined, nor are they an isolated phenomenon, but quite ubiquitous in both the past and present. In the northern Andes anthropomorphic, zoomorphic and geometric figurines occur most commonly in ceramics, but they were also made from textiles (Rowe 1990-91), *Spondylus* shell (Blower 1996:87), bone (Hahn 1991), turquoise (Cook 1992), and ethnographically appear carved from wood (DeBoer 1996; Reichel-Dolmatoff 1961). Figurines of stone, *Spondylus* shell, and turquoise, are all strongly associated with ritual importance, development of power, or, as is thought today (Bolin 1998; Gose 1994), they contain the essence of the life force for the object that is represented. Did the Valdivia figurines contain such a life force? As the earliest documented figurine tradition in the New World we must ask about their cultural importance and their

position as ancestors to many of the later Andean figurine traditions; not overlooking that they may have represented ancestors to the people who made and used them. The underlying pattern of manufacturing figurines might be universal on a structural level, but presentation is culturally specific. This separation is apparent in the incised stone figurines of Valdivia where morphological similarities contrast with incised design elements and information display.

The following chapters will consider the archaeological evidence of stone figurine development as it pertains to the transition from Early Valdivia to Middle Valdivia; after which analogous information will be incorporated into an interpretation of incised stone figurines as objects of material culture and indicators of cultural change.

In Chapter Two I discuss the cultural and environmental background of the southwestern coast of Ecuador and the origins of the Valdivia culture during the Early Formative Period. This chapter places the figurines into the context of previous research. Our understanding of Valdivia figurines has not progressed at the same rate as Formative research has in the past forty-five years. The development of archaeological research projects has consistently realigned chronological and cultural information while the understanding of figurines has remained virtually static. Though mentioned in the context of larger studies, few researchers have considered the figurines in any depth.

The creation of a workable typology has been lacking in Valdivia stone figurine research and this problem is dealt with in Chapter Three. The meaning of style as it pertains to the incised elements on the figurines and the identification of morphological attributes are combined to present a functional typology that allows for statistical definition in both archaeological and interpretative contexts. A three category typology covers the early stone figurines beginning with a distinct group of plain and incised stone figurines, a transitional stage of stone figurines that contain similarities with the later ceramic 'venus' figurines, and another stylistically separated figurine type that appears to be

coeval with a similar line of ceramic figurines. This typology is morphologically based on the figurines themselves and not on function. As such it is a more fundamental method of charting the development of stylistic change and ideological transformation.

Chapter Four continues with the identification of figurine attributes and how they develop throughout the Types. By breaking down the design elements into separate fields on the figurines the 'clutter' of information is reduced to facilitate comparison of the changes identified between categories. This attempt at bringing order to the attributes incised on the figurines provides an opportunity to interpret specific actions from the identifiable variations of the particular style. The isolation of individual gestures or motifs makes comparison with other elements in the same zone possible, and produces an inventory of elements that can be assigned a position of prominence based on the number of appearances.

The analysis of figurine provenience and the figurine collection from Loma Alta, Ecuador, is detailed in Chapter Five. It is from this analysis that information on discard patterns, chronological position of different Types, and stylistic development is assessed. The relationship of artifacts on site, and the problems of excavation are dealt with, giving insight to both the figurines and the indicators of their spatial patterning. Loma Alta provides detailed information on that time period -- Valdivia 1 and 2 -- when the stone figurines were dominant, and is a benchmark by which the figurines of other collections can be compared due to the lack of ceramic figurine influence in the archaeological record.

Chapter Six draws together the various pieces of information collected in Chapters Two through Five and attempts to answer the questions raised during this investigation. At this stage of the study the figurines are dealt with in their own cultural context, placement into a chronology is attempted, followed by the analogous interpretation of other archaeological figurine studies and ethnographic investigations. A more qualitative view of the figurines is also included acknowledging that while the figurines act as indicators of

social change in a long-term sense that allows us to draw lines between blocks of time, it is important to remember that they are objects of Valdivia daily life. As such, they were not intended to tell a story -- as we attempt to make them do -- or support hypotheses on cultural change. Within the broader context of archaeological research the relationship of figurines to human participants should not be overlooked.

The concluding remarks found in Chapter Seven are a summary of the data presented in this thesis. The suggestions of figurine use and the identification of typological variation will contribute to the understanding of Valdivia culture as it developed over time, with less focus on its ceramic precociousness, and offer an alternate means of identifying change and ideological developments.

Chapter Two

THE ENVIRONMENTAL AND CULTURAL CONTEXT

> The chief interest of the geologist is the lithosphere -- primarily the rocks of the lithosphere. His chief goal is to elucidate the natural history of these rocks, which constitute the sole record of the history of the earth itself. This history is reconstructed primarily from the study of the *sedimentary rocks* [emphasis in original]. (Pettijohn 1949:xiii)

During the past 10,000 years, the geophysical conditions of Southwestern Ecuador, from the Manabí coast down to the Santa Elena Peninsula and across to the Guayas Basin, were influencing factors in the environmental challenges faced by the Valdivia people and their predecessors. How the Valdivia people became who they were, and where they were, is an integral part of this study of the incised stone figurines. The influences that affected the Valdivia culture were reflected in their material culture, and none more so than the stone figurines manufactured from sedimentary rocks. Within the stone figurines lies the earliest, most expressive depictions of some part of Valdivian cosmology. The transitional changes that the figurines undergo between Valdivia 1 and 2, and Valdivia 3, illustrate the influences that are concomitant with the development of Valdivia culture through it's later stages. The greatest of these changes occurred between Valdivia 2 and Valdivia 3. While the ceramic assemblage continued developmentally, it is the stone figurines which most accurately indicate the influx of new ideas that appear in Valdivia 3 to Valdivia 6.

ENVIRONMENTAL BACKGROUND

The environment of Southwestern Ecuador at the time of Early Valdivia development is certainly important to any understanding of cultural adaptations and the manifestations of daily life. How cultures functioned within the confines of their resource catchment zones defined how their basic needs were met, and how ritual activity developed to reinforce ideological beliefs and to ensure cultural continuity. In a ritual sense the stone figurines, as the earliest identified manifestation of a figurine tradition, represent an ideological belief; in a more tangible sense they represent the land itself.

The climatic environment of Southwestern Ecuador has changed little since the Late Pleistocene (Stothert 1987:134). The geologic environment has been in place for millions of years. The availability of raw materials for the manufacture of stone figurines remains constant. The onset of oil exploitation in Ecuador produced modern geologic studies that began to document the country in 1916 (Marks 1956:277). Because of the vested interests of international oil companies the geology of southwestern Ecuador is available to assist archaeological research.

A variety of rock formations is present in Southwestern Ecuador. These formations include basalt, andesite, diabase, lavas, pyroclastics, conglomerate and indurated shale and sandstone (Marks 1956:277). Clastic sediments appear only in southwestern Ecuador and form the base of a range that runs northwest from Guayaquil between the Guayas River and the Santa Elena Peninsula (Marks 1956:279 - 280).

There are three types of rock in these deposits: light-greenish shale and greenish-brown sandstone of predominantly volcanic materials; chert with siliceous limestone; and sandstone and dark-gray shale that includes the Estancia, Chanduy, San José shale, and San

José sandstone formations. Most of these materials have been in place since the Late Jurassic, the Cretaceous, and the Paleocene, with the development of shallow-water siltstone and fine-grained sandstone during the Lower Miocene (Marks 1956:286); the relevance of these rock formations to this study concerns the local availability of materials utilised in the manufacture of the stone figurines. There is nothing exotic about the material and any importance attached to the figurines is not based on this kind of association as with other materials -- such as *Spondylus*, obsidian or turquoise --that were traded or collected over long distances.

CULTURAL BACKGROUND AND RECENT RESEARCH

It is into this environmental background that the predecessors of the Valdivia people appear. Early archaeological investigations by Edward P. Lanning (1967) on the Santa Elena Peninsula identified preceramic cultural phases that contained four lithic complexes which extended from the Late Pleistocene to the Early Holocene: Exacto (ca. 12,000 BP), Manantial (ca. 10,000 BP), Carolina (ca. 9000 BP), and Las Vegas (7000 - 8700 BP). The first three lithic complexes were rejected by Karen Stothert (1983) who convincingly argued that they were not substantiated by archaeological investigation. However, Stothert was able to identify remains from the preceramic Las Vegas culture occupying the Santa Elena Peninsula and extend its temporal range to between 10,000 and 6600 years ago (Stothert 1983, 1985). To date it appears that the Las Vegas people are little more than geographic ancestors to the Valdivians as no direct relationship can be supported. Stothert (1992:45) suggests that it was from some of these Vegas-related groups, who were already undergoing the intensification of economic and social strategies, that Valdivia emerged into the

Formative Period. The question of the approximate 1100 year gap in chronology between Vegas and Valdivia is still problematic since archaeological evidence of human occupation during that time has yet to be identified.

Early human habitation of the Santa Elena Peninsula is identified with people typifying the Tropical Forest Culture who migrated onto the southwestern coast of Ecuador (Lathrap 1970:66-67; Stothert 1985:633, 1992:47). Ceramic evidence from Early Formative sites similar in nature to both Tropical Forest systems and Valdivia sites is located to the east of the Colonche Hills in the Guayas Basin (Raymond, Marcos and Lathrap 1980:700). This might indicate that the origins of Valdivia lie somewhere to the east of the Colonche Hills, but the identification of archaeological materials is weak in that region due to environmental problems and preservation.

The movement of Valdivian groups from the Guayas Basin across the Colonche Hills to the Pacific drainage might have eventually brought them into contact with groups further down the Santa Elena Peninsula, although we do not know what happened to the descendants of Las Vegas. A difference in settlement pattern between Vegas and Valdivia sites (Spath 1987:126) indicates variation in adaptation to the region by the two groups. It is possible the changes reflected in figurine development represent the influence of an outside ideology between people living on the Santa Elena Peninsula who might have come in contact with the early Valdivians. This raises the question of whether the changes from Early to Middle Valdivia were brought about by internal or external influences.

Considering the length of time through which the Early Valdivia periods extend (ca. 1000 years), it is not surprising that technical innovation, agricultural expansion, population growth, and ritual development might occur as the possible internal stimuli of major change. Outside influence might provide the impetus for such changes but no evidence has been found to indicate another contemporary migration into the region by an independent group with a contrary ideology. The influx of people with a similar background, or the influence

of ideology from a distant source, might provide the basis for change without an expectation of finding distinct cultural remains, but then similarities in these ideological structures should be identified in the archaeology of other regions. I suggest that the best scenario for the changes identified includes the internal development of Valdivia society, and that the differences identified for the categories of figurines and transitional phases are congruous with that development.

Early Research

Valdivia material culture was identified by Geoffrey Bushnell (1951) in his investigations carried out prior to World War II on the Santa Elena Peninsula. While identifying the cultural complexes of Guangala, Engoroy and Manteño in the region, he also recovered materials from what he termed a Pre-Guangala Horizon (Bushnell 1951:17-21), that would later be designated Valdivia by Emilio Estrada. In the 1950's work was conducted at the Valdivia type site (OGSEMa-172, formerly G-31) by Betty Meggers, Clifford Evans and Emilio Estrada whose 1965 publication, *Early Formative Period of Coastal Ecuador: The Valdivia and Machalilla Phases*, detailed their investigations and included the controversial hypothesis that Jomón fishermen from Japan were responsible for the introduction of Valdivia ceramics. While the strength of the report was its published photos of ceramics, figurines -- stone and ceramic -- and other materials, the book was then (Lyon 1972-1974), as now, criticised for a number of deficiencies over methodology and data presentation; the least of which was their Jomón hypothesis of ceramic introduction from Japanese origins. A stone figurine typology of sorts was created with a nomenclature that is still referenced, even though it is restrictive in its classifications. One aim of this dissertation is to rectify the typological deficiencies.

Archaeological investigation of Valdivia sites covers a large geographic region that extends from the north in Manabí (Zeidler and Pearsall 1994; Zeidler, Stahl and Sutlif 1998), south to El Oro province (Staller 1994), east across the Colonche Hills into the Guayas basin (Raymond, Marcos and Lathrap 1980), and out onto the Santa Elena Peninsula.

Ceramics

Valdivia pottery is generally considered to be the first example of ceramic production in Ecuador, and is preceded in South America only by Colombian ceramics at San Jacinto (Raymond, Oyuela-Caycedo and Carmichael 1998). However an apparently pre-Valdivia pottery complex called San Pedro -- excavated from the Valdivia type site -- exists which unfortunately is represented by a limited number of specimens; too few to be definitive (Bischof and Viteri Gamboa 1972). Similar sherds were also located at El Encanto on Puná Island by Porras ([1973:159] Damp 1979:18). Damp (1979:24-25) also argues that San Pedro sherds recovered at Real Alto are coeval with Valdivia 2, based on their position between Valdivia 1 and 2 deposits, and their position under the Valdivia 2 layer at the Valdivia type site and El Encanto which both begin at Valdivia 2.

The development of an eight phase chronology for Valdivia is based on the work of Betsy Hill (1975) who identified developmental changes in ceramic shape and decoration (also see Lathrap, Collier and Chandra 1975:29-30). While a reappraisal of the ceramic based phase structure will not be presented here, the inclusion of figurine styles in the chronology and comments relating to figurines will. Dealing specifically with Loma Alta figurines, and clay versus stone figurines in general, Hill (1975:10) expresses doubt that classification of the clay figurines based on variability of size, design, and technique could be considered meaningful. I would agree with this; however, it raises another problem.

Excavations conducted at Loma Alta after Hill's report was written did not recover any clay figurines that were similar to stone figurines, indicating that for the Early Valdivia period the stone figurine motifs and morphological forms were unique. The stone figurine style later entered a transitional stage but this is not evident at Loma Alta.

Hill (1975) went on to say "that the development of a relatively uniform figurine style was preceded by a period of experimentation that was still in progress at the beginning of Valdivia III "(sic). I suggest that this no longer appears to be the case. I do not believe that the stone figurines were a form of experimentation, or that the small clay figurines were an attempt to manufacture the anthropomorphic stone figurine traits in a different medium. I suggest that these two lines of figurine development contributed to the eventual ceramic figurine seen in Valdivia 3, but that they fulfilled distinct needs at different stages of cultural development and ideological activity. Hill's statement is entirely appropriate for the time that it was written, although we can now refine, or at least update, what continues to be a strong basis for all future Valdivia chronologies. An attempt to update the placement of stone figurine types based on this study into the chronology appears in Chapter Six, Table 6.1.

The elaboration of ceramic technology is an important development considering that they are not simply vessels representing chronological stages, but representations of cultural beliefs in much the same way that I consider the figurines of Valdivia to be. The suggestion (Damp 1982:157) that the ceramic model and symbolism is tied to the environment and socioeconomic adaptations of the Valdivia people is suitable, but no less so for many other cultures. In Early Valdivia, stylistic symbolism identified by Damp (1984b) refers to the snake and the feline as dominant themes (see Chapter Four). The importance of the snake and feline to Early Valdivia ceramics -- to the exclusion of other motifs on the ceramic bowls -- is as a representation of the tropical forest and river system which formed the ecological setting for Valdivia settlements (Damp 1982:175). This being

the case, we would expect to find similar motifs on the early stone figurines, which unless they are overly stylised to the point of complete abstraction, does not happen. The figurines do have incorporated motifs, but not the T- element of the feline or the hatched triangle of the snake. Those motifs that do appear on stone figurines are discussed in Chapter Four.

Changes in ceramic stylistic elements in Valdivia 3 include the appearance of anthropomorphic faces on bowls that, while similar in a fashion to those of the early stone figurines, have more in common with the ceramic 'venus' style figurines of the Middle Valdivia period. The faces of the stone figurines do not appear on Valdivia 1 and 2 pottery. A change in bowl styles, and ceramic figurines replacing the stone figurines, further separate the stone figurine tradition from Early period ideology and the Middle period ideology. By this I mean that stone figurine elements are not reflected in the pottery in the same way that stylistic elements of the ceramic figurines are in the later period. An obvious question is, why? Why are the stone figurine elements of faces and geometric elements kept separate from the ceramic decorations in one period and not in the rest? Why are there no 'coca chewing' cheeks -- if this is what the distended cheeks symbolise -- on the later figurines and anthropomorphic decorations of ceramics? The development of ceramics reflects the development of ideological elements in all cases but one: the reflection of early incised stone figurine ideology. Where did the early faces found on the stone figurines go? The answer to this question will be found through the identification of ideological rearrangements, the move towards agricultural intensification, and an increase in societal complexity.

Agriculture

The production of the first ceramics known in the Central Andes may be the defining moment in Valdivia development, but the increase of agriculture and the eventual

appearance of maize as a substantial food crop is no less important to our understanding of cultural growth and changing settlement patterns that fall under the rubric of social complexity. A number of plant species were present which indicate not only the presence of agriculture but also suggest a relationship with the origins and development of Valdivia culture.

The presence of *Canavalia* species in early Valdivia sites at Loma Alta and Real Alto indicates that beans were being utilised by the inhabitants, and that some degree of irrigation was present. As a crop that requires a humid environment, and as the southwestern region of Ecuador undergoes minimal rainfall, the presence of *Canavalia* supports the suggestion that Valdivia may have originated in the tropical areas of the Guayas Basin or Colonche Hills (Damp, Pearsall and Kaplan 1981:812).

The expansion of population and site density throughout the Valdivia period was supported by a system of agriculture that included swiddening along the bottomlands and maize cultivation along the rivers; with hunting and fishing rounding out the diet (Schwarz 1987:322-323). This intensification of agriculture and population growth does not appear as the instigator of Valdivia development, but rather as a corollary to it as there is no indication that maize was a dietary staple in Early Valdivia (van der Merwe, Lee-Thorp and Raymond 1993:81).

Maize appeared in Early Formative sites at least 5,000 years ago, although this does not mean that maize was being cultivated as a major crop (Pearsall 1992:192). Maize phytoliths have been recovered from the both the Vegas type site (OGSE-80) with dates of 6000 - 4500 B.C., and at Real Alto dated to 3300 - 1500 B.C. along with beans and cotton, while charred beans and maize at Loma Alta date to 3000 - 2700 B. C. (Pearsall 1992:189). The presence of maize is also substantiated by its use in decorative motifs on pots and figurines. Carlos Zevallos *et al.* (1977), identified maize impressions at Real Alto pressed onto Valdivia 3 pots which does not seem unlikely for that time period. The presence of

maize during the earlier periods and possible uses and associations to ritual have more bearing on the stone figurines. At Real Alto, it is during Valdivia 3 that a noticeable increase of maize in the diet suggests a dependence on its cultivation, partly based on an increase in the number of "manos" and "metates" appearing in the household levels after Valdivia 2 (Marcos and García 1988:38).

Evidence for an even older domesticate appears at OGSE-80 excavated by Karen Stothert. Phytoliths of *Cucurbita* indicate that a "genetically and morphologically altered form of squash" (Piperno, Andres, Stothert 2000:203) was present on the peninsula ca. 9000 BP. The identification of the presence of these plants, and that they were either domesticated or dependent upon human intervention, indicates that knowledge of plant husbandry was available to the populace. This knowledge opens the door to many more food use possibilities than simply those of subsistence.

The utilisation of plants for non-staple food purposes indicates more about cultural associations than subsistence strategies. While those strategies do come into effect during the later stages of Valdivia development, they are not in evidence during Early Valdivia and suggest that plants such as maize presented alternate possibilities for cultural use. The shift from hunting and gathering to plant cultivation and domestication requires a transition in the types of selective strategies and a shift to social complexity. Is this the process that causes ideological change as seen in the change of figurine form and content? Certainly those who control the production of food are as powerful as those who control ritual activity; perhaps they are the same people. The change in both agricultural intensification and ritual development cannot be separated once their place in group ideology is recognised. It is these changes that we see taking place during the Valdivia 2 - 3 transition. However, the indicators of change in social complexity at this stage are not clear.

Knowledge of cultivation, or the manipulation of plant resources, can be traced to the pursuit of authority through ritual feasting, shamanistic activity, and celebratory

offerings. At these times, when socioeconomic change occurs, inequality and status differentiation develop through ritual feasting, the creation of surplus food stores and exchange relationships (Bender 1978; Hayden 1990, 1992; Henry 1989:49). Similarly, the activity of creating medicines, hallucinogens, and alcoholic beverages for ritual or honorific responsibility indicates a change in social relations. The beginnings of this agriculturally related social change can be found early in the Holocene when the adaptive strategies of changing subsistence resources became tools not only in the search for new food sources, but also in the implementation of social inequalities. By the mid-Holocene when Valdivia culture was in its formative stages, the knowledge of plant manipulation was already present.

By using plants for multiple purposes people became aware of their social, ritual, and economic value. A symbiotic relationship between humans and their plants evolved through manipulation and eventual domestication that would require ritual activities to strengthen and maintain the relationship. This symbiotic relationship appears in the stylised carvings of the figurines where coca appears in the cheeks and maize kernels appear on the bodies. The important ritual symbols of daily life appear as iconography and as reinforcements of cultural continuity.

The knowledge of plants and their possible uses as food resources, medicinal remedies, alcoholic and hallucinogenic aids to ritual and curing might have been the first step in domestication that led to agriculture. The presence of figurines within this transitional stage and as part of the ritual or curing ceremonies becomes crucial to the identification of cultural activities at that time.

How this development relates to Valdivia stone figurines is an important point. There is more of a direct association between the Early Valdivia stone figurines, based on plant related motifs, than there is on the later ceramic 'venus' figurines that were constructed during a period of widespread maize agriculture and continued hallucinogenic use. The use

of coca for chewing is identified on Early Formative skeletons by Klepinger *et al.* (1977) and suggests its use expanded from shamanistic control to secular use. This calls into question the veracity of assigning a fertility purpose to the later ceramic figurines. According to Hayden (1992:13), the first domesticated foods should appear as non-staples that serve no other function than to perform a role in the feast ceremony. Hayden (1995:282) later expanded this interpretation to include condiments, intoxicants, containers, lipid and carbohydrate rich foods that would be used primarily as prestige items prior to large-scale cultivated items. Because of this the appearance of ritual food items should appear in the archaeological record prior to the appearance of domesticated plants. This is the case at Early Valdivia sites where the evidence of incipient maize activity and ritual drug use appear.

Pearsall (1995a:191) argues that, based on Central and South American data there is no evidence that rituals and status inequality predate domestication. At Real Alto evidence of maize, beans, cotton and *achira* appears prior to the construction of a ceremonial feasting structure (Pearsall 1995a:191). However, the recovery of feasting artifacts should be enough to satisfy the requirement. It is presumptuous to assume that ritual feasting only took place in permanent structures. Perhaps this is more of an indication that construction of ceremonial feasting structures could only occur after large-scale domestication had taken place, but it certainly does not preclude the possibility of ritual feasting in semi-permanent or temporary structures constructed specifically for that purpose.

The presence of maize in limited quantities raises its own questions. The use of maize beer in the Andes, as *chicha*, could be considered a staple in itself. The antiquity of beer as a social lubricant is suggested, but supported tenuously at best, by recent studies. Further investigations will have to be initiated to determine if maize appeared in Valdivia as beer prior to its large-scale use as a subsistence crop. Some plant species have left a trail of

their domestication lineage, while others such as maize have left suggestions (*cf.* Iltis 1983; Galinat 1992). Were they domesticated for the same purposes that they hold today, or were they originally domesticated for other reasons? Forty-five years ago the question "did man once live by beer alone?" was asked by Robert Braidwood (1953:515) and it would appear that the discussion has still not been settled.

The identification of beer, at times, as a non-staple food should not overlook its serious implications as a source of socioeconomic power. Identifying beer production as opposed to making bread is not as frivolous as it initially appears, as is evident with *chicha* production in the Andes.

The use of plants for hallucinogens could be one of the first and simplest indicators of plant utilisation that had already reached its final form. No domestication was necessary. At San Pedro de Atacama, in the Atacama desert of Northern Chile, preceramic hunter-gatherers and ceramic agriculturist-herders were involved in the use of non-food plant utilisation during the pre-Hispanic period. Archaeological remains include one of the highest concentrations of snuffing implements known from pre-Columbian America (Torres *et al.* 1991:641). From the more than 5,000 burials located since the 1950's at least 612 snuffing kits containing a snuff tray, snuffing tube of wood or bone, a spoon or spatulas, small mortar and pestle, and leather pouches containing snuff powders have been identified. This is not an isolated find. Some of the oldest examples of snuff tablets and bird bone snuff tubes in the Andean region were recovered from Huaca Prieta on the Peruvian Coast by Junius Bird (1948:27). Can the use of snuff be seen as plant management or simple gathering? Knowledge of extracts and preparation must be used in conjunction with availability, seasonality, and maturity to efficiently administer the product.

Other foods are required for subsistence, and beer certainly would need to be augmented with more substantial offerings, but we are not discussing beer as we know it today. More likely the original beers were very low in alcoholic content and took the form

of a gruel, almost a food, similar to Hawaiian *poi* (Mangelsdorf 1953:520). The degree of alcohol content should not alter the perception that alcohol was being brewed and consumed.

Making alcoholic beverages from food crops is not restricted to a particular area, and that it occurs in both the Old World and the New World lends support to its importance as a socioeconomic factor in the evolution of agriculture. The practice of turning maize into beer, or *chicha*, in the Andes is more than just an alternate use for a possible food crop. The creation of rank and status in a society requires that rituals be hosted to keep alliances strong and to support the workers who provide labour for other-than-monetary value (Gero 1990; Hastorf and Johannessen 1993). Excavations by Gero (1990:52) at the Early Intermediate Period (200 BC - 600 AD) site of Queyash Alto in the Callejón de Huaylas of northern central Peru indicated ritual artifacts suited more to a "beer bash" than to the consolidation of political power. The inference of ritual feasting is based on the recovery of large amounts of llama bones, obsidian knives for butchering or slicing the meat, shallow bowls possibly used as high-status drinking vessels, ceramic panpipe fragments and bone flute for music, hollow ground bird-bone tubes, similar to those used for taking snuff, and llama figurines (Gero 1990:53).

The feasts may have been a reward for agricultural labour and based on the surpluses of maize; community feasts were the result. These ceremonies, which could be termed political, would also reinforce social prestige and possibly create more important and powerful ties to the supernatural (Gero 1990:54; Hastorf and Johannessen 1993:117). The feast organisers would represent an ideological relationship to ancestors and the gods that the common people no longer held (Knapp 1988:134, 136). According to Gero (1990:56) the recipients of the feast generosity "were made to feel their own lack of power and prestige" by these ceremonies of power consolidation. Ideology changed the power

relationship of the members of society through the use of food surplus and the distribution of its non-staple derivatives.

At the centre of these feasts is the consumption of *chicha*. The change in political dynamics of the highland societies of the Andes reflects a change in maize use and an increase in *chicha* production and distribution (Hastorf and Johannessen 1993:117). The change from maize, the natural material, to *chicha,* a cultural material of ritual importance, creates a new life-force for the raw material (Hastorf and Johannessen 1993:121), as it does with other raw materials transformed by human agency, such that the new materials have an *ánimo* similar to that of the llama figurines mentioned above known as *illas* or *kantas* (Gose 1994:206).

Appearing on the Santa Elena peninsula of Ecuador as a fully cultivated crop by at least 4400 BP (Pearsall 1978:178), maize came to the Andes as an already transformed domesticated crop in a cultural state (Hastorf and Johannessen 1993:122) with a probable mesoamerican point of origin. Maize pollen and phytoliths were recovered from sites in Central Panama with occupation dates of approximately 7,000 BP (Piperno 1989:545). The movement of maize southward into the Andes progressed through Colombia where it can be found in a pollen core from Hacienda El Dorado in Calima at 6600 BP (Pearsall 1995b:127). This difference in time between introduction and cultivation of maize raises questions about its initial usefulness. If maize took several thousand years to evolve into a large-scale productive commodity, then what other purpose did it serve in the community during its own transition stage? Perhaps its use in ritual or as an ingredient of a fermentable beverage sustained community interest in the grass until other functions could be realised.

The transformation of maize from cultivating and improving the maize ears, to the production of *chicha*, and its place in the social and ritual process of sharing and drinking (Hastorf and Johannessen 1993:122) illustrates its role in ideology and power configurations. The use of maize as *chicha* continues to the present day and charting its

development is not the purpose of this paper; the appearance of maize symbolism on the stone figurines of Valdivia is. The use of maize as *chicha* and its position in the community as a facilitator of social exchange and obligation from its earliest introduction into the Andes is the germane issue. The archaeological evidence of *chicha* use in antiquity is lacking, but its use as a ritual feasting crop, or facilitating crop, is established for Andean culture groups. Did it start out as a food crop or was its importance as a ritual object recognised early in its evolution? There is no conclusive answer at this time, but the Valdivia stone figurines imply that the latter suggestion might be more appropriate.

It would be misleading to say that socioeconomic complexity and the interrelationship of ideology, power and status with the knowledge of agricultural technology and the ability to create surpluses for redistribution fueled the transition to cultivation, and in turn created the event that took place between Early Valdivia and Middle Valdivia. However, it would also be wrong to suggest that socioeconomic factors did not play a role during the transition. The presence of stone figurines and the symbolism incised on them are indicative of this transition.

Settlement Patterns

Information on changing settlement patterns comes from the detailed work at Loma Alta that indicates village size and shape (see Chapter Five), and the study of settlement patterns and spatial analysis at Real Alto performed by James Zeidler in his 1984 dissertation, *Social Space in Valdivia Society: Community Patterning and Domestic structure at Real Alto, 3000 - 2000 B. C.*. The pattern of the Early Valdivia Loma Alta site has been identified as a U-shape (Damp and Clarkson 1980:4 , 1984a:106, 1984b:581), as has the earliest phases at Real Alto, although, the layout at Real Alto by Valdivia 3 changes

into a circular pattern reminiscent of the Gê-Bororo village plan (Zeidler 1984:596). The circular village plan of the Gê was present in northern South America by at least 3000 B.C., and parallels have been drawn between the modern enclosed form and the implications of ceremonial space within a circular pattern (Lathrap, Marcos and Zeidler 1977:10-11). The U-shaped pattern is securely identified at Loma Alta, a Valdivia 1 and 2 village, and Real Alto during the same Valdivia 1 - 2 phase, transforms into a rectangular form during Valdivia 2 - 3, whereas at the Valdivia 3 site of El Encanto on Puná Island the pattern is circular (Zeidler 1984:596). The key element of these changes in pattern is the appearance of vacant ceremonial centres, of any design, and that it is at the multi-component Valdivia sites that encompass both periods that we see the transitional evidence.

Overall village shape is altered during the transitional stage between Early Valdivia and Middle Valdivia, as is the shape and size of individual houses and the demarcation of social space. The average household unit at Real Alto triples in size between Phase 1 and Phase 3 and might indicate a change from smaller nuclear family dwellings to larger extended family units (Lathrap, Marcos and Zeidler 1977:8; Zeidler 1984:211,216,240).

Differences within the Valdivia settlement pattern occur throughout the phases and can be charted as alterations in village size and location throughout the Early Formative Period (Damp 1984a; Schwarz and Raymond 1996:213-216). These changes are best observed as developments between the Early Valdivia, Middle Valdivia and Late Valdivia periods (Schwarz and Raymond 1996:213-216), referred to by Damp (1984a) as Periods A, B, and C. In Early Valdivia the defining trait appears to be the spatial association of two large settlements. In the Valdivia Valley this is represented by the coastal site of Valdivia and Loma Alta approximately 12 km inland. Middle Valdivia sees the creation of more villages dispersed throughout the valleys along the river, and in the Valdivia Valley represents the only instance of site hierarchy during the Early Formative and also sees the

reduction in size of Loma Alta (Schwarz and Raymond 1996:213). The trend towards an increase in the number of village sites continues during the Late Valdivia Period.

In the Chanduy Valley along the Rio Zapotal and Rio Azúcar, Real Alto on the coast and Centinela up river represent the two early settlements with a similar development of site locations along the river floodplain as that of the Valdivia Valley (Damp 1984a). Unlike the sites in the Valdivia Valley there is more evidence to indicate that Real Alto becomes more of a ceremonial centre with remaining smaller village sites peripheral to it. The Valdivia Valley type site has no evidence of similar ceremonial construction (Schwarz and Raymond 1996:215).

At a third valley, the Blanco-Ayampe Valley in Manabí, there are three sites with large ceremonial mounds dated to Early Valdivia (Damp 1984a). An increase to six sites in Middle Valdivia and eighteen in Late Valdivia continues the pattern of expansion from the other two valleys. Damp (1984a) also makes the point that environmental diversity between Valdivia sites is responsible for the higher density of sites in this northern region, due to additional rainfall and extensive forested areas making it unique to the Valdivia pattern.

With the exception of the Blanco-Ayampe valley, there is a relationship between the inland valley sites and the coastal sites that are separated by what approximates a one day walk. This linear expansion along the river reflects a greater focus on available farmland (Schwarz and Raymond 1996:215).

Maritime Activity and Spondylus Trade.

A change in settlement pattern from Early to Middle Valdivia at Real Alto is seen by Zeidler (1991:254) as commensurate with the development of maritime activity, island colonisation, and the introduction of *Spondylus* as a ceremonial and domestic material. Interaction between the coasts of Ecuador and Peru during the Valdivia sequence might have

contributed to the sociopolitical transformations apparent in the Middle and Late periods (Zeidler 1988:269-270, 1991:249). This suggestion is also supported by Marcos (1988:184-185) who associates the increased use of *Spondylus princeps*, long distance trade, and the technological advances in agriculture. If trade with the north coast of Peru did result in cultural influence at the start of the Middle Valdivia period (ca. 2900 B.C.), then perhaps it is one of a number of changes taking place at that time; however, as Zeidler also points out (1991:252), the coastal Ecuadorians were always able to maintain political autonomy throughout their association with Peru. The *Spondylus* shell was also used in a different manner in Ecuador than it was in the Peruvian Andes (Blower 1996) and any attempt to include early Ecuadorian groups in pan-Andean Spondylus activity patterns should be resisted.

One of the strongest, and most utilised, constructs of Andean symbolism is the dyadic combination of *Spondylus princeps* (the thorny oyster) and *Strombus peruvianus*. The oft cited depiction of the Smiling God at Chavín de Huántar holding the *Strombus* shell in his upper right hand, implying masculine traits and order, complements the *Spondylus* shell in the lower left hand, associated with feminine traits and disorder (Burger and Salazar-Burger 1993). Although this occurs during the first millennium B.C., and indicates an interchange of some sort between the Peruvian highlands and the coast of Ecuador, the dyad is considered by many to symbolically represent the Andean mindset as a whole.

A greater antiquity for this concept appears at Real Alto where during the 1974-1975 field season "a large left valve of *Spondylus princeps* and a shell trumpet made from a *Strombus peruvianus* conch [was located] between a tetrapod red-slipped bowl, and a rare tripod one, at the foot of a small ramp leading to a burnt Valdivia phase 2 ceremonial structure at the bottom of Mound B" (Marcos 1998:321). If this Valdivia 2 date is secure, then the combination of the two shells precedes their joint appearance at Chavín de Huántar by about 2,000 years. What is not clear at Real Alto is how the shells were viewed by the

people who buried them. Certainly their interment at the end of the ramp might indicate ritual importance, but whether they were identified as complementary oppositions at this time is unknown. Another point bears consideration when dealing with the *Spondylus* shell; as an offshore native of the Ecuadorian coast, it cannot be termed 'exotic' in the same way that it is in the central Andes. The meaning of the shell to early harvesters and ritual associations identified through archaeological investigations must be contained within the knowledge of Early Valdivia and Early Formative Ecuador and not by how it is viewed for later cultures of the highlands and Peru.

Equally as important to the study of how *Spondylus* shell was utilised, is how it was discarded. For a shell that can be crushed, mixed with *chicha*, transformed into pendants, ear spools, used as *chaquira* beads and much more, it is odd when sections of the shell are not utilised in their entirety. At Real Alto the majority of *Spondylus* materials were leftover valve hinges with few beads, pendants, or whole valves (Marcos 1998:323). This indicates that manufacture of the shell had taken place and that the end-products had been relocated elsewhere. That the hinges of the valves were discarded and not used for production purposes has only been identified at one other site that I am aware of: Rica Playa, outside of Tumbez in Peru (personal observation with Dr. Anne-Marie Hocquenghem and Dr. John Topic, 1993). In this instance the hinges were alone in a cache that is associated with a site along a route used by the Inca travelling from the coast to the highlands. Why the hinges would not be used as material for beads or powder is puzzling. Figurines from Cerro Narrío made from *Spondylus* incorporated the thicker hinge section into the head of the object. While this is important to the study of *Spondylus*, further digression will not serve the stone figurines of Valdivia, apart from indicating the shifts in Valdivia culture that were taking place at the time of greatest change.

Chapter Three

STYLE, METHODOLOGY, AND TYPOLOGY

> Certainly oral traditions and ritual acts constituted elements of the meanings of these works ... [y]et apart from the archaeological context in which the pieces sometimes are found, art historians have nothing else to turn to, especially in the Andean region, than the objects themselves. This "handicap," while curtailing certain ways of knowing, places the art historian in a relation to the object which is, in one way, equivalent to that of the generations of artists who worked within a stylistically coherent tradition without recourse to writing. That is, the appearance of the object and the way it was made, the most easily recoverable components of style in non-literate archaeologically known cultures, are the traces of the history of the construction of representation, a "history" that can be said to be understood as significant by those who produced the objects as cultural acts [Lechtman 1984; Frame 1986]. (Cummins 1998:199)

STYLE

In a general sense, a description of style includes identification of form elements or motifs, the relationship of those motifs, and the overall expression, or quality of the object (Schapiro 1994:54 [1953]). A breakdown of these three aspects results in a list of individual attributes applicable to the figurines. The development of an identifiable style, in this case that which can be identified as the Valdivia incised stone figurine style, is based on

the presence or absence of a number of attributes. As style is a definition of a set of attributes, not a single attribute (Davis 1990:20), the relational rules applied to those attributes must also be specified. The alteration of those rules and changes in the composition of the set of attributes makes it possible to identify those periods of development when stylistic transformation occurs. It is the periods of transformation that offer the greatest opportunity for observing typological change.

As Ucko (1968:390) has noted, the main problem of attribute analysis concerns which attributes are important enough to analyse and which other attributes should be overlooked? This is a discussion that will be developed more thoroughly in Chapter Four. The attributes used for cataloguing in this study are purely subjective and represent an attempt to isolate as many of the attributes present that may be useful at a later stage when the artifacts are no longer 'physically' available for analysis. Not all the attributes identified relate to the overall definition of this particular style even though all attributes do have the potential for defining a style (Davis 1990:21). Again, this is representative of the subjective nature of collecting information and determining individual research needs, or intentions. The definition of an incised stone figurine style and subsequent typology will be based on sub-sets of the attribute data.

The value of determining a style, then, rests on the ability to use it to explain (Davis 1990:23) and identify the changing indicators found on objects of material culture. As previously mentioned, the morphological form of the figurine, even without incised design information, is equally as important to the archaeological study through an analysis of its context.

Communication, Function and Art

Style is a set of rules that artisans work within to create artifacts that hold aesthetic and/or ideological meaning for a group. The patterns and motifs found on figurines, ceramics, and other objects of material culture, are not random acts but instead have cultural meaning -- some may be visual metaphors. Societies are reproduced through the replication of ideological imagery which is associated with social identity (Knapp 1988:136). During times of change the dominant patterns of visual representation change as well. We may infer the appearance of a change in influence, even when from indeterminate internal or external stimuli. Change in figurine style and media of presentation may reflect changes in a culture' s overall way of life, or an influx of influence from outside sources.

Objects of material culture, specifically the Valdivia stone figurines, can be recognised both for the visual representation of artistic techniques and their aesthetic value. Does the aesthetic value of a utilitarian object affect its usefulness or enhance its stature as a well-made tool? Does the level of artistic decoration imply a status level for the user based on the quality of artistic expression? As archaeologists we generally do accept that levels of artistic quality on utilitarian objects imply status goods, although this may not always be the case (*cf.* Braithwaite 1982). Cruder objects are considered more common, in both a general and social sense. Quality of workmanship, and its implications, is a problem that archaeology deals with when attempting to identify the work of a craftsman, artisan, novice or child. These implications do indeed have a bearing on the outcome of figurine interpretation but we must also ask at what stage of development does the crudeness of execution affect the typology and how do we, or can we, control for the variation in the carver's skill and mastery of technique when assessing the results?

I do not believe that the Valdivia incised stone figurines offer a single, unified, presentation of information, but rather a combination of information based on incised design

and morphological form. The design elements are metaphorical and in themselves can constitute a visual imagery of cultural myths (Layton 1991:22-24), cultural myth being representative of a culture's cosmology, and the basis for its belief system. Understanding the imagery might be difficult, but as an expression of mental and cultural constructs (Layton 1991:27-28) that order daily life, the same imagery found in other media reinforces the importance of various design elements (metaphors) located in the "symbolic reservoir" (David, Gavua, MacEachern and Sterner 1991:175) that the creators of the Valdivia figurines drew from for visual representation of their culture. This collection of symbols would have ensured that various groups communicated on the same level of understanding using a set of representations that defined a common thought process.

While the ethnicity of Valdivia groups is illustrated over space and time through their iconography and material culture, variation within those groups should allow for the identification of separate communities through the presence of dissimilar attributes or deviation from a general cultural template. This concept is illustrated by Wiessner (1983:256) who defines style as a "formal variation in material culture that transmits information about personal and social identity." If language and visual media are both forms of communication then the changes in language through the addition and deletion of word use are not that dissimilar from the changes in style of visual representations. Both changes in compositional form, whether language or visual, reflect a distortion from the original intent or use (Kubler 1962:60). This alteration in form reflects the change in group direction. Linguistically the alteration might be traced back to the original structure. Visually the change might be observable to a lesser extent but identification between groups might still be identified, even over a relatively short duration.

Two aspects of style dealt with by Wiessner (1983:257) that illustrate this point concern emblemic and assertive styles. Emblemic style represents an affiliation with a cultural population and identifies the visual representation with a particular group, while

assertive style defines individuality by creating a separation from others in the same group or between other similar groups. One of the primary concerns of this analysis of figurines is to search for attributes that might allow identifications of these concepts. Is there an identifiable distinction between the figurines of various Valdivia sites that implies specific site or regional association within the broader context of a general Valdivia figurine tradition? There may be, but as yet there is not enough controlled information on figurine provenience to determine this issue. This study will show that the emblemic style of the larger Valdivia ethnic group is all that can be identified at this time.

METHOD OF ANALYSIS

Database Design

The collection of data was facilitated by the creation of a database in FileMaker Pro 4.0 (Claris 1997), a relational database software program customised to the requirements of this analysis which allows for the entry of data based on searchable criteria. The methodology of collecting data from the available assemblages of figurines provided for the separation of data into the three distinct areas of artifact classification: Provenience, Stylistic Identification, and Physical Description. Not all figurines include provenience data, which reduces their value in a temporal and spatial sense, but must still be considered for their stylistic and physical attributes. An explanation of these areas as they constitute this project's database will be dealt with in turn when appropriate. While the collection of data is based on a quantitative approach, the determination of certain categories can only be made in qualitative terms. This will become increasingly evident throughout the

dissertation. The lack of provenience for many of the figurines requires this study to rely upon the data from the Loma Alta site, which will be analysed separately in Chapter Five.

Provenience

The provenience information is dependent upon excavation technique and other factors that are beyond the control of this study; no new excavations were undertaken for this project. Fortunately, there are figurine materials with provenience information describing easting, northing, depth and level, unit, quadrant and feature association for some Valdivia sites. This section of the database provides for the input of all relevant provenience data that can be used during spatial analysis and some of the correlation matrices created for statistical analysis. The composition of the matrices is based on the number of sites used for comparison, time periods covered, and stylistic elements thought to be important to the final study. All figurine fragments have been provided with a project database record number that is specific to this study and used in this dissertation as the primary form of identification.

The following fields were designated as those that contain provenience data.

A) SITE NAME: All artifacts catalogued for this project from university, museum and private collections are designated to one of the following sites or general locations.

Real Alto	San Pablo
Loma Alta	El Salado
Valdivia Valley	San Isidro
Bolivar Valley	Manglar Alto
Colonche	Colon-Portoviejo
La Clementina	Cerro Grande
Valdivia (G-31)	Junin M-60

B) EXCAVATION: YEAR — In the case of excavated materials the year of excavation is included to distinguish between subsequent field seasons.

C) PROVENIENCE: NUMBER — The project provenience number, FS number, or museum accession number.

D) COLLECTION: — All figurines are designated to the university, museum or private collection that is presently in control of the artifact from the following list.

University of Calgary
Museo Weilbauer P.U.C.E - Quito
Patricio Moncayo P.U.C.E - Quito
Museo del Banco Central - Guayaquil
Museo del Banco del Pacifico - Guayaquil
Dr. Luis Plaza Febres-Cordero - Filanbanco
Museo Nahim Isaías B. - Filanbanco - Guayaquil.
Museo del Banco Central - Quito
Alexander Hirtz - Quito
Casa de la Cultura - Quito
Museo de los Amantes de Sumpa - Santa Elena

E) SITE PROVENIENCE: — The physical description of figurine location when available from excavated sites in the following categories..

Northing
Easting
Level
Quadrant
Feature No.
Unit
Site Number

Physical Description

This section contains categories that rely on physical measurements, details of manufacturing technique, observations of size, shape, colour, type of fracture and fragmentation, and in the case of complete figurines, a field that calculates an overall length to leg ratio. Classification of figurine style necessitated the development of new descriptive categories to refine the original Meggers, Evans and Estrada (1965) terminology that I consider to be inadequate due to subsequent additions to the overall Valdivia figurine record. Figurines of the three classes referred to previously as *Palmar Plain*, *Palmar Notched* and *Palmar Incised,* named after the Palmar site in the lower Javita Valley (OGSECo-9, formerly G-88), have been separated into eight sub-classifications within one category of the typology.

The primary component of this new identification scheme concerns the presence and stage of development of what is normally identified as figurine legs, unlike the Meggers, Evans and Estrada designations that seemed to disregard these subtle differences. There are four categories of leg development that can be considered diagnostic indicators, and an additional indicator that is based on the presence or absence of incised design. The criteria used to determine these categories is explained in the following section. Additional categories of physical description have been added due to the increased identification of what might best be termed transitional types within the dataset. As some of these figurines do not resemble the early stone figurines, the attribute categories are unsuitable for collecting the pertinent data. This necessitated the formation of additional categories.

The attribute categories are based on the ability to measure discrete and continuous variables. There is no attempt here to use modal analysis as a method of comparing these stone figurines with other stone figurines, or figurines of any material, in the sense that ceramics might be compared with other similar ceramic complexes (cf. Raymond, DeBoer

and Roe 1975:5). This is due to the fact that no other similar contemporary figurine traditions exist at this time, in stone or otherwise, that can benefit from comparative analysis and also, because the classification of these figurines is dependent upon a strict set of rules meant to deal only with the figurines of this study (Raymond 1995:227). The identification of attributes, as components of the design fields, are separated into zones of information on the figurines and dealt with in more detail in Chapter Four.

Material

To begin the analysis of figurines a representative sample of fragments from the Loma Alta (Calgary) collection were tested to determine stone types. During this stage the materials were treated with water to increase the level of grain and determine material porosity, and also a 10% hydrochloric acid solution to test for calcareousness. The identification of material type was made with a Wild bioccular microscope with settings ranging from 60x to 500x magnification. The results of these tests indicated that the majority of the artifacts were carved from sedimentary rocks native to the region in which they were found (Marks 1956:277-288). This determination was made on grain size, composition, and colour (Dietrich and Skinner 1979:181-203). In most cases the figurines are sandstone, siltstone, or shale, with siltstone being the most prevalent. This is in accordance with the determinations of previous researchers who sometimes refer to the material generically as either 'mudstone' or 'siltstone'. There is much similarity between these classifications and some petrographers use the field designation of 'mudstone' to include all siltstones and claystone varieties composed of grain fragments smaller than sand that do not show fissility (Dietrich and Skinner 1979:199; Pettijohn 1949:269).

There are anomalous materials, or anomalous appearances, in the assemblage; such as the figurine fragments covered with coal tar (*cf.* Lundberg 1977:7). Of the anomalous

artifacts, one was previously identified as animal bone, three from the collection were identified as unfired ceramic and were included for comparison purposes in an attempt to determine whether or not they represented a transitional stage of figurine development. All non-incised stone materials were left in the collection for analysis to aid in the determination of temporal positions through associated provenience. What is most important to this study is not that several varieties of soft carvable rock were used, but rather that the materials carved are all local to the area in which the figurines were produced. Any cultural value to the incised stones did not originate from a ritually exotic material but instead by other means. The database created to assemble the information described above was initially based on the analysis, and subsequent re-analysis, of excavated figurine materials from Loma Alta, Guayas Province, Ecuador (see Chapter Five). The database was then 'fine-tuned' as investigations continued in Ecuador to reflect the identification of additional stylistic attributes and change.

Figurine Form

The method of shaping the figurines provides for identifiable categories and, again, much variety. Originally the overall shape of the figurines was designated by a combination of its longitudinal and transverse appearance. These designations range from Rectangular, Ovoid, Elliptical to Cylindrical and several other in-between permutations. However, these designations proved to be too general for the range of shapes in the collection and it became apparent that two categories would better serve the variety of horizontal and vertical cross-sections; both horizontal and vertical shapes are now distinguished in separate categories. This reclassification of body form provides a useful advantage in searching the database for implications of preference in body shape.

Many of the fragments are unclassified due to the lack of the section that indicates leg style, or in some cases the head (upper) details. Incorporating data from these fragments by way of cross-section shape analysis means the unclassified figurine fragments can provide useful spatial and physical data increasing the size of the usable sample.

The surface appearance of the figurines indicates the level of 'finish' placed on the artifact. Stages of development may be identifiable through the presence or absence of striations, or smoothed or coarse surfaces, but I think this is one of the weakest attributes available as post-depositional factors could be responsible for some of these characteristics. However, there is an identifiable level of finish on some of the figurines that denotes a high degree of technical skill and quality.

Stages in Development

If the different sub-categories of figurine style are manufacturing stages and not representative of finished artifacts then a number of questions must be dealt with. Foremost of these concerns the possibility that *Palmar Plain* and *Palmar Notched* varieties are all unfinished developmental stages that were meant to eventually become what Meggers, Evans and Estrada (1965) refer to as *Palmar Incised* in the finished form. This may only be determined through an analysis of stratigraphic data that is restricted to the Loma Alta materials.

Some of the *Palmar Notched* figurines show signs of longer notching on one side, indicating that they might be in the development stage of becoming *Palmar Incised*, although, the extended notch on one side is also indicative of the buttocks and the dorsal side of the figurine in some cases. Conversely, the evidence of finished, by means of polishing, *Palmar Plain* figurines in the collection indicate that a non-incised, un-notched, appearance was intended in some cases. This would make the *Palmar Plain* figurines

antecedent to the notched/incised figurines. Unfortunately the typology does not work. *Palmar Plain* implies no notching and no incising. *Palmar Notched* indicates the presence of a notch but no incising, while *Palmar Incised* is not concerned with whether or not a notch is present - the criteria for the notched category. The typological attributes as originally defined are unclear and overlapping.

Size

Figurines range from 12.9 mm to 131.2 mm in length, and from 4.1 mm to 9.3 mm in width, although the question of intentional size determination versus the physical restrictions of material and availability remains problematic. A variety of styles appear in a range of sizes, and the issue of presentation will be dealt with after statistical analysis has been performed. One problem of size concerns the figurines classified as *Palmar Plain*. It is accepted that certain of the blank figurines were meant to become notched or carved figurines, but a segment of the category, the smallest, and at times multi-sided examples, never appear as notched or carved. An explanation of how these small artifacts fit into the figurine category will also be attempted after analysis. Are there specific size criteria for the various categories that might have dictated the final appearance? For example, do all incised figurines fall within predictable size ranges? The statistical results should be able to answer these questions and become more confident as the sample increases.

Lundberg (1977:9) also raises the question of relevance to the interpretation of these figurines based on size that in some cases are as small as one centimetre. A similarity exists in this matter with the carved *Spondylus* figurines from Cerro Narrío in the Ecuadorian Highlands where average length figurines are approximately 10 cm, but figurines of approximately 1 cm have been recovered (personal observation). Do these small figurines perform a similar function to that of the large ones? Is there a functional relationship

between the stone figurines of Valdivia and those of the later Cerro Narrío figurines? There are certainly enough material differences to indicate that there is no connection during the Early Valdivia stage of the Early Formative. But the transfer of *Spondylus* shell from the coast of Ecuador to the highlands at Cerro Narrío is documented for the later stages of Valdivia. Hence, the eventual exchange of stylistic influences is not unreasonable if an overlap in time periods between Valdivia and Cerro Narrío is accepted.

The following attribute fields appear in the project database as categories of quantitative variables used to collect data on the physical description.

F) STYLE TYPE: The entries in this category are based on the typology found in Table 3.1., along with designations for anomalous ceramic figurines and unclassified pieces.

G) MATERIAL: Several of the materials are quite common in figurine manufacture, mainly siltstone and mudstone, but other materials do appear.

Sandstone	Serpentine
Mudstone	Tuff
Siltstone	Ceramic
Shale	Bone
Quartzite	Unclassified

H) COLOUR: A variety of colours are present.

Pale Green	Reddish Brown
Pink	Yellowish Brown
White	Gray
Buff	Black
Orange Tan	Purple

I) FIGURINE FORM: There are two subdivisions of this category based on the shape as seen on a horizontal and vertical plane

i) Horizontal Cross Section: This is the plane as seen by taking a cross-section of the figurine at the waist.

Square	Elliptical
Rectangular	Truncated-Elliptical
Cylindrical	Multi-sided
Ovoid	Wedge

ii) Vertical Cross Section: This cross-section is seen lengthwise with a section taken between the front and back of the figurine.

Rectangular	Concave-Rectangular
Elliptical	Rounded-Rectangular
Truncated-Elliptical	Flared-Rectangular
Convex-Rectangular	Globular

J) SURFACE TREATMENT: This includes three subdivisions that deal with evidence of striations leftover from manufacture, the morphology of the figurine surface and corners, and the condition of the surface or any applied finish such as a slip.

i) Striations:

Longitudinal	Angular
Transverse	None
Mixed	

ii) Morphology:

Smooth w/ Rounded Corners	Coarse w/ Rounded Corners
Smooth w/ Square Corners	Coarse w/ Square Corners
Smooth w/ Angular Corners	Coarse w/ Angular Corners

iii) Finish:

Natural	Slip
Charred	Unclassified

K) SIZE: The metric measurements of the figurine, or fragment, is taken in the following fields with one category that calculates the leg to overall length ratio.

Length	Leg Length
Width	Leg-Length Ratio
Thickness	

L) CONDITION: Overall physical condition regarding the present state of the figurine based upon whether it is a complete or fragmented artifact, and if it is fragmented, the type of fracture.

i) Full: A complete figurine.

ii) Fragment: An upper, middle, or lower section, or possibly a corner piece, or leg of a figurine.

iii) Fracture: The type of fracture that appears to have left the figurine in the state that it is in, in an attempt to identify accidental, depositional, or intentional breakage of the figurine in the following ways.

Angular	Corner Missing
Transverse	Leg Missing
Superficial	Unclassified
Longitudinal	None

DESIGN FIELDS

At the stage of data entry design elements are dealt with in a perfunctory manner, insofar as they provide searchable data of a physical type that can be used to group the figurines into categories. Does the figurine have eyes or not; do the eyes have medial incisions or not; is there a geometric rather than an anthropomorphic design; is there symmetry or irregularity of design, and so on, for characteristics that can be used for identification purposes during the following relational trait searches. No attempt at interpretation is made beyond this level. It is only later in the interpretation and discussion of stylistic influence that these criteria become important based on the appearance of attribute patterns. To accomplish this the figurines were photographed and scanned to detail the stylistic information for further comparison.

The following list identifies those elements that are present as stylistic information based on the zones of head, torso, and legs.

M) HEAD: The head zone contains the primary information that identifies the Type categories of figurines. There is more variation in Type One figurine head zones than in Type Two transitional where the facial characteristics are concerned, as most Type Two faces are comprised solely of several slits.

i) Eyes:

Oval	Angular
Round	Tear-Drop
Punctate	Brow-line
Rectanguloid	Brow Incised
Curved Line	Semi-Circle
Unknown	None

ii) Eye Slit: Present or not.

ii) Nose:

Parallel Sided	Bulbous
Curved Line	Unknown
Single Line	None
Triangular	

iv) Mouth:

Oval	5 - sided
Rectanguloid	Punctate
Semi-circle	Unknown
Round	None

v) Mouth Slit: Present or not

vi) Vertical Incisions by Mouth: Present or not

vii) Headband: Present or not

N) TORSO: The torso zone is composed of arm design, arm position and the presence of breasts on all figurine Types. except Type Three where no arms occur.

i) Breasts: Present or not

ii) Arms:

Angular	Vertical to Face
Curved	Unknown
Curved at Waist	None

iii) Vertical Centre Line: Present or not

O) LEGS: Legs can be alternately incised with design patterns or plain, and also have leg ends that are fashioned in different ways. In many cases the style of leg end appears to be directly related to the type of vertical cross-section employed.

Incised	Unknown
Plain	None

i) Leg Ends:

Rounded	Angled
Straight	Unknown

P) Geometric Design: Present or not

Q) PRESENTATION: This involves the presence of design on one, or both sides of the figurine, and the execution of those designs.

i) Ventral Design: Present or not

ii) Dorsal Design: Present or not

iii) Execution:

Symmetrical	Unknown
Irregular	None

Additional categories of stylistic identification were created to address the presence of information based on transitional figurine forms. The data in these fields is as much qualitative as it is quantitative and serve only to create distinctions that are useful in searching the database.

R) HEAD STYLE: This category identifies the characteristics that are most representative of a Type style.

Early (Stylised Carved Face)	'Venus' (Eye & Mouth Slits w/ Helmet Head)
Transitional (Combination Form)	Late Valdivia Stone

S) TORSO STYLE: The shaped body indicates a three dimensional anthropomorphic form that contrasts with the flat, celt-like form of the early figurines.

Early (No defined body shape)
Transitional (Body shaped w/ stylised design)

T) LEG STYLE: The leg style is another trait that is used to define Type and can be any of the early notched styles, or, one of the transitional erupting styles of the transitional figurines.

Early (Notched/Open Leg)	'Venus' style (Full humanoid legs)
Transitional (Closed petal legs)	Unknown
Transitional (Open petal legs)	None

U) OVERALL STYLISTIC DESIGN: In the early figurines this is an attempt to isolate a major descriptive trait such as incising on one side, on both sides, curvilinear design techniques, geometric design presence, and those elements of design that are more closely associated with later styles of figurines.

Open-form front only	Punctate design
Open-form extends to back	'Venus' elements
Elements encircled on front	Geometric Maize Motif
Elements encircled on front/back	Late Valdivia Face Motif
Breasts & Notched Legs	Incised Legs

V) CARVING STYLE: A combination of incising/carving styles appear on the figurines: mainly high and low relief for early figurines, with some apparent sculpting; and more sculpting and engraving for the transitional figurines.

High Relief	High & Low Relief
Low Relief	Sculpted/Engraved

BUILDING A TYPOLOGY

An Early Typology

Any attempt at a reappraisal of the Valdivia stone figurine typology must begin with the initial classification of Valdivia figurines by Meggers, Evans and Estrada (1965:95). The designation of three "distinguishable" types (Meggers, Evans and Estrada 1965:95-96) still survives as a point of reference. However, as an increased number of specimens has become available for study through site excavation and increased accessibility to private collections, it is time to reevaluate these three types, and also time to increase the types to include the "unclassified" (Meggers, Evans and Estrada 1965:100) stone figurines that at the time were considered unique. The creation of a typology that adequately describes the changes in style and morphological development of the Valdivia incised stone figurine form is long overdue, as is an attempt to deal with typological deficiencies.

Over forty years has passed since the identification of Valdivia incised stone figurines and their published descriptions by Meggers, Evans and Estrada (1965), and they have yet to be rigorously analysed. Attempts have been made to analyse the ceramic Valdivia figurines for chronological order and ritual or secular purpose (see Di Capua 1994;

Hill 1975; Lundberg 1977), and in some cases these purposes have been extrapolated to the stone figurines, but the incised stone figurines have been accepted for what they are, and less for what they might mean in a broader sense. Some theories suggest that the stone figurines are feminine on the basis of the 'notch' representing a vulva. I do not agree, and will detail the development of the notch and confirm its identification as a means of separating the material into 'legs'.

No one study has restricted itself to an examination of the stone figurines alone, and their position within the overall figurine tradition of the Valdivia culture. The collection of data on which this chapter is based represents such an attempt. Lundberg (1977:1) recognised that the stone figurines recovered in 1974-1975 from Real Alto in the Chanduy Valley did not represent a unilinear progression through time, and identified the contemporaneity of stylistically varied incised stone figurines with ceramic figurines as opposed to chronologically separated styles.

The typology that follows is based on a similar assumption that identifies the separation of styles while at the same time identifying transitional styles. A most important consideration concerns the identification of several parallel lines of figurine development that are independent of each other but with obvious stylistic similarities, or overlap. Whether this variation in styles is based on different environmental influences in site locations, technological changes associated with chronological development, or the presence of functional versus aesthetic figurines, can only be determined by studying the full range of figurines available. Any suggestion that all the figurine forms from one culture with multiple sites -- as Valdivia is -- could be interpreted as variants of a cohesive whole is not only restrictive to the study, but is potentially responsible for masking the alternate functions that some of the figurines may have held and which also need to be recognised for their diversity (Ucko 1968:426). This typology recognises that figurines in the Valdivia assemblage may have appeared for different purposes and with different influences at some

sites and not others. Obviously some of the figurines make use of common symbols or techniques of expression while other attributes indicate they may have been intended for alternative purposes.

Why a New Typology?

The initial figurine classification by Meggers, Evans and Estrada (1965) did not include examples of the later or transitional phase figurines, and dealt with anomalous stone figurines as "unclassified". With the increase in figurine recovery since that time the original "unclassified" stone figurines have now taken a more prominent position in the stone figurine assemblage, requiring new categories of classification to deal with them. The incised stone figurines also suffer from a lack of uniformity in the definition of artistic techniques employed to incise, carve, engrave, or sculpt them. These techniques are themselves used, at times, interchangeably when they do indicate different techniques of execution. While incising is a general term applicable to preparation of the figurine, the identification of high relief or low relief is an assessment of execution style, both of which are present to varying degrees on the figurines, either alone or in concert. As the variation of relief type is particular to specific figurines I use the generic term 'incised' when referring to the figurines in a general sense, while identifying the techniques of carving when dealing with individual figurines.

An Alternate Typology

To better describe the complete range of variation present in the accumulated collections of Valdivia incised stone figurines I have devised a typology based on a number of stylistic and technical characteristics (Table 3.1). This typology does not solve any

problems of absolute chronology, nor is it meant to, but it does attempt to fit the stone figurines into a more definitive context of figurine development, and to examine that development through its categories and sub-categories. This typology does not attempt a linear explanation for all the figurine variants as stages of development, instead it recognises that some figurines may have developed independently and either influenced or reflect changes found within the more prevalent stone figurine style, the influence of ceramic types notwithstanding. With this variety of figurines, questions of purpose can be framed. Are the figurines art, or utilitarian objects used as a background for artistic depictions? Is the object morphology -- shape, legs, notches -- part of the stylistic information conveyed by the incised patterns or simply a vehicle of expression? There is no indication that the notch was utilised for any functional purpose, as no repetitive wearing of the open notch is present -- as is the case with holes in spindle whorls.

The separation of the material form from the incised design information becomes clearer among the early figurine types when the dominant attributes of a stylised face and hands is replaced with geometric designs. In this sense then, the morphological form supports the design information -- morphological 'structure' to the design 'superstructure' -- and raises the question, is the design information necessary for the performance of the objects intended purpose purely decoration, or do both form and incisions convey information on two different levels?

Table 3.1. Valdivia Incised Stone Figurine Typology

Category		
	1(a)	Palmar Plain
		Palmar Plain Incised
	(b)	Palmar Short Notched
		Palmar Short Notched Incised
		Palmar Long Notched
		Palmar Long Notched Incised
		Palmar Open Notched
		Palmar Open Notched Incised
	(c)	Palmar Curvilinear Incised
	2(a)	Palmar Transitional
	(b)	Palmar Terminal
	3(a)	Valdivia Plain Breasted
	(b)	Valdivia Notched Breasted
	(c)	Valdivia Breasted Incised
	4	Valdivia Late Stone

THE FIGURINE DATA SET

The majority of figurines in this project database were recovered from the Loma Alta (OGSEMa-182) site in the Colonche Hills of Guayas Province, Ecuador. This dataset includes a substantial collection of stone figurine fragments and several anomalous pieces. The figurines and figurine fragments from Loma Alta number 572 specimens. Although this amount has been previously reported by Stahl (1984:179, 1986:141) as 536 figurines and fragments, reanalysis of the Loma Alta materials by Dr. J. S. Raymond and additional analysis conducted for this project resulted in the identification of the additional 36 figurine fragments. The analysis of a combined assemblage that includes figurines and fragments is a necessity, as any study that looks only at the complete figurines will lack the additional data that can be found in the analysis of fragments. The statistical breakdown of figurines and materials included in the project database appears in Table 3.2, with the site distribution breakdown -- minus unclassified and non-stone materials -- in Table 3.3. Neither of these tables include materials from private collections that were not fully analysed.

Eleven additional figurines from other Valdivia sites at Real Alto (OGCh-12), Valdivia Valley (OGSEMa-17 - 1 site #21), and Bolivar Valley (OGSEMa-22 - 1 site # 26), are included with the Loma Alta assemblage for comparative stylistic data (total = 583; Table 3.3). Fragments that were determined to be not of stone were kept in the database as comparison data (combined total = 610), such as the ceramic figurines that were similar to the stone Category Three styles, and that have comparative chronological information, and one ceramic figurine from the Guayas basin (Project No. 0810; see Chapter Six) that displays comparative style information (see Table 3.2). Some of the figurines indicate that experimentation in other media, such as bone (Project No. 0238)and wood (Project No. 0244), had taken place (Table 3.2), although many of these materials would not necessarily

be well preserved in the archaeological record resulting in an unclear picture of their statistical representation. It does, however, indicate that bone and wood were in use and confirms that there is a body of data that is lost to us. Like stone and shell, bone and wood are both carvable materials; different from the malleable clay that represents a completely different technique.

The information from this collection is critical to the interpretation of figurine spatial distribution on Valdivia sites when most of the figurines in other collections appear to have been purchased or recovered by surface collection. Apart from the public museum collections that amass materials in various conditions, private collections probably say more about the owner than the materials themselves (Way 1993:112) and their preference for impressive artifacts, omitting those figurines that are substantially damaged or incomplete.

The remaining collections of figurines analysed or viewed come from the following collections: Museo Weilbauer in Quito at the Pontifica Universidad Católica del Ecuador (PUCE); Museo del Banco Central, Guayaquil; Museo del Banco del Pacifico, Guayaquil; Dr. Luis Plaza Febres-Cordero (Filanbanco), Guayaquil; Museo Nahim Isaías B. (Filanbanco), Guayaquil; Museo del Banco Central, Quito; Sr. Alexander Hirtz, Quito; Sr. Ivan Cruz, Quito; Casa de la Cultura, Quito; Museo de los Amantes de Sumpa, Santa Elena; and the Museo de Salango in Manabí. The majority of these figurines have very little provenience information, and at best offer only general locational data (see Table 3.3).

The addition of analysed figurines from other sources increased this Project database to 810 records. While this may seem like a small amount, these additional figurines were mostly in complete condition with only a few comparative (ceramic) pieces included. This meant that an actual count of the figurine materials associated with, or recovered with, these complete figurines in each collection does not exist and is not available for study. Additional figurines -- between 200-250 -- were observed in private and museum collections

that were not available for complete analysis; although in some cases they were photographed to document stylistic elements. The variety and combination of stylistic elements in these collections were representative of the traits on specimens that were analysed and entered into the project database.

Other collections of stone figurines exist, but are not available for study and, as with those stone figurines that remain unrecovered, they may contain information that will support or refute interpretations and conclusions that result from this study. However, I have confidence in the present sample with regard to the goals of this study and do not feel the database is inadequate or unsuitable for the intended purpose.

Table 3.2. Valdivia Figurine Dataset

Material		Quantity
Stone	Category 1	458 *
	Category 2	52
	Category 3	14
	Category 4	6
	Unclassified	241
Ceramic		32 †
Wood		4
Bone		3 #
	Total	810

* Includes those *Palmar Plain* figurines that met the criteria for blank figurines but which may have been used for other purposes.

† Eleven of the ceramic specimens are Category 3 style, with 15 fragments and figurines of the 'venus' style, and one comparative Guayas Basin figurine.

\# One of the three bone fragments can be classified as a Category 1 figurine fragment.

Table 3.3. Database stone figurine category distribution by site.

Site	Category 1	Category 2	Category 3	Category 4
Loma Alta (Calgary*)	338			
Loma Alta (#)	16	1		
Valdivia (G-31)	8	2		
La Clementina *	34	19	2	
Valdivia Valley	11	9	9	
Bolivar Valley	1			
Colonche	1			
San Pablo		2		
El Salado		1		
San Isidro				2
Manglar Alto		1		
Colon-Portoviejo				1
Junin (M-60)				1
Real Alto	9	†		
Total	418	35	11	4

* These figurines have controlled excavation data.

\# Museo del Banco Del Pacifico collection, Guayaquil

† While no figurines of this category are represented in this collection there are Category 2 figurines at Real Alto as reported by Mariella García Caputi (1989).

VALDIVIA INCISED STONE TYPOLOGY

The stone figurines can be divided into four distinct categories. The first two comprise those figurines that Meggers, Evans and Estrada (1965) classified as *Palmar Plain*, *Palmar Notched* and *Palmar Incised*. Their classification may have been sufficient at the time; however, their three classes combine the presence or absence of motifs or patterns, and their correlation with short, long or full notched morphological variants. To fully describe the level of development it is necessary to identify these sub-categories.

The designation *Palmar*, the name of a village near one site, while not sufficiently suggestive of the wide geographic distribution of Valdivia figurines, does prevent any confusion with Valdivia ceramic designations that include the style types of Valdivia Incised and Valdivia Carved. Because of this I continue with its use to indicate those stone figurines associated with the Valdivia culture that fit within the initial Meggers, Evans and Estrada (1965) designations. The later incised figurines that exhibit transitional elements from early *Palmar* to the ceramic figurines are also designated *Palmar* -- although I would prefer Valdivia as the cultural referent -- again, to avoid confusion between stone figurines and ceramics. However, there is sufficient separation in style between Category Three, which includes simple figures with no faces or limited incised design but with three dimensional breasts, and Category Four, which includes the Late Valdivia period figurines, to support the Valdivia designation (see Table 3.4).

Table 3.4 Typological Class Attributes

Category	Morphological Form	Elemental Features	Expression
1	Celt-like Rectangular Elliptical Round Multi-sided	Plain Anthropomorphic Geometric	Stylised
2	Rounded	Anthropomorphic 3-dimensional	Naturalistic
3	Rounded	Breasts 3-dimensional	Abstract
4	Squarish Blocky	Anthropomorphic	Stylised/ Abstract

Category One

While *Palmar Plain* is ostensibly the easiest to categorise, it is perhaps the most difficult. The *Palmar Plain* designation covers those pieces previously identified as thin, flat slabs with waterworn rounded edges (Meggers, Evans and Estrada 1965:95) and includes all blank, worked rectangular pieces that range in length from 1.3 cm to 10 cm, and width from 1.3 cm to 3.3 cm (Figure 1). In some cases the *Plain* figurine is cylindrical and resembles a human finger with knuckle joints or a phallus (Figure 2). A number of different shapes and sizes are found in this category that includes: elongated rounded pebbles; flat rectangular blanks, or celts; thin ovoid elliptical shaped artifacts without carving; small multi-sided pieces; and rough cylindrical pieces. Are the worked pebbles earlier renditions of the rectangular forms? There is no indication that all figurines presently identified as *Palmar Plain* were figurines in their own right, or blanks used as the beginning stage of manufacture. Due to the variation in size it is highly unlikely that some of the smallest of these figurines -- with very little workable space --would be suitable as blanks for incising, none of which ever appear as incised forms. It can be noted that the *Palmar Plain* subcategory has within it the potential for its own subcategories based on the size and shape of artifacts included.

As the criteria for establishing this typology are based on a combination of morphological characteristics and stylistic design elements, it would be erroneous to overlook the presence of incised figurines without notching. While it is not common for incised figurines to appear without notching, it does occur. Two figurines included in this project do illustrate this fact. One of them, Project No. 0117 (Figure 3) from Loma Alta, has a very crude (or poorly executed) version of the anthropomorphic face indicative of the Category One incised figurines, and the other, Project No. 0683 (Figure 4), has a representation of a geometric motif in place of the face -- two parallel horizontal lines

separated into sections by five vertical lines -- a stylistic element that will be identified and described later as a simplified version of what I have termed the 'maize motif'. The presence of these figurines alters the description of *Palmar Plain* and necessitates the identification of a sub-category -- *Palmar Plain Incised* -- that adheres to the overall morphological form categorisation, but also recognises the distinction of incised elements as an attribute of typological assessment.

The majority of *Palmar* figurines can be placed into the main (1b) subcategory, as there is no doubt that they were deliberately worked, and vary only in degree of complexity and appearance. Each figurine is distinguished by the presence of a notch on one end that separates the vertical plane into two. The length of the notch varies from a small incision no more than a few millimetres in length along the bottom of the figurine to a continuous superficial notch that extends up both sides of the figurine. In its most developed version the notch is completely open on both sides of the figurine and gives the appearance of legs. I have termed these three subcategories *Palmar Short Notched*, *Palmar Long Notched*, and *Palmar Open Notched* (Figures 5, 6, and 7). The short notch designation is reserved for those figurines that display evidence of carving on one end of the longitudinal axis. In many cases this appears as a V-shaped notch, but it can be nothing more than a few incisions forming a small groove. The Long Notch is a variation of the Short Notch, which might be an intermediate stage of manufacture. It is identifiable by the addition to the Short Notch of an incised line that extends further up the figurine on both sides but without actually penetrating the figurine enough to create the impression of a full leg. The long notch can only be considered a superficial extension of the leg representation. The presence of a notch has also been identified as the representation of the female vulva (Di Capua 1994:232), but I disagree with this interpretation.

Palmar Open Notched specimens leave no doubt that legs are intended to be recognised on the figurines. The separation of legs is achieved through complete removal of material

between the resulting legs. The removal of this material creates a fragility to the legs that allowed them to be broken off easily, and as such results in the many broken 'leg' fragments found in the collection. The purpose of breaking the legs, and other parts of the figurines will be discussed later.

The proportions of the *Palmar Open Notched* design could be considered odd, as the leg length appears far shorter in relation to the upper body than is anatomically identified as an average in present populations. This proportion of stature, known as the cormic index -- an individuals sitting height divided by standing height -- indicates a ratio of stature based on the length of the legs to trunk (Molnar 1992:139). Modern Chinese, American, Indian and Eskimo populations can have cormic indices as high as 54 %, indicating long trunks and short legs (Molnar 1992:139). This would make the figurine cormic index, at approximately 75 %, slightly anomalous with present day populations. By recording a leg to overall length ratio based on complete figurines, it is possible to arrive at a mean estimate of 25 % leg to full body height. The length of the leg on complete figurines was divided by the total body length to determine a workable ratio that can be used for two purposes: 1) it indicates the leg length used on specific types of figurines styles; and 2), it can be used to project the overall length of a figure that is missing an upper body part. To standardise the procedure, legs were measured from the base of the figure to the top of the carved crotch. The measurements range from a low of 13 % to 37 % with a mean of 25 %. Short Notch figurines were not included in this analysis as they may only be the beginning stage of the leg process, and if they weren't, the short notch is usually less than half of one percent of the figurine in length.

The purpose of utilising this leg length in figurine manufacture may be related to stature, in which case studies of temporally related human remains from Valdivia will have to be considered. Analysis of skeletal remains from Loma Alta indicate that the individuals were relatively tall with a range of 173.7 cm for males and 160.2 cm for females (Kennedy

1984:19-20). The leg length of figurines might have been a construct of technological design based on material flaws and fracture points. Longer legs would snap off much more easily than short non-separated legs. There is no other reason for such a disproportionate appearance.

In all cases the figurines exhibiting these characteristics need no further artistic presentation. However, all three types do at times exhibit the incised stylistic elements that have been identified by Meggers, Evans and Estrada (1965:96). These elements can be either anthropomorphic in the form of stylised facial features, arms, and at times breasts (Figure 8), or geometric patterns representing grids, squares, and u-shaped designs that take the place of the facial features (Figure 9). In this sense the separation of morphological form from stylistic design is highly pronounced. The notches are present regardless of whether anthropomorphic or geometric patterns are used.

It is clear that two very different expressions of information, or stylistic motif, are present. First, the figurine, that might be a blank or one of the three notched varieties, must be considered not only as a representation of developmental stages of manufacture but also as a medium for expression, a blank canvas, that was used for the presentation of the stylistic information in the second instance. Morphological characteristics of the figurine contribute information on figurine development that might be separate from, but that can be used in conjunction with, the secondary information of the artwork. Because of this, the three categories must be augmented by three additional designations: *Palmar Short Notched Incised; Palmar Long Notched Incised*; and *Palmar Open Notched Incised.* The *Palmar Open Notched Incised* figure is the most stylistically complex category of those that have a face with the body. In some cases the face and anthropomorphic features are replaced by geometric design. As some examples of these types are found broken or defaced and with legs missing, it is difficult to determine in which category they belong. It is tempting to include a separate category that would allow these incised fragments to be classified, but the

lack of notches or a complete form precludes this. The incised figurines of unknown notch morphology are definitely *Palmar Incised*, but that is not enough to establish another subcategory of its own when the typology is based on a combination of morphological form and stylistic elements. The use of *Palmar Incised* to identify these fragmented figurines is a useful term employed to establish statistical data but not typological dissimilarity.

Within Category One additional, but less obvious, technical information is provided by the vertical and horizontal shape of the figurine. Regardless of notch type, the figurines can be cylindrical, elliptical, rectangular, square or ovoid and still provide a background on which similar stylistic information is displayed. The available permutations in this category are all based on similar attributes: a combination of background morphology and stylised depictions of human faces and body parts. In a majority of incised figurines the stylised information includes incised lines that extend to the outer limit of the figurine and then stop, leaving the design open at the figurines edges. However there are exceptions to this process that I believe represent an evolution of stylistic technique, requiring a separate designation.

A third subcategory (1c) represents this stylistic development, or alteration, in artistic process, that sees the anthropomorphic elements of the face, chest and hands found in the *Incised* category shift from an open design style to one that consists of curvilinear lines that join the elements, and in most cases encircle the entire design in an artistically cleaner and more complex design style, that is self-contained on the figurine. As such I have called this style *Palmar Curvilinear Incised* (Figure 10). More than any other attribute, this development separates the incised design elements from the morphological characteristics of the overall figurine form. Incisions are no longer part of the figurine, but self-contained and presented on the figurine, not within it. By this I suggest that the closed style of incising with curvilinear lines releases the stylistic elements from the morphological form, unlike the open incisions that extend to the edges of the figurine, appearing as part of

the overall form. There is a similarity in the content of the design, as far as patterns or motifs that appear in the previous open-ended designs, only the presentation has changed and as such this form is still identifiable as a Category One figurine style and appears in the short, long, and open notched forms. This last point suggests that if curvilinear design is a later development, and it appears on all notched types, then either the degree of notching is definitely not related to manufacturing stages, or the incised designs were created prior to the placement of the notch. It is possible that an unnotched form provided a more stable surface for incising than one that had been weakened by the notch placement.

Category Two

The second category ultimately represents a complete morphological divergence from the previous style. The rectangular/elliptical body shapes are now replaced by sculpted anthropomorphic forms with heads, necks, waists, arms and breasts. One subcategory, (2a) which I call *Palmar Transitional*, represents elements of both the Notched/Incised figurine style and those characteristics that are associated with the ceramic style figurines. In this instance there are facial and torso characteristics of the earlier style combined with the body, arms and leg style of the ceramic figurines. This includes the development of three-dimensional breasts (Figure 11). No longer incised breasts, but a change in form that required an amount of stone material to be removed from the figurine to leave the breasts raised above the rest of the figurine. This combination form might be broken down into its own subcategory, but I think it fits in well with the transitional figurines as three-dimensional breasts appear as an indicator of the change in carving technique and possibly the move to fully-formed three-dimensional figurines in stone and ceramic. It is unclear whether this is an indication that overall figurine design was moving toward the ultimate ceramic form, or if the ceramic form influenced the stone carvers. As

the stone form does include examples that are more completely similar to the ceramic form, I consider these figurines to be transitional in nature.

It should be noted that the three figurines in the project database that exhibit curvilinear design along with three-dimensional breasts from the Museo Nahim Isaías B. collection of the Filanbanco in Guayaquil, Ecuador, are all assigned to the same geographic region by the museum in which they are stored. Their provenience is unknown apart from a general location listed as the Valdivia Valley. A fourth figurine that exhibits similar body form with three-dimensional breasts has a much simplified face consisting of a single line for brow and nose with punctate eyes. There is still a trace of the 'maize motif' design, common to many of the earlier Category One figurines, where the chin should be.

The duration of this style appears short, based on the small number of figurines in collections that exhibit the 'old' style face and 'new' style body combination. The placement and presentation of the arms and breasts have now become an integral part of the figurine. In some cases there are similarities in overall form with the Category One figurines, as the general shape of the figurine might appear more elliptical and rounder than the ceramic figurines, but the similarities in content are definitive enough to identify the strong relationship between these and the ceramic style figurines. The complexities of the early stylised features are replaced by simple incised lines, or slits, that represent eyes and browlines. The breasts and arms are now three-dimensional, protruding from the form instead of being incised into it. Stylised hair and arms appear on the back of the figurine as do lines separating the buttocks and legs. In short the figurine is now a fully-fashioned anthropomorphic figurine as opposed to the early one-sided Category One style.

These figurines represent an advanced stage in carved stone development, as visually they have more in common with the ceramic figurines and appear nothing like any of the figurines recovered from Loma Alta which is classified as a Valdivia 1 and 2 site. Other examples of Valdivia carved stone figurines do appear that indicate a possible

transition stage between the early stone carvings and the later ceramic figurines (Lathrap, Collier and Chandra 1975:40, Fig. 50 #77, and 77 #78). The subject of stylistic variation and change from one medium to the other -- lithic to ceramic or vice versa -- needs to be dealt with to understand the purpose of the figurines. After the analysis of the figurines for location, time period, material and stylistic development, a broader picture of how they developed will appear.

Following on the transitional form are two sub-styles of stone figurine that are differentiated again by leg morphology. The category *Palmar Terminal* (2b) (Figures 12, 13 and 14) includes figurines that represent the hooded ceramic style and no longer exhibit any of the Category One traits. They are now completely identified with the ceramic figurines but with legs that are slightly different. Instead of an open form leg, such as those easily manufactured from two coils of clay, the stone version is more phallic and represents what appears to be either closed or open flower petals with the upper body and, in some cases, the pubic region emerging from the flower to varying degrees. A similar concept is expressed in the Jaina figurines of Mesoamerica where Maya gods -- at times the maize god -- emerge from the blossoms of flowers with their arms crossed over their stomachs (Miller 1975:52; Schele 1997:172-173). The appearance of the maize god emerging from the flower is certainly interesting, but no connection is suggested at this time.

There is not enough stylistic divergence to justify a separate designation between the open and closed 'flowering' leg elements, however, the symbolism of the upper half of the figurine emerging from the bottom 'flowering' half, leaving the pubic area outlined by the open petal shape, should not be overlooked. The overall phallic shape of these terminal styles appears indicative of the female figure emerging from the male phallus which is distinct from the open legged versions of the ceramic figurines that are unquestionably female based, as shown by other attributes. The geographic distribution of figurines of this style is not restricted to a single site or area; their recovery ranges from La Clementina in

the Colonche Hills to Real Alto in the Chanduy Valley on the coast of the Santa Elena Peninsula. According to García Caputi (1989) carved stone figurines were associated with burials at Real Alto (1989:242). From Trench B, one stone figurine (FS# 1227, Unit B 38-9, N 236-238 W 161-164) located in a structure of *bahareque* corresponds to Valdivia II, or Marcos' Epoch Ib, and is described as erupting from phallus-style legs (García Caputi 1989:84). The accompanying drawing of this figurine shows quite clearly a figurine of the *Palmar Terminal* style.

Category Three

Unlike the first two categories that appear to indicate a series of developmental stages in figurine production and stylistic presentation, other figurines seem to have developed on another trajectory. Unfortunately the figurine forms in this category are found almost entirely in unprovenienced contexts and have no secure stratigraphic information that can be used to help place them in the chronology. For the present, the stylistic information has to suffice. The figurines in Category Three (Figures 15 and 16) might have effected an influence on, or been influenced by, the predominant line of stone figurine development seen in Categories One and Two, or they may have been developed independently. The appearance of parallel stylistic traits in both ceramic and stone that are similar to these categories, yet presented on a stylistically distinct form, is problematic. Category Three can, however, be placed chronologically into the figurine typology based on several important traits.

First, the *Valdivia Plain Breasted* (3a) and *Valdivia Notched Breasted* (3b) figurines are much simpler in design and identifiable by the lack of a head or any design other than breasts, or breasts with leg notches, and in some cases pregnancy (see Figure 17). These figurines appear to be completely distinct except for the notch that appears on some

specimens. The presence of three-dimensional breasts on stone requires a greater effort to remove material than it does to incise breasts as part of a stylised design. Second, the appearance of the notch might indicate a concomitant development with the *Palmar Plain* and *Notched* styles, except that in some cases the figurines have faces, as in *Valdivia Breasted Incised* (3c), that consist of motifs found in the *Palmar Transitional* and *Terminal* styles. This feature alone moves Category Three up the developmental ladder and places it in a position parallel to that of Category Two. Third, all three of these sub-styles have counterparts in the ceramic figurines. Ceramic slipped figurines with a complete leg outline similar to the legs of the 'flowering' *Palmar Transitional* figurines (Figure 18) cannot be overlooked as indicators of relative chronology. The facially incised stone figurines (Figure 19) also appear in the ceramic version (Figure 20). The appearance of these traits in both the ceramic and stone versions along with the presence of breasts and similar facial motifs on the better-known 'venus' figurines of Valdivia style secures the general chronological placement of these Category Three figurines at a time contemporary with *Palmar Transitional* and *Palmar Terminal.*

Whether or not the stylistic elements and design motifs were transferable to other media is a major point that needs to be determined. As there is an indication that similarities exist between the incised stone figurines of Valdivia and the ceramic figurines, the issue of skeuomorphic change, or the process of translating an original form in one medium into that of another, arises (Vansina 1984:56). Some stone figurines from Valdivia resemble early clay/ceramic specimens, as shown by the Type Three stone figurine with breasts (*Valdivia Plain Breasted*) recovered from a surface collection at site # 26 in the Bolivar Valley (Project No. 0592). This particular figurine is similar in shape and style to several of the ceramic figurines included in the collection that might represent an incipient stage of figurine development.

The technical presentation of the figurines in this category is less intricate in design and execution than the Type One figurines, but even with slight similarities there is enough difference to warrant their inclusion as a separate style. Their presence in various geographic locations indicates that they were not simply an anomalous attempt at figurine-making, but developed in their own right.

Category Four

The fourth category (4) can best be described as *Valdivia Late Stone.* There are several stone figurine styles that are attributed to late Valdivia 8 period manufacture (Figures 21 and 22). In some cases the provenience is of dubious origin and controversy surrounds many of them. There is little to connect them to the previous three categories apart from some similarity in the eye/face motif. None of these figurines have been identified through controlled excavations that would indicate contemporaneity with the other categories described above. Their identification in several major collections as Valdivia figurines makes it impossible to disregard them at this stage of the investigation. However, the lack of chronological continuity between the first three categories and this last one removes them from the discussion of Early Formative Period Valdivia incised stone figurines, and their analysis can be left to a separate study.

TYPOLOGICAL CONCERNS

Unclassified Figurines

The original descriptions of stone figurines by Meggers, Evans and Estrada include a section on 'Unclassified' figurines in which stone figurines that didn't fit into the Plain, Notched and Incised categories were treated as anomalous or evidence of random experimentation (1965:100-101). We now know that the random figurine styles are much more prevalent and fall within the transitional phase of stone figurines. One of these figurines excavated from Cut J, at G-31 (Meggers, Evans and Estrada 1965:101, [Figure 61]) is assigned to the Period B levels. Even if the chronology for levels at that time has been revised since, it does appear that this figurine fits into a phase later than the early stone figurines. The drawing of the figurine is almost an exact copy of a figurine from the reserve collection of the Banco Central del Ecuador in Guayaquil (Accession No. GA-6-875-78) acquired from the Estrada estate, but that artifact is listed as being from El Salado; there is a difference between the figurine dimensions for both that implies they are two different figurines but all surface markings and fractures indicate they are the same figurine (Figure 23 and Figure 24).

Close examination reveals that the legs weakly, but distinctly, indicate the 'flowering' form I have described for the Palmar Terminal style where the opening of the 'petals' frames the pubic region in the closed version. The rest of the figurines' incised features are also indicative of this style, which can no longer be regarded as 'Unclassified'. I would agree that the development of the eye motif and facial presentation does appear to be a later transitional style that could be a predecessor to the eye motifs found on Late Valdivia stone figures.

This figurine and others described by Meggers, Evans and Estrada (1965:100-101) as rare or unclassified can now be placed into their correct typological categories. Unfortunately the drawings, though similar to figurines analysed for this study, do not give enough detail to accurately identify them. At this point in time I would suggest that there is no reason for any complete figurine to be classified as 'Unclassified'.

SUMMARY

The typology developed above represents three distinct types of stone figurine categories for Early Formative Valdivia and one umbrella category for later carved stone figurines. The later Type Four figurines are not involved in the present study. Previously identified Early Valdivia stone figurines (Meggers, Evans, and Estrada 1965) are included in Type One, although they have been further sub-divided into categories that more accurately deal with differences based on morphological form. Type Two figurines are those that represent a significant change in figurine carving techniques and a trend towards the stylistic elements of the later ceramic figurines referred to as 'venus' figurines without completely emulating them. The Type Three figurines stand apart from the first two categories as a completely different morphological form. Subtle similarities in facial representation indicate a connection to the Type Two and ceramic figurines, while occasional notching associates them with Type One. However, these associated traits that may be enough to place them securely as Valdivia figurines, do not relegate Type Three artifacts to a position solely of transitional importance, but to an incipient form of figurine development based on different ideological needs.

Chapter Four

ATTRIBUTES AND DESIGN FIELDS OF THE TYPOLOGY

> To isolate a specific figurine feature, such as posture or arm-position, is clearly both necessary and yet potentially dangerous. Thus, to take an absurd example, it would be profitless to link together all figurines from anywhere in the world, and from quite diverse periods, simply because they were represented with a navel. On the other hand it would be equally profitless not to consider the possibility of a connection between a culture which only produced figurines with stump arms and crossed legs, and a culture with one figurine only, shown with stump arms and crossed legs, and made of an imported material. (Ucko 1968:390)

The purpose of this chapter is to consider the identity of the elements of style and morphological composition as they appear on the incised stone figurines. The motifs of arm and hand position, facial components, geometric designs, and surface decoration are identified as traits that provide specific information representing the Valdivia culture. Breaking down the stylistic components into dimensions of variability allows for a controlled analysis of element combinations and forms of presentation. Each group of incisions forms a specific informational presentation that can be isolated as to its repeated appearance on multiple figurines. In groups such as the face, many incisions create an identifiable form that is recognisable by our own cultural standards -- albeit with 'stylised' imagery -- and also in the position of the of the arm, hand, and fingers, which add an action

to the figurine. Are the arms benignly held in front, across the chest of the figurine, or do they reach for the chin, or mouth, representing motion? In other circumstances a single line is enough to create the presence of legs, although, a single line can at times represent nothing more than a headband, the slit of an eye or mouth, and a vaginal incision. These incisions, whether alone or in concert, are really the subject of this section of the study and will be identified as to the imagery they represent.

Are They Legs, or Are They Vulva?

A key determination in the controversy concerning whether the figurine notches are legs or vulva is crucial to understanding the visual elements as part of a style. Placing a vulva at the bottom of a figurine where the separation of legs would appear is not without its analogous referents. Ceramic figurines recovered from the site of Granja de Sivia on the Apurimac River in Peru, indicate a female genital organ placed between the two feet (Raymond, DeBoer and Roe 1975:104-105). This does not necessarily mean that all notches between feet or legs can be considered vulva, although in many cases that is exactly what they imply. Can the 'legs' on Category Three figurines be identified as a vulva because the only other physical features present are breasts? If there are only breasts and vulva present on Category Three figurines, then does this make the legs on the Category One figurines a vulva? The breasts on Category One figurines are not part of the morphological form like the legs are, but are incised as part of the style, when they appear at all. This is not a clear point to determine. However, there is some stylistic information available that might provide an answer to the problem.

The presence of a notched line that separates the legs on both the front and back is important to the argument that notches indicate female vulva. As this issue relates to stylistic attributes, and not purely interpretation, it will be included here as it relates to

stylistic development. In the case of the Category Two figurines the line on the backside of the figurine extends further up the body and creates vertical definition for the buttocks in combination with a horizontal line that occurs below the buttocks. The increased length of this line on the backside is also apparent on some Category One figurines that have anthropomorphic facial characteristics on one side. The opposite side has a longer notch line than the side with the face. This can be interpreted as a stylistic element that indicates not only the buttocks, but also the back of the figurine. Once identified in this capacity it was then observed that *Palmar Long Notched* figurines without facial incising had notches of different lengths in some cases.

A review of the Early Valdivia stone figurines from Loma Alta in the Valdivia Valley does not indicate any extended incisions on one side. As these appear in controlled excavations and the previously mentioned figurines with uneven incision lengths were collected from the surface of the Valdivia Valley where later settlement sites occur, it is possible to infer that the presence of an extended incision on the backside of the figurines is a later stage of development that can aid in the chronological placement of these objects.

Another point to consider concerns the inclusion of a vertical slit, or vaginal incision, in the defined pubic region on some of the Category Two figurines (Figure 25 and 26). From the information present on these figurines there can be no doubt that the slit represents the vulva and appears in conjunction with leg separation at this stage. If the 'leg' notch was indeed a vulva, then there would be no need for the distinct representational element of the vaginal incision. This also supports my suggestion that the earlier figurines are predominantly male as they now can be seen to have legs not vulva, and the inclusion of breasts appears intentionally in limited numbers of specimens. The elaboration of facial and torso design, and in some cases the presence of breasts, indicates that there was no impediment to incising breasts when needed. If the lack of a breast can indicate the opposite, that there is still a breast but that it is just not incised as such, then why leave

only that one element off the figurine? Eyes, noses, cheeks and mouths, are not individually left off the figurines, so the implication must be that breasts are not incised when they are not intended to be present.

From this I suggest that the notch does in fact indicate separation of legs, and that where longer notches of different lengths are present on one side, buttocks are indicated. Because of the identification of what I consider to be a quantifiable stylistic element, the leg and buttocks notches, I also suggest that this nullifies any implication that the notch represents the female vulva.

DESIGN ELEMENTS AND THEIR CORRELATION

I have stated previously that the information found on the figurines is of two sorts: morphological form, and incised design. As the categories evolve from Type One to Type Two, the separation disappears. Prior to the conflation of design styles into a transitional form, identifiable elements of anthropomorphic and geometric design can be identified as common designs with metaphorical meanings that then become transitional in nature.

Type One Figurines

As with all the figurine types, the Type One figurines contain distinct areas of design information. There are four such areas -- face, torso, legs, and headdress -- although they are not all present on all figurines. The main design field, the face on the Type One incised figurines, is the most complex. The area can be broken down into five main

components: eyes; nose; cheeks; mouth; and headband. There are a number of options available in each of these components that can appear in any combination.

Face.

The eye and mouth elements are associated by form, as they both exhibit shapes that span the following: Oval; Round; Rectangular; Semi-circle; with the additional form of Tear-Drop for the eyes and Five-Sided for the mouth; all of these elements appear with a slit inside. The nose can be formed at times by: Parallel Lines extending down form the edge of the eyes and cheeks terminating above the mouth; a Curved Line that follows the curvature of the eyes and indicates a nose by dropping towards the mouth without coming in contact with it; a Single Line that has no width to it; and a rounded or Bulbous element at the bottom limit of the nose section. The cheeks can be Round or Square, but in either form, give the appearance that they are distended, most commonly identified as a portrayal of coca (*erythroxylum coca)* chewing. However, ethnographic analogy (see Chapter Six) suggests alternatives for this action.

Obviously this breakdown of component elements is dependent upon the skill of the carver and the interpretation of the observer. The differences between an oval eye form and a poorly executed rectangular form with slightly rounded corners is not something that should be treated as a quantifiably definitive technique.

Torso.

The torso, or chest design field in particular, is comprised of three components: hands; arms; and breasts. The hands are at times placed so that the fingers meet horizontally at a vertical centre line that separates the chest area below the mouth in what can be termed a 'hand to hand' association, or gesture. When the hands are supported by arms, the arms are either angled upwards from the side of the figurine with the hands and fingers extended

towards the chin or mouth, or the arms enter the chest from the side then turn vertically towards the mouth in a 'hand to mouth' gesture. A combination of the two sometimes involves curved arms surrounding breasts -- or not -- with the hands vertical to the chin and the fingers splayed underneath. This last gesture does not require the presence of breasts and occurs in the same form with arms, hands and fingers only.

The 'hands to mouth' gesture on the Valdivia stone figurines can be identified as the earliest extant example of a design element that can be tracked throughout the continuum of figurine development in Ecuador. From the two hands at the mouth or chin, the motif reappears in the ceramic Valdivia figurines as a single hand to the mouth (Figure 27). With variation this action is repeated through all successive figurine traditions, although, the intent might be different. In some of the later representations it is quite clear that the hand is putting something into the mouth -- coca, drugs of some sort, a musical instrument -- but in others it is not so apparent. This in itself might create a false impression. Only a small percentage of these figurines might employ the gesture of 'hand to mouth' in the same manner as originally developed in the Valdivia figurines.

While this gesture is documented as a stylistic element in an artistic description of the figurines, it cannot be separated from its representational information. Why illustrate the arms in various positions? What actions do the arms reflect? A more important question would concern whether it is the position of the arms/hands to the mouth, or whether the mouth is the target area and the hands are involved in an associated action that supports what is going on in the mouth. There are a number of possibilities that might relate to this action, and they all appear ethnographically in South America lowland analogies which is a very indirect method of determining purpose, but nevertheless, these will be identified in Chapter 6.

Legs.

The legs are simply incised or not incised. Occasionally there is an incised horizontal line that indicates feet, or in rare cases, an extension of the body design motif into the leg area. Morphologically the leg ends could be finished in a rounded, angled, or straight fashion, and this seems to be dictated by the overall morphological form of the figurine.

Headband.

The headband occurs as a single line crossing horizontally above the eyes in its open form, terminating at the edges of the figurine's ventral surface. In some cases it becomes a part of the extended curvilinear design that encircles the other elements on the front, or a combined front, side and back structure, that separates the design elements from the figurine background. At times it appears that the headband is replaced with something more complex, that can only be defined as a headdress. The headdress is the least common element and when present is part of the curvilinear design where all lines are connected from the eyes, headband, mouth, and hands, and extend down below the head as additional features on the figurine (Figure 28). The headdress concept brings additional elements into the face/torso/hands configurations. It might illustrate the overlay of additional elements such as a feathered headdress with hanging elements, and is an element that appears in a modified form in the later Type Two category figurines. According to Marcos and García 1988:41) figurines representing shamans in ceremonial attire appear at Real Alto during Valdivia 4 with shamans' stools appearing in Valdivia 3. This may be true for the ceramic figurines, but I think the concept, or representation of these individuals occurs much earlier as might be evidenced by the possible ritual attire stylised on Figure 29.

Geometric Elements in Type One.

The geometric designs are repeated often enough to indicate the importance of a motif and the intention of the carver to utilise culturally specific images. Ethnographic studies of geometric forms contain a basic list of elements that can appear either alone or in concert, and includes: the straight line, found in different angles; the circle and the semi-circle; the undulating line; and the spiral (Funes 1997:23). The repetition of these forms into what could be considered decoration is more predominant on ceramic vessels than on figurines, but if the geometric elements observed on the stone figurines are a decorative motif, or entoptic originating design, then why is there a lack of these elements in their decorative capacities? As decorative elements there are no swirls, spirals, angular lines, only grids and u-shaped patterns. The elements that have been designated as geometric designs might serve another more utilitarian purpose, while the few indecipherable elements that might be construed as zoomorphic presentations are simply a group of elements that are not yet identifiable as mundane representations. Further discussion on the geometric design elements appears in Chapter Six.

Maize Motif in Type One.

The dominant recurring motif on these figurines comes in two forms: a double segmented band, that at times resembles rows of maize kernels; and a similar, single, segmented band. Because of this resemblance, drawings of corn cobs on figurines, and given the fact that maize has been identified as a part of Valdivia culture, I refer to this as the 'maize motif'.

The maize motif appears in three main design fields of the Type One figurine: in place of the face, in a single band (Figure 4), or in a double band (Figure 29); in the neck area (Figure 30); and, as both single and double band versions lower on the torso near the waist or directly above the leg notch (Figure 31 and 32). The presentation of the 'corn cob' can be seen in two separate locations: one from La Clementina (Figure 33) and the other from

Loma Alta (Figure 34). It is the representations of the actual 'corn cobs' on Figures 33 and 34 that indicate the presence of maize during this time period, and obviously the maize motif can only be considered a stylised version of the rows of kernels at best.

There are differing degrees of artistic execution associated with the maize motif, some of the double rows have vertical lines that do not cut completely through both rows but instead are incised separately, slightly askew of each other. More than anything this produces the appearance of rows of corn kernels. Some of the double rows do exhibit continuous vertical incisions, that are performed in a more expedient manner, and in the single row the vertical line merely segments the band. It can be noted that the vertical incisions are contained by the upper and lower horizontal lines indicating the intention of multiple carvers to isolate this design element, not as an attempt to decorate empty space with an assortment of hatched lines. While the exact intent of this motif might remain unresolved, a more important question concerns its failure to survive the transition from stone to the ceramic figurine style of the 'venus' figurines. It is not simply the figurines that change but the message that they carried.

Type Two Figurines

The transitional figurines stretch the limits of the word incised. As there are elements similar to those of the Type One figurines, and those that appear like the modelled features of the ceramic figurines, a combination of the terms incised, engraved, and sculpted seems more appropriate, but the term incised is still applicable. The figurines in this category are three dimensional in form but their stylistic elements can still be separated into areas of informational data. The head, torso, and legs, are all zones of classifiable information.

Head.

The head has undergone a transformation in those pieces that do not show Type One traits. The complexity of the facial image has been reduced into its simplest forms and for the most part is no longer a focal point for information. The eyes, nose, and mouth, are represented by slits in most cases, or as curved lines in some of the slightly more complex specimens. The head itself has become more identifiable as there is usually an indication of a neck separating the traits of hair/headpiece from the rest of the body. When there is hair it extends around the back and appears at times to have a headpiece attached to it (Figure 35).

A variation on the headpiece seems to explain the lack of a mouth element in most of these figurines. Some of the figurines appear to have short hair, but at the same time show no slit for the mouth (Figure 36). I think this can be explained as the presence of a headdress, or helmet style headpiece that also covers the mouth, exposing only the eye and nose area (Figure 37).

The presence of a headpiece can be seen in a number of figurines where the arms reach up to the side of the head as if holding on to the headdress. This might represent a headpiece with attachments that hang down from the head and that are 'pinned up' to the back of the shoulders, but I think this action represents the removal of an object from the head. This is nowhere more apparent than in Figure 38, where the details of the arms, separated from the neck, and with the fingers on the hands clutching the side of the headdress, possibly indicate its placement onto, or removal from, the head. The importance of this action is unknown, but it is appropriate to consider why the figurine carvers chose to freeze this moment in time. First of all, why wear a headpiece, and second why identify its removal or placement as a moment deserving of special attention?

Are these figurines representative of ceremonial specialists who took control of ceremonial activity at the end of the Early Valdivia period as ceremonial centres developed?

In short, are the figurines illustrating a type of garment used by a particular group of people. Does the act of wearing the garment transform the wearer into a shaman or ritual specialist? If so, then we must ask where the people portrayed by these figurines went, since once the ceramic figurines began to dominate, they do not appear in the classic ceramic styled figurines. The figurines that exhibit this trait -- analysed in this study -- are all female, or at least appear to be female based mainly on the presence of breasts and in some cases on a defined pubic region complete with vaginal incision. Were they the ceremonial specialists, or part of the ceremonial activity? Either way, their positions were important enough to be singled out. Zeidler (2000:175-176) suggests females held positions of political authority at Real Alto during Valdivia 3 and were involved with ritual performances as shamans and healers by Valdivia 8 based on mortuary practices and figurine iconography. This is consistent with the above suggestions concerning a group of females involved in specialist activities, but the identification of these specialists occurs earlier based on the results of this stone figurine study.

Torso.

The outstanding traits of the Type Two torso has to be the development of three dimensional breasts and the arms that are modelled from the shoulders, down the side of the figurine, and then horizontal across the waist meeting over the stomach. This is similar to the hands meeting at the vertical centre-line of the Type One figurines, but appear more strictly utilised to frame the breasts, when the arms are not reaching for the side of the head. One example indicates a single arm extending from the centre of the waist upwards to the chin, or mouth, as occurred in the Type One figurines, but this is not common in the figurines analysed.

One group of *Transitional* figurines can be identified by their three dimensional breasts which have replaced the arms and hands of the Type One figurines, but which retain

some of the stylistic facial elements found in the Type One *Curvilinear Incised* figurines (Figure 39). It is here that the issue of breasts must be considered. Figure 39 illustrates a very round projecting style breast that is very different from the transitional breasts seen in Figures 35 to 38, that appear to be larger, flatter, and in general more matronly, as they dominate the torso area. The difference between the two styles of breasts is also a difference in the two styles of figurines. The breasts, when considered in context with the other attributes, indicate that a change occurred, whether in the people being portrayed, or the importance attached to specific physiological features. Whatever the change, it is reflected in a major shift from gender neutral, or gender questionable, figurines to gender specific artifacts.

One figurine that bridges the gap between Type One and Type Two figurines appears as a *Palmar Short Notched* figurine with carved arms and breasts (Figure 40). The arms and breasts are reminiscent of the *Curvilinear Incised* form and no further facial or head development is indicated.

A figurine unique to this study appears with a child held off to one side on the hip (Figure 41). The 'child' is facing upwards and an incised face can be seen looking towards the damaged head. This inclusion of a specific activity complements the actions of the figurines with arms raised to the side of the head. The informational content of the figurines is definitely different from that of the early Type One figurines. The subjects in this category appear more realistic than representational, again indicating a change in ideology.

Legs.

The legs of the Type Two figurines appear as indicators of the particular stage of execution. The early transitional pieces have legs indicated by the single notch style of the Type One figurines. At this stage there is a blurring of the line between legs and, at times, the associated facial attributes. Some of the figurines display legs that are separated in a

manner similar to the Open Notched style, indicating human-like legs, but the diagnostic elements of this category are the 'flowering' legs from which the upper portion of the figurine appears to be erupting. There are two varieties of this element, the 'closed petal' (Figure 12) and the 'open petal' (Figure 13), which depict two different stages of eruption; as discussed in the chapter on typology. The level of eruption, or the vacant space that is available between the 'petals,' can in some cases cover the pubic region or define it. It is in this bounded region that the element of the vaginal slit occasionally occurs. Apart from the pubic region there is no other stylistic element to contend with, although the carved form of the legs is an element in itself.

Type Three Figurines

The third type of figurines, the *Palmar Breasted* and *Breasted Incised*, have only one main zone of element presentation, and two others that appear occasionally. The face, torso, and legs, are all very simplistic in detail and have nearly identical counterparts produced in clay or ceramic.

Face.

A very simplified face composed of slits for eyes and mouth may be present but is not the main characteristic of this type. The face -- when present -- does represent a stage of facial development that has more in common with the later ceramic figurines, and as such are associated chronologically with the Palmar Transitional figurines with similar facial elements.

Torso.

The breasts are the only element found on the torso of this type with consistency. There are no arms and hands, but occasionally a geometric element-- the maize motif -- occurs between the breasts and the face (Figure 42). The incised face, when present, and the geometric motif, along with the three dimensional breasts, helps to place the Type Three figurines into a transitional period between the Type One and Type Two figurines. A placement that is confirmed by excavation data -- or lack of where this type figurine is concerned -- provided by the Loma Alta Archaeological Project (cf. Chapter Five). None of these type figurines appear in the Loma Alta Archaeological Project assemblage.

Legs.

The third zone on the figurine is the notch that indicates the separation of the legs. Not all Type Three figurines exhibit this notch, but when present it is executed in a manner very similar to the Type One notches. The Breasted figurines with notches, but without facial features, might seem to indicate that only sexual elements are being presented, and as such, breasts and vulva are present, but I still disagree for the reasons previously stated. The inclusion of the face and a geometric motif render the breasts and legs of the figurines into a similar morphological form developed by the Type One category. Because of this, the notch remains an element that represents leg separation and not a sexual organ.

SUMMARY

The figurines possess detailed information that cannot be overlooked as artwork. In some cases the attributes are associated with decorations found on other artifacts: mainly

ceramics in the later stages. Each of the attributes found on the figurines in the specific zones of presentation communicate a message. As the messages were not intended for us they are difficult to decipher, but it is not impossible to extract evidence of cultural shift from how the stylistic elements change themselves. The development of stylised anthropomorphic images on the stone figurines into figurines that reflect human activity in a more naturalistic manner does not necessarily indicate that only the artistic capabilities of technical execution flourished over time, but rather that a change in the perception of self -- both individual and group -- occurred in a very broad sense. The figurines indicate that this change was reflected throughout the cultural community of Valdivia and not as an individual construct of identity, but instead, over a large spatial area and extended temporal zone.

Chapter Five

INCISED STONE FIGURINES AT LOMA ALTA, ECUADOR

> In contrast, the position, size, and depth of depositions at the Loma Alta site indicate sedentary occupation by a respectable number of people in a fertile inland valley with an ample fresh water supply. I believe that Loma Alta was a farming community, as Valdivia was essentially a fishing village, while Punta Concepción was a good place to go clamming and to escape from the bugs at the height of the rainy season. (Norton 1982:108)

Open to less interpretation than the stylistic data portrayed on the figurines is the physical data of morphological form and site provenience; the technical information on figurine size, shape, material and finish, along with the provenience data indicating exact location within the site. This is the quantitative physical description that appears as database field criteria, where associations between attribute fields are searchable and information is reduced into trait specific subsets of data. The provenience data, for those figurines that have any, provides the spatial and temporal position of the figurine for analysis. The analysis of stylistic information as physical data -- alternately seen as informational data, discussed in Chapter Four -- can be dealt with in a similar manner. This should not imply that all physical data can be taken at face value. Depositional disturbances, intrusive activities, and taphonomic processes affect many of the figurine contexts. How the figurines, their morphologically distinct forms, and their identifiable

motifs of stylistic elements, are distributed in the archaeological site record and their statistical significance is the purpose of this chapter.

THE LOMA ALTA (UNIVERSITY OF CALGARY) COLLECTION

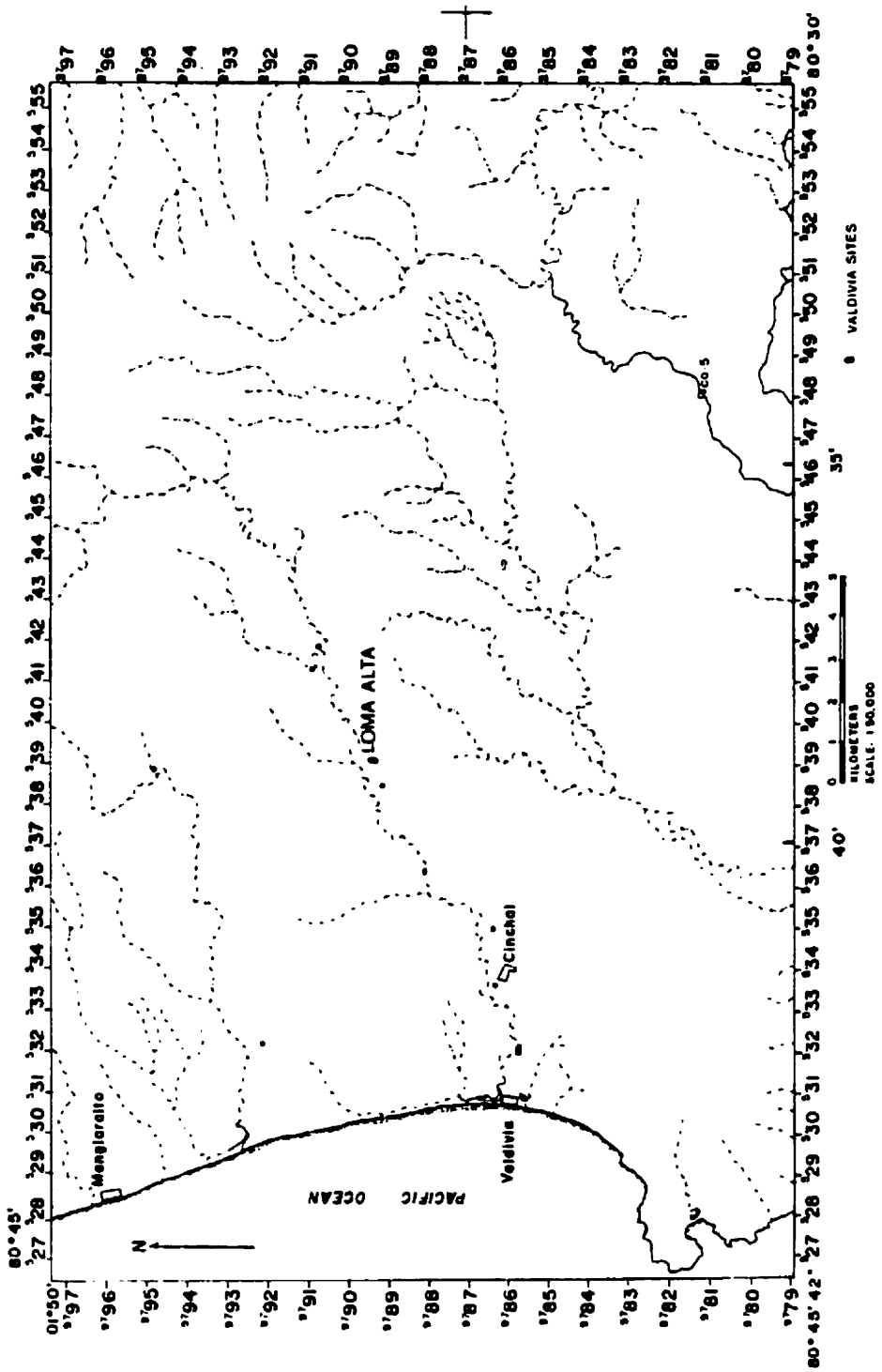
The Loma Alta Archaeological Project operated in 1980 and 1982 under the direction of Dr. J. S. Raymond, Department of Archaeology, University of Calgary, with the intent of determining the economic development and settlement patterns of Early Formative Valdivia culture in the Valdivia and adjoining valleys (Raymond 1980, 1982). This was accomplished by recovering evidence of "households, village layout, food economy, burial practices, and other aspects of the prehistoric culture" (Raymond 1980:3). It is into the "other aspects" category that the stone figurines fall, although they certainly reflect associations with households and village layout through their provenience and patterns of disposal. How the figurines were used in these contexts is an issue that remains open to interpretation.

However, this was not the first time that Loma Alta had been examined for archaeological materials. Presley Norton tested the site in 1969 and excavated in 1971 (Norton 1982:102) and 1977. It is from these excavations that the additional Loma Alta figurines located in the collection at Banco del Pacifico, Guayaquil (which now owns the late Presley Norton and Leonor Pérez archaeological collection), originate. Unfortunately there is very little provenience information. Because of this the figurines are not included in the statistical analysis of the Loma Alta Archaeological Project materials, which explains the use of the Calgary designation when speaking only of the University recovered materials.

Results of the Loma Alta Archaeological Project indicate that Loma Alta was a multi-component site with two principal occupations: Valdivia 1 and 2, and a Chorrera phase (Raymond 1982:11). Apart from these occupations the site area appears to have been occupied intermittently from Valdivia 1 up to the present time (Raymond 1982). The uncorrected dates on Valdivia 1 extend from 3300 to 2700 B.C., and for Valdivia 2 from 2700 to 2300 B.C., identified together as the Early Valdivia period (Damp 1984b:573; Schwarz and Raymond 1996:206). It is from this early period that the stone figurines are recovered.

The Loma Alta site (OGSEMa-182) is situated approximately 15 kilometres east of the village of Valdivia in the Valdivia Valley, at 1° 54' S latitude and 80° 39' W longitude (UTM Co-ordinates 398893-5, Manglaralto Hoja CT-MIV-E4) (Map 1). The Valdivia Valley is approximately 50 km long and about 10 km wide, extending from the Colonche Hills to the Pacific coast. At the time of excavation the site environment was extremely dry as a result of an ongoing drought that had affected the area for at least eight years (Raymond 1980:5, 1982:16). Drought and population pressure caused residents to strip much of the valley of its forest and in the 1980's the residents were exploiting the forest products for construction, furniture making and the production of charcoal. In addition to this the introduction of irrigation and water pumping in the late 1950's drought has caused the water table to drop (Stahl 1991:355). Analysis of vertebrae taxa during the Early Formative at Loma Alta indicate that a number of different habitats were available to the people of the valley (Stahl 1991:351, 356).

The 1980 field season on the Loma Alta site included surface collection, shovel testing and transecting the site along cardinal directions: E-W to sample the extent of the site width, and N-S for site length (Damp 1984b:577-578). The two transects, identified as Trenches A and D, comprised of 2 x 3 metre units, were excavated in alternating units to expose the site stratigraphy and village layout (Damp and Clarkson 1980:2). These



Map 5.1. Location of the Loma Alta Archaeological Project (from Raymond 1982).

excavations, along with the original Norton fieldwork, indicate that a midden was deposited along the outer edges during the Valdivia 1 and 2 occupations in a u-shaped village plan around a sterile centre (Damp and Clarkson 1980:4). Village size reached about 2.5 hectares during the Early Valdivia occupation (Raymond 1993:31).

During the regional survey ten other Valdivia phase sites were located within the Valdivia Valley and ten more in the adjacent Simon Bolivar and Javita valleys. Among these sites it is at Loma Alta that the earliest presentation of Valdivia materials occurs (Scharwz and Raymond 1996:211-212). The Valdivia phase sites were all found on either the flood plain or the margins of the flood plain in a distribution that is consistent with flood-plain agriculture (Raymond 1980:8).

The 1982 field season crew continued with the excavations, and, as a result of an unexpected 5 metre wide bulldozer cut down the southeast slope, they were able to identify the stratigraphic relationship of cultural strata, sterile substratum, and alluvial plain surrounding the site (Raymond 1982:5). Because of this, excavation of fifteen units immediately north of the cut, down to the sterile layer, could take advantage of the natural and cultural stratigraphy from the north profile of the bulldozer cut (Raymond 1982:7). Another nine units, seven down to sterile, were excavated at the east end of Trench A (Raymond 1982:6). The identification of cultural-stratigraphic layers through this road cut aided excavators in the determination of provenience layers.

PHYSICAL, DESCRIPTIVE, AND STATISTICAL ANALYSES

Analysis of the dataset is defined by three procedures: first, that which deals with the physical properties of the figurines, by identifying fragments with the aim of refitting

wayward pieces; second, descriptively identifying figurine provenience and relationships; and third, attempting to statistically analyse the data for correlations. The attempts were sometimes successful, sometimes redundant, and sometimes impossible --but never irrelevant.

Searches For Association

The initial search included identifying all single leg fragments in each of the colour categories and then attempting to match them with fragments that had legs missing with those of the same colour. The search procedure was completely manual and based on the visual association of fragments to each other. This might have been performed with the aid of a computer through the database measurement and colour fields but would have still required the physical assessment of possible matches.

Ten individual searches were performed that produced no matches based on 'colour', 'leg' fragment , or 'leg missing' criteria. Once this search was completed it was possible to reclassify some of the 'unclassified' 'leg' fragments as *Palmar Open Notched* specimens at the least, although information on possible incised elements elsewhere on the figurine is still unavailable. In some cases a reclassification to another style type was possible.

An additional ten searches were performed based on the 'upper', 'middle', and 'lower' fragment criteria for each colour category. An attempt was made to reunite the 'lower' fragments with 'middle' fragments, and then to 'upper' fragments with no success. Following this a match of the 'middle' fragments to 'upper' fragments was performed. None of these searches were fruitful and the possibility of reclassifying the fragments into a particular category became minimal due to the nature of the fragments. Those fragments designated as 'upper' could not be classified without an indicator of notching or carving to determine which end was present. 'Middle' fragments with no carving also have no

indication of legs or facial characteristics, and any 'lower' fragments with notches can be termed diagnostic of the style types already identified. After analysis of these fragments and the other figurine collections it is almost possible to predict which figurine fragments would have belonged to each style but as this cannot be confirmed the fragments were left as 'Unclassified'. As the 'Unclassified' fragments contribute to the overall description of the Loma Alta Archaeological Project they are useful artifacts, but, as part of this study is concerned with the stylistic elements of the figurines, the present project database will be reduced by removing the Loma Alta 'Unclassified' fragments from any statistical matrices used for further analysis.

A Matter of Provenience

Important to the understanding of figurine use is the state of a figurine prior to deposition, and its spatial appearance within the site. It has been suggested by Stahl (1986:141) that most figurines were broken prior to disposal, and this should be testable based on analysis of the data. With increased access to private collections it is now possible to say that more intact specimens have been recovered than previously thought. However, the percentage of damaged figurines can still not be estimated due to the selective recovery and curation of private collectors who show a preference for complete, or almost complete, figurines. It is also useful to consider that not all figurines have incised faces to begin with and still are assumed to be figurines. If it is necessary to 'deface' an incised figurine for a ritual purpose, then shouldn't the plain figurines be equally defaced? Plain figurines should also show damage in a similar manner, but a plain figurine fragment might be less likely to be recognised as a figurine fragment and be discarded or unnoticed during excavation. This raises an important point. Do all the figurines represent the same level of ritual significance? If they do, then we can expect to identify plain figurines with evidence

of similar treatment. If defaced *Palmar Plain* figurines do not exist then the purpose of the plain figurines as stand-alone figurines is doubtful. In this event then, they might just be the blanks forming the first stage of incised figurine manufacture.

Analysis indicates that 10 % of the figurines (58 completely undamaged) in the Loma Alta collection were not broken in any way. This figure is based on the total assemblage of 572 stone figurines and fragments in the University of Calgary collection. By removing the 'Unclassified' fragments the total assemblage of identifiable figurine fragments becomes 338, which raises the number of unbroken figurines to 33 %. Obviously this is a game of numbers; where do chipped or slightly damaged figurines fit into these categories? Stahl (1986:141) identified 76 unbroken figurines in the Loma Alta (Calgary) collection from a total of 536 pieces, or 14 %. The spatial position of discarded figurines is a statistical concern that will relate them to the social structure of the village through their provenience.

The number of complete versus broken figurines in the entire database collection and the manner in which they are broken appear in Table 5.1. Figurine damage is present in a number of ways leaving fragments of figurines broken as follows: at the waist, which indicates they may have been snapped in two sections; into three sections, upper, middle, and lower; a leg section; face missing, which leaves a posterior fragment; or unclassified, a category based on those fragments that have no distinguishing features to identify upper or lower such as the *Palmar Plain*. Unfortunately, not all the fragments are found in associated contexts with their broken figurine hosts, or at the least, recovered through the excavation process, indicating that some of them have either been overlooked, perhaps because they no longer resemble figurine fragments to the excavator. Another possibility exists: they were deliberately separated, fragment from fragment, for other reasons.

The numbers on Table 5.1 indicate that the Loma Alta Archaeological Project excavations recovered more fragments than complete figurines. This is not the case with the

Table 5.1. Database stone figurine distribution by fragment.

Site	Complete*	Upper	Middle	Lower	Leg	Face	Miss.	Unclass. †
Loma Alta (Calgary)	110	62	26	82	48	3		7
Loma Alta	10	5	2					1
Valdivia (G-31)#	10							
La Clementina	34	13		5				3
Valdivia Valley	22	5		2				
Bolivar Valley				1				
Colonche		1						
San Pablo	1			1				
El Salado		1						
San Isidro	2							
Manglar Alto	1							
Colon-Portoviejo	1							
Junin (M-60)	1							
Real Alto	7	1		1				
No Site Provenience	48	10		1	1	1		
Total	247	98	28	93	49	4		11

* Complete but with slight damage.

† This represents those figurines that cannot be identified as upper or lower, such as the *Palmar Plain* which have no notch or face.

\# Not including those described by Meggers, Evans and Estrada.

figurines from other sites and collections, although, comparison to the other sites is skewed statistically due to the incomplete nature of artifact retrieval. A comparison between figurines recovered by the Loma Alta Archaeological Project and those previously collected by Presley Norton indicate differences in recovery techniques and choices of what to save (Scott Raymond, personal communication 2000). These procedural differences are similar to the collector's preference for complete figurines and amounts to the same problem where statistics are concerned.

The type of fracture present on the fragments might also indicate whether or not deliberate destruction of the figurine had taken place, or if the fracture is consistent with the random fractures of depositional damage. A number of different types of fracture are present on the figurines that include; transverse breaks; angular breaks; longitudinal breaks; corners missing; legs missing; and the surface fracture that in most cases has removed the face. Some figurines may exhibit more than one of these fractures, or are fractured in a minor way.

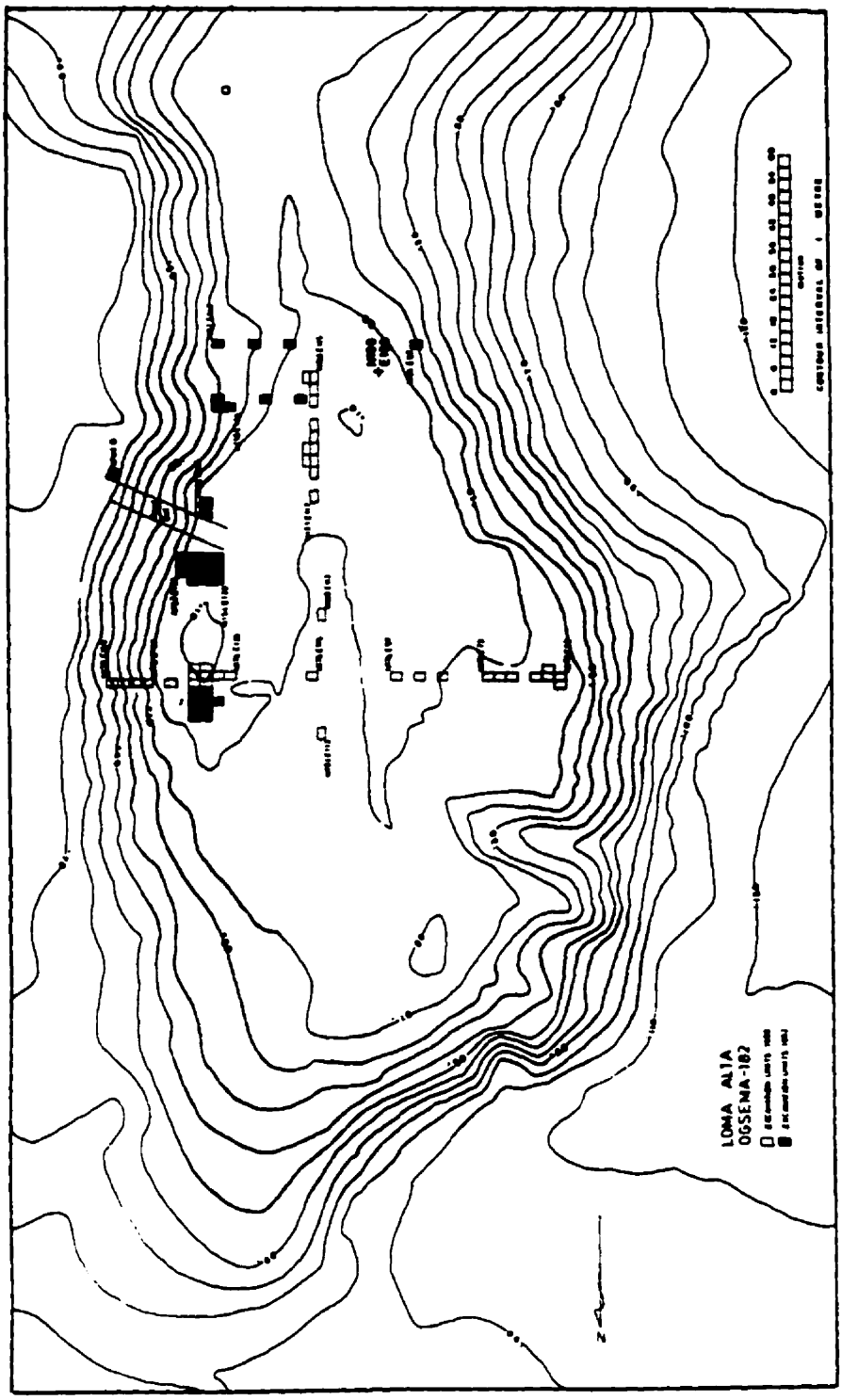
Once again the Loma Alta information offers a different perspective than the figurine fractures from other sites. There are more transverse breaks than any other type, and all the fractured specimens combined outnumber the complete figurines four to one. There are no fractured figurines at the Valdivia type site (OGSEMa-172, formerly G-31) from the database collections, yet Meggers, Evans, and Estrada (1965:96; Plate 118) reported several incised figurines terminating at the waist in their collection from Cut J. The problems inherent in this analysis are obvious. The lack of provenience and specific locations of recovery for figurines is a problem compounded by missing information from early excavations.

The spatial distribution of figurines from the Loma Alta site illustrates the density of figurine recovery. The highest concentrations of figurines occur on the eastern and western slopes of the site (Map 5.2) which were originally identified as large midden areas

(Scott Raymond personal communication). The midden context makes temporal analysis problematic, but has been performed nevertheless.

The numbers for each of the Category One sub-categories at Loma Alta based on morphological form indicate that the *Open Notched* figurines are the most prevalent at 34%; followed by *Palmar Plain* at 25%; *Palmar Long Notch* and *Incised* at 18%; with *Palmar Short Notch* and *Incised* at 12%; and *Incised* fragments at 11%. When incising and non-incised leg notching is taken into account 79% of the figurines on site are not incised. With only 21% of figurines indicating evidence of stylistic incision, the importance of incision, or the ability of carvers to create the stylistic designs must be called into question. Twenty-five per cent of the recovered figurines at Loma Alta are considered *Palmar Plain* by virtue of their lack of incision and morphological form. This figure is approximated throughout the site in various localities.

The breakdown of the figurine distribution by general excavation units -- 1980 and 1982 combined -- confirms the conclusions by Stahl (1986:141) that figurines were discarded in the domestic refuse, or midden areas around the edges of the site. The fact that the middens are on the edge of the site where drop-off and site formation processes have taken their toll, requires an alternative approach to analysing the data. The temporal distribution of figurines is seen in Table 5.2 with no correction for mixed stratigraphy, while the spatial dimension of site distribution is found in Table 5.3. Both of these Tables represent the data in a raw form that will be clarified in the next section.



Map 5.2. Topographic plan of Loma Alta excavation units 1980-1982 (from Raymond 1993:32).

Statistical Analysis of the Dataset

Matrices utilising the collected data have been created for processing in SPSS for Macintosh, Release 6.1.1 (SPSS 1995), a statistical package that provides a detailed analysis of variable attributes. Through the use of correlation matrices, the morphological elements developed for cataloguing the data and spatial information are used for Cluster Analysis (Tabachnik and Fidell 1996). Cluster Analysis separates the attributes into groups that might indicate levels of element importance, and that are visually apparent through the production of dendrograms.

For statistical analysis of correlations between the categories, SPSS will be used to perform a Cluster Analysis and Principal Components Analysis. Cluster Analysis, which is a form of taxonomy, or the classification of objects into homogenous groups (Davis 1986:502), will be used to identify relationships between elements. Principal Component Analysis was also chosen to determine which variables in the data set could be grouped together into subsets that are basically independent of each other (Tabachnik and Fidell 1996:635). However, a Correlation Matrix was produced that indicated there were not enough correlations above the .30 mark to proceed with the analysis indicating that the use of Factor Analysis is inappropriate in this case (Tabachnik and Fidell 1996:641). This was confirmed by the Kaiser-Meyer-Olkin Measure of Sampling Adequacy -- a ratio of the sum of squared correlations to the sum of squared correlations plus the sum of squared partial correlations -- which indicated a level below the minimum required value of .6 necessary for a reliable Factor Analysis (Tabachnik and Fidell 1996:642).

The following statistical analysis is based on the Loma Alta site distribution of specific morphological characteristics of the figurines, and the localities within the site in which they were found. These characteristics are separated into the typological categories

Table 5.2. Loma Alta (Calgary) figurine temporal distribution by excavation levels.

Level	Plain	Short Notch	Short Notch Incised	Long Notch	Long Notch Incised	Open Notch	Open Notch Incised	Incised	Total
01		1		1					2
02		1				2	1		4
03	4			3	1	12	4	3	26
04	9	4	2	6		9	1	6	38
05	4	2		8	1	6	1	2	23
06	7	6	1	4	2	11	3	5	39
07	8	3		3		6	1	4	25
08	5	1		7		8	1	4	26
09	6	3		5	1	7	1	2	26
10	9	3		5	1	7	1	2	27
11	7	2		2		6		3	20
12	8	4		1	2	8	2	2	27
13	5	1		3		7	1		17
14	4	1				2	1		8
15	3	2			1	2		1	9
16						1			1
17	1					1			2
18						2		1	3
Total									(326*)

* Seven of the 333 figurines with unit data have no level data.

Table 5.3. Spatial distribution of Loma Alta (Calgary) figurine concentration by excavation unit.

Unit N - E	Plain	Short Notch	Short Notch Incised	Long Notch	Long Notch Incised	Open Notch	Open Notch Incised	(Incis.)	Total
106-139	2		1	2		3		1	9
108-139				1		1	1		3
121-115		1		2					3
121-117						1			1
121-124			1						1
124-115				1					1
132-142	3	1		2		1	2		9
134-142				5		9	1	1	16
136-142	2	1					1	1	5
146-139		1	1						2
146-142	1			1		3	2	1	9
146-145	1	1		1					3
146-148		1							1
148-145					1	1		2	4
148-148	5	2				2			9
150-142						1			1
150-145	1	2		1					4
150-148	1					1			2
152-145	1								1
174-142	4	1				2			7
174-145						1			1
174-55	1								1
176-142						4		2	6
176-145	1	1		2		4		1	9
176-52	6	1		6		11		3	27
176-55		1		1		1	1		4
176-58	8	1		1		7	4	2	23
176-64	2			1		3			6
176-67				1		2			3
178-142	2			1		4		1	9
178-145	2	2		1		4		1	10
178-151	1	3							4
178-157	3			2		1	1	2	9

(cont.)

Table 5.3. Spatial distribution of Loma Alta (Calgary) figurine concentration by excavation unit (cont.).

Unit N - E	Plain	Short Notch	Short Notch Incised	Long Notch	Long Notch Incised	Open Notch	Open Notch Incised	(Incis.)	Total
178-160	2			1		2		1	6
178-163				1	1	1		4	7
178-166								1	1
178-52	7	5		4		9	1	3	29
179-142	1								1
180-142		1		3		2		2	8
180-145	5	4		3	1	1	1		15
182-142	2	1		4	2	2	2	2	15
182-145	4			1	1	4		2	12
184-142	7	1			1	1		1	11
184-145	5	1		1		1	1		9
186-142	1	1				4		1	7
186-145					2			2	4
92-130			1						1
92-139	1								1
92-89		1							1
Total	83	35	4	50	9	94	18	37	330

already discussed, and represent different degrees of technical execution. Research at the site took place in multiple localities that identified discrete areas of activity, or non-activity. The correlation of these traits to the localities is the purpose of this analysis, which is performed both in a general sense comprising all site figurine materials, and also more specifically, to those materials that appear to be securely placed into the Valdivia cultural layers for comparison. Preliminary investigations indicate that a relationship exists between the levels of figurine complexity, illustrated by the numbers present in the various typological sub-categories.

There are seven typological categories occurring on the site, distributed over an area that is separated into nine localities. In some areas the excavation of units was not as extensive as others based largely on previous surface collections of materials and test pitting. Other factors may have affected these decisions but they are no longer important to the study at hand. Initially the site was laid out in alphabetical trenches, but as the stratigraphy of the site is not continuous, in some areas I have reduced the areas into sub-localities. These localities can be seen in Table 5.4, where the total of all figurines and their location on the site can be found. As many of these figurines were recovered from layers of mixed deposition -- mainly Chorrera but also with Machalilla and Bahía materials -- a second matrix (Table 5.5) was created that illustrates only those figurines associated clearly with the Valdivia cultural layers of the site. In both Tables the fragmented incised figurines are included as PI (*Palmar Incised*) to give a more accurate indication of figurine activity on the site.

The data in this second matrix is dependent upon stratigraphic information and required a reassessment of the excavated levels to establish their true provenience. The site could not be connected by layers of similarity and soil types or colour leaving only the presence of cultural materials as an indicator of provenience. By reviewing the original site records, field notes, and subsequent report data, an attempt was made to place each

figurine into a secure Valdivia component as materials of Chorrera and Machalilla are associated with Valdivia materials in the upper levels. By removing the figurines of mixed or intrusive deposition a 'purely' Valdivia matrix was obtained. It is from this matrix that the statistical procedures are performed. It should also be noted that as this is a comparison of morphological styles, the *Palmar Incised* fragments were removed from the statistical matrices due to the lack of morphological definition reliant on notching.

Table 5.4: (Matrix 1) Total site distribution of figurines by locality.

Locality	PP	PSN	PSNI	PLN	PLNI	PON	PONI	(PI)
A(1)	24	8		14		33	6	(8)
A(2)	10	7		4		19		(6)
A(x)	6			4		5	1	(10)
B		1	1	3		1		
C(1)	5	2		7		10	4	(2)
C(2)	10	7	1	3	1	8	2	(3)
C(3)	25	9		12	5	17	4	(10)
E	2		1	3		4	1	(1)
F	1	1	—	1	—	—	—	—
	83	35	3	51	6	97	18	(40)

* 333 figurines

Table 5.5: (Matrix 2) Valdivia levels site distribution of figurines by locality.

Locality	PP	PSN	PSNI	PLN	PLNI	PON	PONI	(PI)
A(1)	9			5		11	1	(3)
A(2)	6	7		4		13		(3)
A(x)	3			2		3		(2)
B			1	1				
C(1)	2	2		5		8		(2)
C(2)	6	5		2	1	5	2	(3)
C(3)	23	9		8	3	12	4	(8)
E				2		1		
F	1	—	—	1	—	—	—	—
	50	23	1	30	4	53	7	(21)

* 189 figurines

However, all tests were completed with and without the incised fragments to control for any major variance, but there were no discernible deviations in the results.

The original sampling strategy cannot be considered to have been a random sampling of the artifact population, but instead a non-random sample. Most non-random samples can appear to be biased based on deliberate excavation of high-profile areas of a site (Drennan 1996:89). While the occurrence of figurine artifacts on the site are subject to random human and non-human intervention, the data sample collected represents the complete assemblage of extant figurine artifacts from the Loma Alta Archaeological Project.

ANALYTICAL METHODOLOGY

The method of hierarchical clustering involves an 'n x n' matrix of similarities from which the most similar observations are combined over a number of iterations until the similarity matrix is reduced to a 2 x 2 matrix (Davis 1986:503). From this information a dendrogram is produced that visually identifies clusters of similar attributes.

The data matrix of localities and morphological traits was imported into the SPSS program where the Hierarchical Cluster Analysis was performed. The hierarchical cluster analysis produced dendrograms using: Ward's Method, based on the calculation of the means of each variable and its squared euclidean distance to the cluster means; Single Linkage (Nearest Neighbor) Method, which combines items of the greatest similarity; and Average Linkage (Between Groups), where information about all pairs of the distribution is used, not just the nearest or farthest (SPSS 1995). The different methods were chosen for comparison purposes to test the connectivity of the clusters. The cluster analysis was performed by both morphological traits and locality.

The difference between the results of the Ward's Method and the Nearest Neighbour are slight, indicating final clustering in the same pattern but show differences in the distances of clustering. Because of this the Nearest Neighbour results were discarded as redundant and only Ward's Method and Between Groups results appear in the Tables.

Cluster Analysis Application and Interpretation

The application of a hierarchical cluster analysis to the morphological figurine variables produces results that are immediately obvious. The figurine variables have been clustered into groups that quite plainly separate the subcategories of morphological elements into plain, notched, and incised groups with one exception. In both the Ward's Method and Average Linkage (Tables 5.6 and 5.7), the clustering results are consistent, although at slightly different distances, and both illustrate a strong relationship between the *Palmar Plain* figurines and the *Palmar Open Notched* varieties. The meaning of this relationship will be discussed at the end of the chapter.

The clustering of figurine type by site locality indicates similar results by both Ward's Method and Average Linkage (Tables 5.8 and 5.9), where four Localities B(+x), F, E and A(x) are clustered. This is not surprising as they represent areas on the site that should either be devoid of Valdivia cultural materials due to their geographic position in the area of the open end of a U-shaped village pattern, or on the periphery of the midden and sloped areas. The second cluster of four localities, C(1), C(2), A(1), and A(2), represent areas less subject to slumping than the first group and are located in areas where human occupation was expected to be highest for the U-shaped village plan and also confirmed by the archaeological excavation of other cultural materials. The results indicate a similar distribution of figurine types in these areas. The last locality, C(3), stands alone in the

clustering process -- although it is spatially situated adjacent to Locality A(2) -- as it indicates an extremely high activity area for figurine disposal.

The position of the high density C(3) locality is also adjacent to Structure 4 identified by Damp (1984b) as a "small, elliptical, one room dwelling" with lithic activity areas, refuse pits, and hearths containing evidence of cooking, and artifacts of occupation also in association, based on excavations performed in the 1980 field season. Burials were located under the structure which also covered the top of a large pit (Scott Raymond personal communication 2000). Figurine locality A(2) can be considered part of the Structure 4 materials, although no figurines are mentioned by Damp (1984b:580-581). Locality C(3), the highest density of excavated figurines on the site, is outside the structure to the north while the doorway to Structure 4 opens to the southeast. This indicates that the bulk of the figurine materials are behind the house but there is no way of knowing where they are located in relation to other unexcavated structures.

The results of the cluster analysis suggest that the morphological element variables group statistically according to use, and that the element frequencies by locality can be identified in a statistically representative pattern. In both Table 5.6 and Table 5.7, a pattern is immediately obvious that differs only in the distance of clustering between the two Cluster methods. The *Incised* figurines group together quite early indicating a strong relationship based on the incisions and not the morphological form. The *Notched -- Long* and *Short* -- figurines without incising cluster a bit later but then combines with the *Incised* figurines to form a single group. Two categories omitted from this cluster are the *Palmar Open Notched* and the *Palmar Plain.* Initially separated, they join together forming a single unit that is very distinct from the rest of the figurines.

Table 5.6. Four Cluster Dendrogram using Ward Method by Notching and Incision

Rescaled Distance Cluster Combine

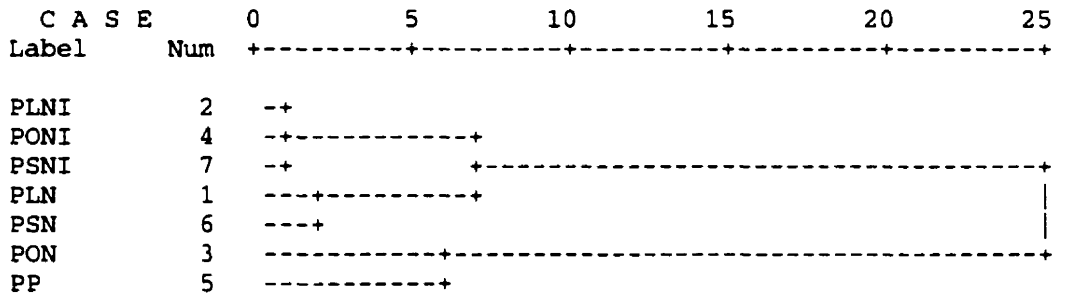


Table 5.7. Four Cluster Dendrogram using Average Linkage (Between Groups) by Notching and Incision

Rescaled Distance Cluster Combine

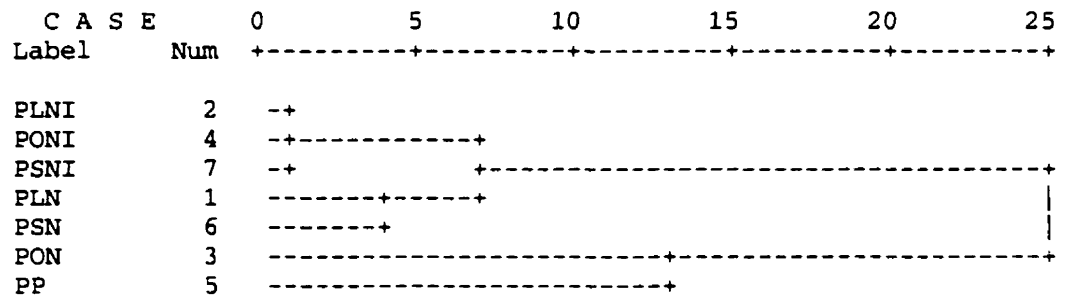


Table 5.8. Dendrogram using Ward Method by Locality

Rescaled Distance Cluster Combine

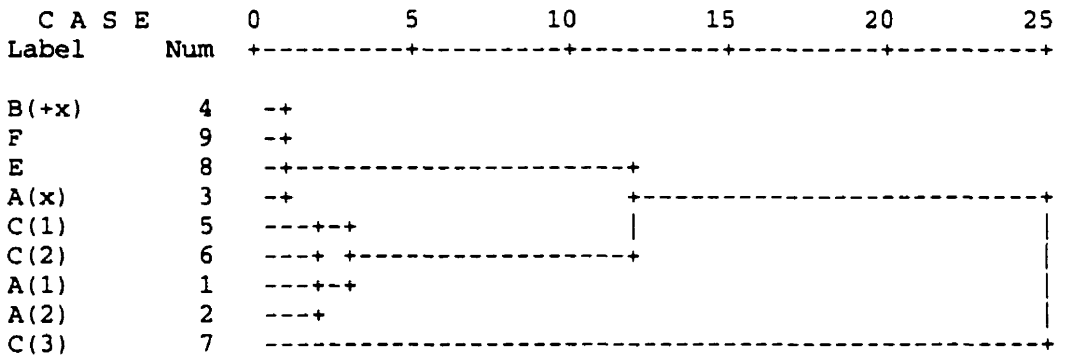
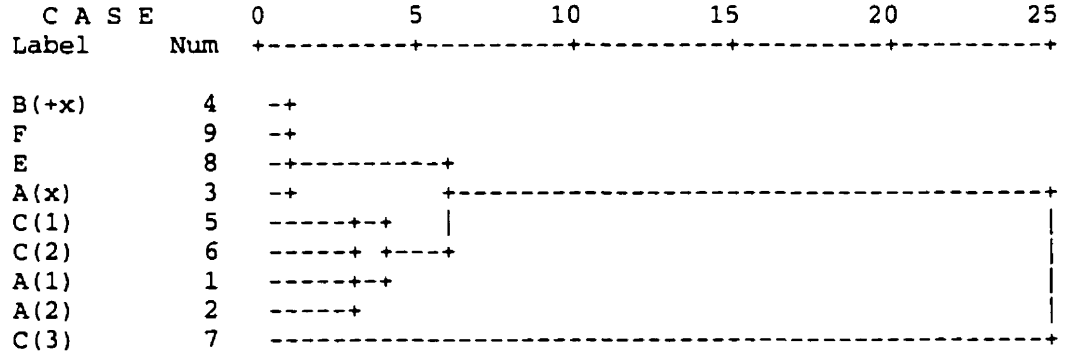


Table 5.9. Dendrogram using Average Linkage (Between Groups) by Locality

Rescaled Distance Cluster Combine



This strong association can be looked at in two ways. First, if the plain figurines were only a beginning stage of manufacture meant to become the open notch figurines, then the on-site quantities that create this relationship of figurines as a starting and finishing point is likely to occur. The in-between stage of notch manufacture would provide fewer artifacts as they would be eventually finished in the open form. However, the problem with this approach has always been that incisions occur on figurines of all notch types. This then is the second possibility, the dominant morphological form is the *Palmar Open Notched*; with all others representing intermediate stages of manufacture. As previously mentioned, 25% of figurines at Loma Alta were *Palmar Plain*, with 79% of all figurines showing no sign of incising. The incised stone figurines might draw more attention, but they are not the site norm.

If these figurines had been used for different purposes their clustering patterns might make more sense and prove more informative as to why they group together as they do; as it is, with a single implied purpose, the possibilities are reduced. If the figurines were manufactured for different purposes, or events, then their relationships could be better identified. What should not be overlooked is the possibility that these clusters indicate that the figurines were used for different purposes and represent a hierarchy of importance that sees the incised figurines at the top with the blank un-incised figurines at a lower level.

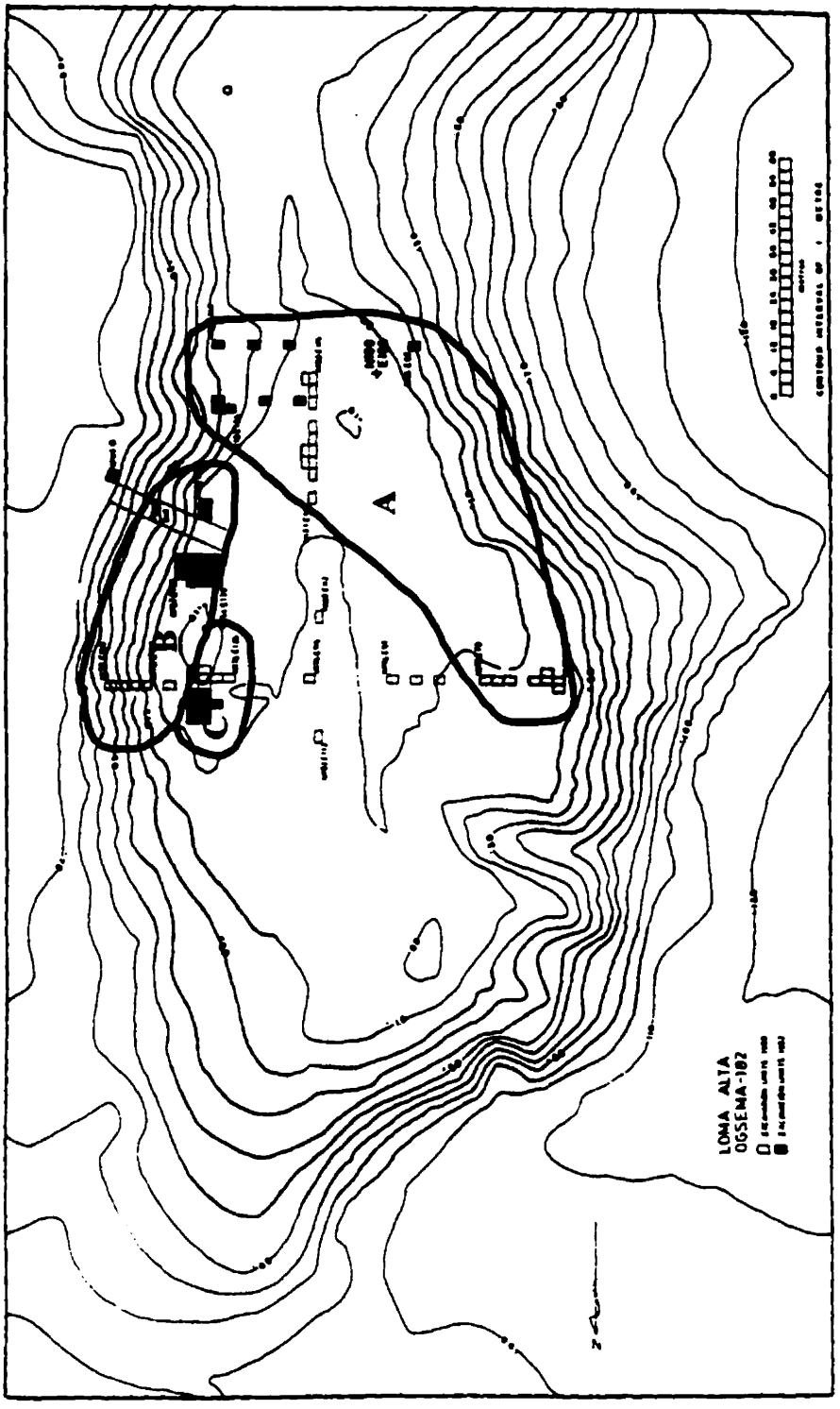
A similar cluster analysis of localities is slightly more informative; statistically confirming spatial patterning already identified by excavation. The results are not unexpected as they reflect site location based on figurine quantity. Three main cluster groups can be identified that represent: (A) the low density midden areas and slopes along the edges of the mound where the site is located (localities A(x), B(+x), E, and F); (B) higher density areas on the inside of the U-shaped pattern, on the level ground above the mound slopes (C(1), C(2), A(1), and A(2)); and (C), the highest density locality (C(3))

located on the eastern side of the mound in an area adjacent to Structure Four (Map 5.3). The first two cluster groups are to be expected given the layout of the village; the separation of the third group reflects a concentrated deposition of figurines that is not easily explained, except that it is also adjacent to the highest point of land on the mound. While this might be relative, any attempt to tie the two together is purely speculative at this time.

Again, the cluster analysis of the localities suffers from the same deficiency as the cluster analysis of figurine sub-types. Being unable to identify specific functions for the sub-types limits the results of the tests. Spatial analysis of figurines that reflect different levels of meaning or utilisation would certainly benefit from this type of study, and might in the future when more data are available. At this stage the results offer corroboration of previously known information; but do raise some questions on figurine manufacture and site use that might imply designated areas of increased ritual activity when viewed within the context of other site materials.

Geometric Figurines

Eighteen incised figurines with geometric designs, representing *Short Notched*, *Long Notched* and *Open Notched* varieties, were present at Loma Alta. Any attempt to isolate their position spatially or temporally from that of the other figurines based upon provenience data and an analysis of stratigraphic contexts proved futile. It appears that geometric designs were interchangeable with anthropomorphic designs in the sense of where they were utilised. However, this should not suggest that they were not as important, or, more important, for other reasons, based on the function of their geometric design. That the geometric designs occur in limited quantities might suggest a sacred status for their purpose above the other figurines; it might also suggest that they were only required on



Map 5.3. Cluster groups (A, B, C) of Loma Alta excavation units 1980-1982 (after Raymond 1993:32).

special occasions. Interpretation of their use at this time would be speculative and does not alter the indistinct character of their site provenience.

Curvilinear Incised Figurines

As a more technically complex style, the curvilinear incised style elements might suggest a state of development superior to that of the open style. This development might be viewed as more advanced and chronologically later than the open style. However, there is no evidence to back up this suggestion based upon the provenience data of figurines recovered from Loma Alta. The sixteen curvilinear incised figurines are found in the same disturbed contexts and spatially separated units as the rest of the figurines on site. If there is a progression from early open-styled figurines in Valdivia 1 to that of the curvilinear incised during Valdivia 2, then it remains unsubstantiated. The ability to accurately define figurine change to that degree is not readily apparent in the materials from Loma Alta.

Ceramic Figurines

The ability to compare ceramic figurine styles and their provenience with those of the stone figurines would go a long way towards establishing temporal and spatial relationships, and also providing insight into the chronology. However, this comparison will not occur between the materials at Loma Alta. At Real Alto, Zeidler (1984:560) identifies stone figurines and ceramic figurines as being functionally identical and occupying the same female activity space. A stone figurine was also recovered from Level 1 in Structure 20 at Real Alto adjacent to the central hearth which suggests its association with female activity areas but does not explain its coeval positioning with the ceramic figurines (Zeidler 1984:561-562). There is also no identification as to the style of stone figurine.

It should not be surprising that ceramic 'venus' style figurines do not appear in Loma Alta, a Valdivia 1 and 2 site, as they have been identified with Valdivia 3 and later. This in itself quite distinctly supports the identification of Loma Alta as an Early Valdivia site. A better question is why are there no ceramic figurines during Valdivia 1 and 2 when ceramic technology existed? There are Type Three figurines manufactured in clay, but these are smaller and slightly different from the rest of the Type Three group; possibly representing a local incipient attempt at ceramic figurine manufacture.

The Original Presley Norton Loma Alta Excavations

There is a slight disparity between the results of figurine provenience reported by Presley Norton and the results of the Loma Alta Archaeological Project. Norton's collections of archaeological materials presently reside in the Museo del Banco del Pacifico in Guayaquil. Figurines researched for this study were provided by the museum but do not necessarily match that of Norton's published reports. Because of this, the Norton published material accounts of figurines at Loma Alta are dealt with separately and do not appear in any of the above matrices.

The early excavations by Norton (1982:103) recovered 51 figurines of the three categories identified under the nomenclature of Meggers, Evans and Estrada (1965). Twenty-seven *Palmar Plain* were found distributed throughout all the levels, but they were the only figurine type recovered from the 2.20 - 1.50 metres level. Nineteen *Palmar Notched*, with some variant of leg designation were located between 1.50 - 0.40 metres, while five incised figurines of the type *Palmar Incised* appeared in the upper levels. Subsequent excavations by Norton at Loma Alta in 1971 and 1972 recovered over 100 stone figurines but he does not list the provenience (Norton 1982).

This provides us with a very 'neat' description of the development of the figurines morphological form. To have the incised forms in the upper levels, above the notched leg form, which in turn is above the plain, blank form, suggests a clear indication that the level of technical, or artistic, complexity, was evolving over time from the simple plain to the complex incised forms. This would solve a number of problems, but it is not borne out by the results of the analysis of the Loma Alta Archaeological Project materials. More provenience information for these early materials is necessary to include in a comparative analysis.

During both the 1971 and 1972 excavations Norton reports on two crude ceramic figurines, each made from a single roll of clay. The first with an incision used to represent legs, which he felt at the time was an adaptation to clay of the Palmar Notched figurine (Norton 1982:102), and the second from the upper levels that had a "suggestion" of female features (Norton 1982:104). A number of these clay figurines were recovered by the Loma Alta Archaeological Project and represent a ceramic version of the Category Three stone figurines. One stone figurine (Project No. 0701) collected by Norton and in the Banco del Pacific collection has been placed in Category Three, but no others of this type appear in the Loma Alta Archaeological Project assemblage. The lack of provenience for this figurine and the absence of similar materials from the 1980-1982 project reduce its usefulness to this study and cast doubt on the veracity of its identified location. The double coil ceramic figurine technique utilised in the classic Valdivia figurines does not appear until approximately Valdivia 3 and 4 (Hill 1975:11). However, the appearance at Loma Alta of incipient clay figurines assists in the placement of stone and ceramic figurines in the present eight phase Valdivia chronology.

INTER-SITE ANALYSIS

There is a second collection of excavated figurines from the site of La Clementina (OGSECo-5) located at the Museo Weilbauer in Quito at the Pontifica Universidad Católica del Ecuador (PUCE). The excavations at La Clementina were conducted under the direction of Dr. Patricio Moncayo during 1990, 1991, and 1992 but unfortunately there is no published site report available. However, Dr. Moncayo (personal communication 1999) indicated that published information on the excavations does appear as a footnote to an article by Costanza Di Capua (1994:232-233) which very briefly describes the provenience of the stone figurines in the following way:

> "From four test pits, at depths between 1.00 and 1.20 meters, 8 rectangular figurines were discovered. No ellipsoidal examples were found. Another pair of pits produced a total of 4 rectangular and 6 ellipsoidal figurines. At a depth of 1.00 meters 1 rectangular figurine and 1 ellipsoidal one appeared. At a higher level the rectangular ones disappeared, but 19 ellipsoidal figurines were recovered. Depths of between 1.00 and 0.80 meters produced 5 incised Palmar figurines. This makes a total of 13 rectangular, 26 ellipsoidal and 5 Palmar Incised figurines." (Di Capua 1994:232-233).

The La Clementina figurines analysed for this study confirm this provenience information, however, 53 figurines were made available to this study by Dr. Moncayo during analysis of the collection -- one of them a ceramic hooded 'venus' style. An additional four unprovenienced La Clementina figurines were located at the Banco del Pacifico in Guayaquil.

From my analysis of this collection it is obvious that the information included in Di Capua's footnotes does not really reflect the La Clementina figurine situation. Of the 56

stone figurines, 23 of them have recorded depth information; with another 14 being recovered on the surface; and the remaining 19 showing no provenience. In all three of these instances there is a marked similarity: they all contain Type One and Type Two figurines; and the surface collection includes two of the Type Three *Breasted* figurines (Table 5.10).

What is apparent from this data, is that the materials are mixed in the excavated levels, and the surface, with no clear chronological position. If La Clementina is a later Valdivia site (Valdivia 2 - 3) than Loma Alta (Patricio Moncayo personal communication) then the transitional materials are expected. That there is no clear distinction between them and the Type One stone figurines found at Loma Alta can indicate either that the Type One figurines were still in use during the development of a transitional stone figurine phase, or that, the lack of information from the excavations makes this data unreliable for anything more than a statistic of what materials were present on the site. However, as already noted for the Loma Alta figurine distributions, where 25 % of the stone figurines were *Palmar Plain*, at La Clementina a similar ratio occurs with 21% *Palmar Plain* in the total distribution. There is a consistency in the category distributions between different areas of the same site and between different sites that is possibly related to figurine manufacture practices.

Table 5.10. La Clementina figurine distribution.

	PP	PSN	PSNI	PLN	PLNI	PON	PONI	(PI)	PTran.	PTer.	PB	PBI
Level												
N/A			1	1		2	2	(3)	7	1	1	1
Surface	5			3			1	(1)	3	1		
00 -1.0	1	1							1			
80 -1.0								(3)	2	1		
1.0-1.20	1	1	1	4			1	(2)	3	1		
	7	2	2	8		2	4	(9)	16	4	1	1

Chapter Six

CARVED FIGURINES OF VALDIVIA, AND ECUADOR ... AND BEYOND

> Differential size and shape of raw material, differential incising techniques, and variability in the incised forms, elements, or motifs that can be arranged differentially on a given piece all suggest a variety of axes along which variability (and perhaps even visual messages of a stylistic nature) could be encoded and more or less standardized, and made more or less visible to potential social audiences. (Conkey 1981:38)

Conkey was speaking of incised bones when she wrote the above quote, but it is entirely applicable to the incised stone figurines. Variability in style, in message, and the variability of the audience who would decode the message, all form the basis for the discussion of these figurines. The incised stone figurines of Valdivia are not solely artifacts of material culture, as seen in the preceding chapters, but couriers carrying a message. While the message has been eroded, or has diffused, through time, there remains a substantial body of information available to allow for a qualified comment on their position in --and about -- Valdivia culture. These comments are framed on the questions that have been defined during this study and subsequent attempts to answer them through figurine and site analysis.

In an attempt to create order out of the many tangents that figurine study might take I divide the data into three areas: first, the temporal positioning of figurine developments

and transitional relationships as they occur in the overall Valdivia chronology must be attempted; second, ethnographic analogy appears to be one way that interpretation of the figurines stylistic elements and motifs might be accomplished; and finally, the identification and association of figurine development with that of other figurine complexes.

Temporal Position

Fitting the stone figurines in to the overall chronology of Valdivia periods as redefined by Betsy Hill (1975) requires an acceptance of the temporal position of the ceramic figurines at this point in time. It appears that there is no definitive method of placing the stone figurines into this chronology, other than to limit them to Valdivia 1 and 2. Ceramic figurines, or at the least, "experimental" female figures, appear in Valdivia 2 and early Valdivia 3 (Hill 1975:11). Table 6.1 attempts to illustrate the independent categories of figurines while recognising the influence and parallel development that appears to have taken place.

The presence of Type One incised stone figurines at Loma Alta supports its designation as an early Valdivia site that ceramically at least, indicates heaviest occupation through Valdivia phases 1 and 2. The lack of Type Two transitional figurines or ceramic 'venus' figurines sustains this designation. Loma Alta did not fall completely into disuse after that time but very little of the later Valdivia materials appear on the site (J. S. Raymond personal communication). Six ceramic figurines of the *Valdivia Plain Breasted* and *Notched Breasted* types do appear, unlike their stone counterparts, in the mixed upper levels of the site. As none of them appear in the secure Valdivia 1 and 2 levels, this suggests that they are a later entry into the figurine tradition, but possibly occupying a position antecedent to the stone Type Three versions.

Three other ceramic figurine fragments were recovered, also in the mixed Valdivia, Chorrera, Machalilla levels: one beak-like head fragment of the Buena Vista style (Project No. 0067); another cylindrical upper fragment that is broken just as the notch begins to separate for the legs, is complete with breasts and a single slight horizontal slit for the eyes, but with a flat-top head (Project No. 0235); and the middle fragment of a venus style figurine that is broken at the neck and where the legs separate. This last piece is complete with breasts and arms that meet at the waist, and the standard red slip for Phase 3 ceramic figurines (Project No. 0560). What is odd about these figurines is not that they are located at Loma Alta, but that there are so few of them.

The presence of these later style ceramic figurines is helpful in determining the chronology of figurine use during the Early and Middle Valdivia Periods, but the lack of other similar figurines, especially the 'venus' type in the deposits of later Valdivia phases at Loma Alta, is puzzling. Is this another indication that ceremonialism became more controlled during Middle Valdivia and the people of Loma Alta travelled elsewhere for their figurine related rituals?

The question of stylistic influence and temporality, with regard to ceramic figurines and stone figurines requires further investigation. Individual specimens of either material represent anomalies that can do little to elucidate the matter until statistical samples are increased; but they do offer us a glimpse of possibilities. One ceramic fragment (Figure 43) from an Early Formative site containing Valdivia-like ceramics near Colimes in the Guayas Basin has combined traits that are similar to the transitional stone -- three dimensional, with breasts and no mouth or chin -- and the later beaked nose Buena Vista style of 'venus' figurine. It is also a very convincing phallus shape with breasts indicating both genders. The eye slits are also reminiscent of later styled ceramic figurines. Radiocarbon dating of materials in the same context indicate a possible date of about 2535 B.C. which would place it into late Valdivia 2 or early Valdivia 3 (Raymond, Marcos and Lathrap 1980:701). The

direction of influence movement -- east to west, or west to east over the Colonche Hills -- will only be determined when other specimens are recovered, but the presence of some of these traits at this early phase might suggest that external influences were originating in the eastern interior and moving west to the coast.

Another consideration associated with the Valdivia Valley and figurine chronology is the recovery of Type Three figurines. In all, 14 Type Three figurines are included in the database, of which two are from La Clementina, one possibly from Loma Alta -- but not from the Loma Alta Archaeological Project -- two without any provenience, and nine from the Valdivia Valley. The nine from the valley are all from periodic surface collections made by Dr. Luis Plaza Febres-Cordero of Museo Nahim Isaías B. in Guayaquil. That these nine Type Three stone figurines occur at surface levels throughout the Valdivia Valley as opposed to the excavated levels of Loma Alta places them in a later relative position chronologically than Valdivia 1 and 2. All of the 30 figurines -- of all types -- designated as Valdivia Valley artifacts came from surface collections: eleven Type One; nine Type Two; nine Type Three; and one unclassified.

As mentioned in Chapter Two, settlement in the Valdivia Valley during the Early Valdivia Period consisted of two main sites: Loma Alta, and later, Valdivia on the coast. If additional villages did not appear until the Middle Valdivia period throughout the Valley (Schwarz and Raymond 1996) then these surface collected figurines represent the transitional stages of valley settlement. As no transitional Type Two figurines occur at Loma Alta, it is not unlikely that they are associated with later sites in the Valley. The question is where do the Type Three figurines fit in ? I think this is an indication -- albeit a largely unsubstantiated one -- that stone Type Three figurines did not occur until the transitional period. What is more compelling, is that the Type Three figurines are predominantly situated at Valdivia Valley locations with two at La Clementina, a Valdivia 2

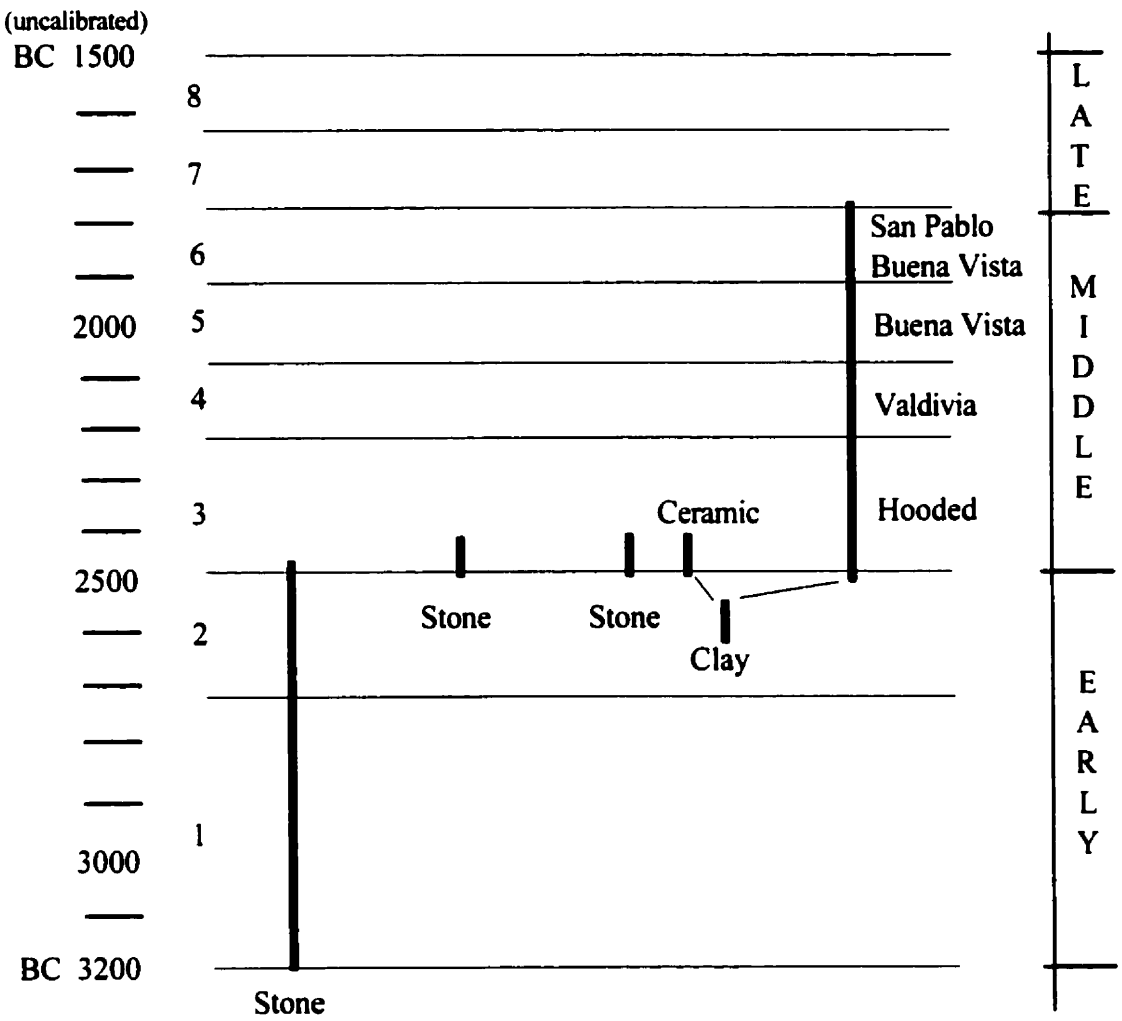
and 3 site in close proximity to Loma Alta. So far it appears that Type Three figurines are a localised development in the central area of Valdivia culture.

Taking this into account, along with the chronological information supplied by Hill 1975), Table 6.1 illustrates the transitional appearance of figurine manufacture at the end of the Early Valdivia period and can be read in the following way. First, incised stone figurines only occur during the Early Valdivia Period based on the materials at Loma Alta, and the ceramic Valdivia figurines occur during the Middle period (Hill 1975). These are the most secure identifications available at this time. The Type Two transitional figurines do not occur at Loma Alta but do at La Clementina indicating their appearance during the Middle period. Similarly, there is no secure evidence that Type Three stone figurines appear at Loma Alta but they do appear at La Clementina and in the Valley of Valdivia where Middle period expansion took place.

The Type Three ceramic counterparts are placed in the same time frame because of stylistic associations rather than excavation provenience. The early unfired clay figurines that appear to resemble Type Three figurines are found at Loma Alta and might represent the incipient form of Type Three but no stone versions have been recovered there. These small artifacts might also be an early stage of the ceramic 'venus' style figurines, but these later forms do not appear at Loma Alta and only the stylistic elements of leg separation and three-dimensional breasts joins the two types together.

While the placement of these Types into a relative position on Table 6.1 might be speculative at best, framed at both ends by the excavated data of early stone and 'venus' figurines, the presence of a transitional period is strongly illustrated. This should not be seen as a time of continuous development with transitional stages, but rather a time of disruption in style and ideology that occurs prior to the consolidation of a corporate style that saw the termination of early stone figurines and the assertion of a strong ceramic figurine style.

Table 6.1. Early and Middle Valdivia figurine chronology (ceramic chronology based on Hill 1975).



ETHNOGRAPHIC ANALOGY AND WISTFUL THINKING

If the stone figurines of Valdivia represent the first extant figurine traditions in the New World, then similarities with other figurine developments might provide insight into their possible purpose. There are two avenues of inquiry available, both of which must be used judiciously: archaeological investigation of additional figurine complexes; and the use of analogous information from surviving figurine traditions. In the first case identifying links from one culture to another may be specious at best, and projecting an ideological interpretation across cultural boundaries might prove flawed. Second, using ethnographic analogy to extrapolate 5,000 years into the past from modern cultures, however similar they may appear to be, is likewise problematic. This does not mean that no useful information can come from these methods, only that no definitive conclusions can be reached. The results of this approach to interpreting the figurines of Valdivia have appeared in several theories that will be critiqued based on the information produced by this study.

To accomplish this three areas of inquiry will be followed: first, other carved figurine traditions from pre-Columbian Ecuador will be discussed; second, figurine use, or meaning, is considered through analogy with modern tropical forest groups as a starting point; and third, relationships with other figurines that might suggest, or that have been suggested as having, an association with the stone figurines from Valdivia will be examined.

Other Carved Figurines of Ecuador

Do later element styles derive from Valdivia or were they produced independently? The variety that occurs in ceramic figurines might not be as noticeable in the carved figurines. For example, the carved *Spondylus* figurines of Cerro Narrío and the tusk-shaped

Bahía figurines carved from stone and shell do exhibit similarities in some ways. If there are common aspects to the presentation of carved figurines then perhaps this will aid in the reconstruction of the carved figurines longevity. Why do carved and incised figurines still appear when ceramic is much easier to use in large quantities? Does the act of carving imbue the material with a spirit, or life force, that is different in some way to that of a ceramic modelled or molded figurine?

Unfortunately it is beyond the scope of this study to re-examine figurines from other cultures and instead we must rely on the studies already conducted. The study of Bahía figurines by Hahn (1991) contains a sample of 1,000 figurines from across the United States and Ecuador, making another detailed survey of the material prohibitive. An assemblage of *Spondylus* figurines is available in Quito at the Jijón y Caamaño museum which I have previously catalogued (Blower 1996), and based on these studies I suggest that though there are differences between them all, there are also some important similarities.

Cerro Narrío was involved in interchange with the coast; can any stylistic similarities between Valdivia and Cerro Narrío's *Spondylus* figurines be identified? The Cerro Narrío figurines also display various arm positions that might be tracked from Valdivia. One trait of the Cerro Narrío figurines that is quite pronounced is the appearance of 'chubby' cheeks. I originally thought that these cheeks made the figurines look more juvenile than adult but overlooked the possibility that they represent the coca, or blowing, cheeks seen also in the early Valdivia stone figurines. It must be remembered that chewing coca only requires one cheek. As far as carving material is concerned, Bahía phase figurines are also produced in *Spondylus* and turquoise and share some visual similarities with both Valdivia and Cerro Narrío.

The stone figurines of the Bahía phase date to the Regional Development Period (Hahn 1991:37). Similarities in style can be seen that might be considered to contain

aspects of both Cerro Narrío and Valdivia traits. The 'coffee bean' eyes and mouth, slit eyes and mouth, and geometric designs on some figures are reminiscent of Valdivia (Hahn 1991:37, Figs. 1 - 3; also see Figure 44 in this study), while the arms and overall tusk shape are similar to Cerro Narrío (Figure 45). Some of these figurines appear as pendants on ceramic figurines and are found buried upright in small holes (Hahn 1991:38). Can these traits be traced back to Valdivia origins or to other carved stone figurines? One type of tusk-shaped figurine, known as the Geometric Style, consists of a triangular cross-section with a vertical line down the centre of the front body and bands of horizontal or diagonal parallel lines that define the image (Hahn 1991:36). On Puná Island similar stone figurines occur in shell middens associated with Late Valdivia phase occupation (personal observation 2000). The question remains, is the development or diffusion of these design elements media specific or do they represent transferable universal traits? Again, the arm positions of horizontal across the chest and angled towards the face, mouth or chin, appear.

What is more important is that both Bahía and Cerro Narrío figurines are so similar, even though temporally and spatially distinct from each other, and that the continuation of these motifs occurs repeatedly in carved figurines more so than it does in the more plastic ceramic figurines. The use of these motifs in a medium that does not lend itself to the same degree of experimentation as ceramics indicates that the elemental form is representative of certain metaphorical meanings that were reduced in presentation to these positions. They are like 'shorthand' descriptions of a specific action and as such are more stylised in execution than later modelled figurines that include the objects of action.

Ethnographically Based Hypotheses

Interpretations of the purpose of the Valdivia figurines range from shamanistic aids (Stahl 1986) for the stone figurines, to markers of the stages of female physiological

development for both the stone and ceramic types (Di Capua 1994). Neither of these can be proven or disproved, and in light of ethnographic research both might hold some validity.

Ethnographic research by Gerardo Riechel-Dolmatoff (1961) in Colombia with the Chocó and Cuna cultures provided insights as to how indigenous groups utilise figurines. During the Cuna curing ceremonies a number of figurines are required to act as the shaman's spirit helpers, after which they are discarded as useless objects that are no longer sacred. Because of this, figurines are required on a continuous basis (Reichel-Dolmatoff 1961:231-232). Not all spirit helpers require a corporeal form to effect cures, but in some instances it appears that life force may enter the figurines during the time of ritual.

A study by Stahl (1986) of the figurines recovered at Loma Alta suggests use by shaman during hallucinogenic activity and ecstatic ceremony. These figurines in particular might have acted as repositories for spirits during the ceremonial activity and afterwards been discarded. The action of discard without concern for ritual association -- in this case the recovery of figurines from household refuse areas -- suggests that protecting the figurines or their metaphorical relationships was not necessary. A lack of concern for curation is indicated by the appearance of predepositional damage (Stahl 1986:141), but a question remains concerning exactly what constitutes predepositional damage. If the figurines were temporarily imbued with a life force, then it might have been removed through the act of destruction. However, if the figurines were ritually broken then why are many of them intact?

Di Capua (1994:231) questions their use in ritual based on a lack of injuries or visible expressions of disease carved on the figurines, or that the lack of figurines in agricultural contexts limits the argument that they were used in crop fertility rites. I agree with the first point that the figurines do not show any signs of physical deformities or health problems, which raises some doubt about their participation in curing rituals unless they were used as spirit helpers and reflect the shaman and not the patient. Di Capau's

second point is a bit more dubious as the ritual activities related to crop fertility do not necessarily have to have been performed in a field but could have occurred in a domestic context during Early Valdivia. Lundberg (1977:4), who studied the stone figurines from Real Alto, suggests that even the larger figurines could have been broken if that was the intention. As previously mentioned, the inability to match any figurine fragments to each other from the excavated units at Loma Alta implies that the broken pieces were not only discarded but separated from each other.

In her attempt to explain the stone figurines, Di Capua (1994:232) is biased by her belief that most figurines -- stone and ceramic -- were female. The idea that the *Valdivia Short Notch* figurine is female is based on her interpretation of the notch as a representation of the vulva instead of the delineation of legs. She also regards, all curves on the figurines as indicating the female body, and arbitrarily dismisses the cylindrical shaped stone figurines because they do not fit her categories, suggesting that they might have served a different function (Di Capua 1994:233). It appears that her theory only functions when selective analysis is applied. One other marginal form of proof that all the figurines were "exclusively female" (Di Capua 1994:245) is based on the evidence of provenience, and their location in domestic contexts. This is another area where a re-examination of the site and figurine provenience must be approached. According to Lundberg (1977:3) and Zeidler (1984:442-443), figurines at Real Alto were recovered from living floors, wall trenches, postholes, pits, burials and midden. Certainly these cannot all be considered exclusively female areas, although several of these areas have a "strong gender association with females (Zeidler 1984:443)."

The discard of figurines after use, and their seeming lack of importance based on discard is documented in other archaeological studies. Broken figurines discarded in refuse is recorded for the Early Preclassic Amate phase from Chalcatzingo, Mexico (Guillén 1993:211). Discard patterns through subsequent phases indicate that figurines were used

mainly in areas of food processing that also contained other domestic refuse -- again patterns similar to those of Valdivia figurines. The fragmented nature of the Chalcatzingo figurines according to Guillén (1993:213) might be due to the structural weakness of ceramic points of articulation -- attachment areas of the legs, arms and head -- which is suggestive of the breaking patterns of the early stone figurines at Valdivia. Not that this specifically indicates a female activity area but it does imply that females were the primary users of figurines during the life-cycle rituals (Guillén 1993:220).

Gestures and Geometry

But what of the gestures and actions depicted on the figurines? How do they provide insight into the meaning of the figurines and their purpose? By looking further into ethnographic contexts it is possible to identify correlates of activity between modern tropical forest cultures, their mythology, symbolism, and the metaphorical meanings of the ancient figurines. Is the figurine action sacred or profane? Does it take place in the sacred world of ritual activity, or is it a physical action related to a common gesture? One of the identifiable actions found on the early stone figurines is the 'hand to mouth' gesture that involves two hands under the mouth or chin, and later appears in the ceramic figurines as a single hand to mouth action. The mouth is an integral part of ritual activities for various tropical forest cultures and it is through ethnography that a suggested purpose might be found.

The geometric elements of design on the figurines might also be derived from ritual activity and have their own ethnographic associations. The possibility that they are entoptic originating designs will be considered, along with the possibility that one motif in particular might be the result of a more profane identification, or a combination of both.

The Cosmological Mouth.

The actions of ritual activity, whether it be for fertility, coming of age, transitional movements through life, health concerns, or offerings to deities, are tied to cycles of activity for the most part. Even matters of health that do not occur on a regular basis can be considered a movement through the greater cycle of life from one stage to another. The importance of the 'hand to mouth' gesture in ethnographic studies is not so much the actions of the hand, but rather the indication of the mouth. In many ways the mouth is integral to the performance of ritual activities and will be examined from the perspective that the 'hand to mouth' gesture is centred more on what the mouth could be doing -- or might represent -- than what the hand is doing. The hand might be holding back something, holding a material to be blown, or preparing for an as yet unknown action, but the depiction serves to direct our attention to the mouth more than it does to the hand(s). Drawing on ethnographic studies of South American tropical forest cultures, the following section will consider several possible activities that involve the mouth.

One function of the mouth, of course, is for the intake of food and drink. The importance of drinking to festival or ceremonial activity begins with the preparation of the drink which can symbolise the transference of life force and rebirth through fermentation; all of which is initiated in the mouth. However, the importance of a fermented beverage to the household unit is not restricted to ceremonial activity in a western 'special occasion' sense, but, as in the case of the Canelos Quichua of eastern Ecuador, could be termed the lifeblood of the household (Whitten 1976:82). In a spiritual sense daily life is filled with sacred events, and drinking chicha, with all that it entails, appears commonplace yet is anything but.

Starter mash made from ripe vegetables or fruits is partially consumed by women and kept in the mouth until ready to decay and fermentation begins. Once it emerges from the mouth a rebirth occurs that sees a new form of symbolic life, where the actions of

humans mimic the actions of sacred beings in the creation of change and the renewal of household life (Sullivan 1988:197; Whitten 1976:84). At this time when ripe fruit is ready for fermentation, spirits of the dead return and are associated with the fermented drink (Sullivan 1988:201). That women create the starter mash and begin the fermentation process which is then consumed by the men, metaphorically symbolises the acceptance by men of women's substance in a manner opposite to that of sexual intercourse where women are the recipients of male fluids (Sullivan 1988:206). The identification of this symbolism begins with the mouth and its metaphorical functions and ritual obligations. Connections to spirits, dead ancestors, and spouses or kin, are all established by this rite that might be reflected in the early tropical forest cultures such as Valdivia.

Another function of the mouth is as a portal through which the soul can be pulled (Sullivan 1988:183). The Mapuche of south-central Chile perform a dance that includes the pouring of fluids and the singing of a *tayil*, or musical text that contains the patrilineal soul. During the ceremony a female pulls the soul from the mouth of her husband and fuses it with the souls of the deceased members of the family (Sullivan 1988:183). As for the 'hand to mouth' gesture this is a possible reason why the hand would be moving toward, or covering, the mouth.

Another possibility that connects figurines to gynocentric activity is the almost universal responsibility of women in village cultures to communicate with the recently deceased ancestors and to help them fulfill their obligations to descendants; as the Mapuche do with both real and mythical ancestors (Faron 1961:211; Marcus 1998:1). The suggestion that females are primarily involved in this activity is more appropriate to the Valdivia 3 and 4 ceramic figurines with the single "hand to mouth' gesture than the double handed early stone figurines that I identify as predominantly male. This in itself might be another clue to the changes that take place during the transitional stage of figurine

development between Valdivia 2 and 3; gender specialisation or responsibility for specific ritual processes was transformed at this time and resulted in the change of figurine focus.

To continue the discussion of the mouth as a ritually symbolic 'object' there are other manifestations. When a Canelos Quichua child is born, spirit helpers are acquired at birth, entering through the mouth, giving involuntary aid to the baby known as an 'unripe' jungle person. The child must then learn to control the spirit helpers before becoming a youth (Whitten 1976:142). The mouth then can be seen as an entry or an exit point for souls. The loss of a soul can occur during ecstasy where the soul might leave through sickness, fits of anger, or during a sneeze or cough through the mouth. These events are usually controlled through the use of shamans who understand the movement of the soul through ritual space, its effects on the human body, and its relationship to spirit essences and ancestors (Sullivan 1988:390; Whitten and Whitten 1988:31). Unsung words from the spirit world may pass outward from a person on his breath, carrying the proof of an inner strength (Whitten and Whitten 1988:38). However, when a deliberate act of harm includes the aid of spirit helpers, a person puts their hand over the mouth, takes aim at the person to be harmed, and blows, sending a spirit helper towards the victim (Whitten 1976:145). This use of the hand with the mouth and the act of blowing resembles the actions depicted on the early figurines.

Other cultures, the Jívaro of Amazonia for example, see the mouth as a container of spirituality used in sucking cures. The act of blowing and sucking by a shaman is a procedure used quite commonly in curing practices (Faron 1961:212; Sullivan 1988:453; Whitten 1976:158; Wright 1998:82). Shamans also identify the relationship between specific foods and the spirit world, and prepare some foods for consumption by 'blowing' on them (Sullivan 1988:420).

Another example of blowing from Amazonia groups relates to the execution of harmful magic by the Kari'ña where blowing sounds through tobacco smoke attracts and

captures a victim's soul, in what can be identified as magical blowing (Sullivan 1988:434). Similarly, the Akawaio practice ritual blowing, called *taling*, as a performance of a deliberate conscious act where a person's breath is linked to a person's spirit (Sullivan 1988:435). Conversely, the Shavante use a blowing technique to deliver 'bad dust,' a powder used in sorcery, to injure victims,; but do not believe that the act of blowing holds any specific power when performed in a ritual context in this manner (Maybury-Lewis 1967:277). It is in most cases the breath, the blowing, and the point of entry or exit that is integral to the identification of the mouth as an important ritual construct.

While the mouth represents many of these vital acts of ritual life, it is also the focus for the ultimate act of life; the point at which cessation occurs. The final moment of death is marked by the last exhalation of breath adding to its importance and this is also stressed by the action of the mourners who symbolically add their own breath to the escaping breath of the deceased when the soul has left the body (Maybury-Lewis 1967:280; Sullivan 1988:483). Leaving the body through the mouth in the form of escaping breath is the ultimate expression of the importance of the mouth in many of these cultures.

Continuing with the breath analogy, the Baniwa shaman blows away signs of death with the breath of the tobacco spirits (Wright 1998:199). Tobacco use by horticultural groups in South America centres on the use of nicotine (*Nicotiana*) as an intoxicant, with the two most highly utilised species being *Nicotiana rustica* and *Nicotiana tabacum* (Wilbert 1987:4). While smoking tobacco made it unnecessary to eat for several days by curtailing the appetite, it was also identified as early as 1578 that a secondary use of tobacco was that of ritual 'tobacco blowing' ([Léry 1578] Wilbert 1987:13).

In later figurine styles actions represented are at times associated with the overall position of the figurine. When seated, resting an arm on a leg quite naturally leads the hand to the chin or mouth in a relaxed pensive stance. Covering the mouth with a hand may represent the ingestion of a type of comestible or an expression of embarrassment, or

wonder. There is no way of knowing the precise meaning without examining the other actions that require bringing the hand to the mouth to see if analogous events might be taking place. These are the actions, represented on later figurines, that might form the link between the Early Valdivia figurine designs and the cultures used for ethnographic analogy.

What is important to note, is that this gesture is not a random action, but one that occurs in developed forms across a period of almost 5,000 years. The same double hand to mouth/chin gesture appears in the Caranqui culture of highland Ecuador as late as 1250 - 1500 A.D., on a stone figurine indicating the longevity of this action (Ontaneda L. 1998:26). Conversely, if this gesture is deliberate, then what is the significance of the hands meeting horizontally at the chest/waist in a 'hand to hand' gesture? This too is a gesture that occurs over time in various figurine forms. The presence of a 'hand to mouth' or 'hand to hand' gesture cannot be considered accidental and must be isolated as a specific statement concerning the action that the figurine depicts. I suggest that in the case of the early stone incised figurines with hands to mouth, or under the chin, that the act of blowing is most likely what is being represented, either through holding a substance in the hands to blow, or in preparation for blowing, possibly spirit darts.

Geometric Elements.

The anthropomorphic elements conjure up images of humans engaged in activity: portraying a shaman in a headdress; blowing coca or tobacco with the hands held to the mouth, or some form of supplicatory posture; or the reflection of a cultural image. These are all possibilities, but what of the geometric elements? How does an entirely different set of patterned incisions replace the anthropomorphic information, yet still appear on a similar morphological form? This is the key to the separation of the background figurine and the information contained on the surface of the figurine. If the incisions are not merely decorative features, then the figurine itself carries the message: which would be intrinsic to

the image presented, whether anthropomorphic or geometric. In a fairly convoluted manner then, this would mean that there is no difference between the anthropomorphic and geometric images as far as providing information to the recipient. If they are meant to provide two different types of information, then why were they transmitted on the same morphological form? This is not to say that a face is the same as a grid, however, the method of sending a variety of messages through the same carrier renders them similar in execution if not completely through intent.

Entoptic Designs.

The presence of geometric designs on the Type One figurines might be explained by analogy with modern and prehistoric parallels. Geometric patterns have been found in the prehistoric Paleolithic cave sites of Europe where they are associated with shamanistic activity (Clottes and Lewis-Williams 1998:16-17 and 92; also see Stahl 1986). The geometric designs on the stone figurines might be explained in this way. A crucial component of shaman activity is the movement from the day-to-day world to the spiritual world brought about by the inducement of a trance-like state. Trance-states and the use of hallucinogenic drugs during shamanistic activity were almost certainly a part of the Valdivia culture based on the recovery of coca pots or "coqueros" at Real Alto (Jim Zeidler personal communication 2001). According to Dowson (1992) the hallucinogenic experience proceeds in three stages. When entering the first stage of the trance state people report seeing geometric forms that include grids, parallel lines and curves and U-shapes which, when from this influence, are known as entoptic phenomena (Dowson 1992:29-30). These phenomena originate from the reaction of the human nervous system to hallucinogenic stimuli and as such, are not culture specific.

Stage two of the trance state is represented by a heightened awareness of the geometric forms as they turn into objects of emotional or spiritual significance. The

randomness of geometric form is replaced by the dominant theme of the individuals own, or culturally shared, spiritual understanding.

In stage three, with subjects in a deep trance, geometric forms change to zoomorphic forms. The configurations produced in the final stage of the altered-state are culturally dependent on a pattern of mental imagery developed within that environment, and to take the thought one step further, might be considered a reflection of cultural imagery. If the geometric designs are reflections of trance activity, then why not the anthropomorphised images as well? Are these images the reflections of a real world or an altered world? The figurines have faces with eyes, a nose, a mouth, and bodies with arms, hands and legs; are these real people? This point is not as rhetorical as it might sound. The question that needs to be answered concerns not only which geometric designs appear in the figurine assemblage, but which expected designs do not appear. The lack of some designs might also indicate that the geometric designs represent patterns from daily life.

To discuss this point is to make use of ethnographic analogy -- that body of knowledge that we identify in the present with the hopes, and sometimes expectations, of illuminating our perception of the past. When dealing with a probable tropical forest culture type such as Valdivia the nearest ethnographic examples must come from the Amazon Basin. The use of psychotropic substances for hallucinogenic activity by indigenous groups of the Amazon Basin has been studied by Reichel-Dolmatoff (1972) who discussed the presence of geometric design on material culture, in particular that of the Tukano of the Territory of Vaupés in Amazonia. Design motifs based on images present in the physical environment occur during the state of hallucination, at which time an individual recalls these motifs in what is considered a "cultural memory" (Reichel-Dolmatoff 1972:110). In some cases these motifs of symbols can be codified by modern groups and can imply meanings that do not begin to approach an archaeological interpretation of the same symbols but are based on an understanding of cultural ideology.

Whether or not a design represents a geometric form or a zoomorphic form can always be debated under these circumstances. One such figurine from La Clementina does appear to illustrate the form of a butterfly -- however, for each person who has viewed this figurine design there are as many interpretations of what it appears to represent (Figure 46). Another geometric form found at both Loma Alta (Project No. 0478) and Real Alto (Project No. 0536) indicates a u-shaped enclosure (Figure 47) in place of a face or other anthropomorphic details. The u-shape is mentioned as a form found in the Stage one catalogue of design elements, but it is also an important design element in Andean and Amazonian cosmology. U-shaped structures and village layouts all appear to direct a convergence of supernatural power. The possibility that Loma Alta was designed on a u-shape is used by Stahl (1986:146) as a correlate to a level of development that includes shamanistic activity.

The significance of these two figurines as a metaphor of spatial patterning needs to be investigated further, but their importance should not be underestimated. It is not inconceivable that these designs appear as a reflection of everyday patterns in village planning. The geometric, or non-anthropomorphic, images could reflect objects or concepts of daily life without the benefit of trance-inducing drugs. In the case of the geometric grid pattern, which can be regarded either as a gate or an example of spatial patterning, there may be another, more utilitarian, purpose.

While the geometric grid pattern is a common trance-state apparition, it appears in the same space usually occupied by the face on an incised figurine (Figure 48). Some of the grid patterns are crudely executed and might serve another function. The parallel between the grid and the segments of the anthropomorphised faces of the Early Valdivia figurines provides the impetus to suggest that the grid pattern is a template used by carvers to form facial features (Figure 49). Many of the figurines display faces that are very blocky in their presentation and lend themselves to this method of pre-patterning the face (Figure 50). In

some cases (Figure 51) hands are found across the chest with a grid in place of the face. I think this represents an attempt to 'rough' out the features that will eventually become the anthropomorphic traits discussed above.

The formal, or structured style of facial layout illustrates a dichotomy in design when compared to the less structured, informal style. There is no doubt that there are different levels of artistic execution occurring in the figurines. Does the formal style represent a corporate style that was copied by others with less ability? Another, rounded form also appears, where the individual facial elements are composed of curved lines but that still adhere to the symmetry of the formal style. This does not mean that all grid patterns should be considered 'artistic' templates. Other motifs occur that use vertical and horizontal lines in a manner that have nothing to do with the face.

Some geometric forms are present that affect entire sections of the figurine, but mainly the leg area. Stahl (1984:167-174) has discussed the issue of human/animal metamorphosis during shamanistic activity at Loma Alta as found on the ceramics, the dominant theme portrayed in this way being the serpentine motifs. The argument of triangular snake patterns as a decorative motif on Early Valdivia ceramics is compelling, but there is no similar triangular motif on the stone or ceramic figurines from this current study (also see Damp 1982). Neither is there a snake-like pattern of triangular hatching that simulates snakeskin (Damp 1982).

What does appear, is a pattern of vertical and horizontal lines that I originally thought represented cayman skin, completely covering the legs and lower torso of one fragmented figurine (Figure 52), and in a similar way, covering the legs and lower torso of a complete figurine (Figure 53) indicating that the rest of the figurine was not meant to be completely covered by this pattern. As only the lower half of the complete figurine is involved with this pattern it could support Stahl's hypothesis of a metaphorical relationship between a shaman and an animal counterpart (1984:168) either in a transitional

stage or as a hybrid of the two forms. However, another possibility might be that a relationship with the land is also represented in the form of a connection to maize, which would also be presented in a series of rows with vertical and horizontal lines. This should not suggest that maize was utilised in any significant quantities as a staple crop, but possibly in a more ritual sense in restricted quantities.

Maize Motif.

The transition from Valdivia 2 to Valdivia 3 does however see the presence of a maize decorative element appearing in Valdivia 3 ceramic pots from Real Alto and at San Pablo (Zevallos, Galinat, Lathrap, Leng, Marcos and Klumpp 1977). Impressions of maize kernels in ceramics were first identified by Carlos Zevallos who recovered ceramic fragments with Olaf Holm from the San Pablo site (Zevallos 1966-1971:19). Their interpretation of the Valdivia figurines -- and the appearance of maize symbolism and decorative elements-- suggests they were part of an agricultural fertility cult that is entirely appropriate for a community that depended largely on agriculture (Zevallos 1966-1971:23). This is not entirely out of the question based on our expanded knowledge of maize agriculture in Valdivia since the time of the Zevallos and Holm investigations (1959-1960) but it does not necessarily support the contention that a cult existed.

Another maize related object appeared at Real Alto during the 1977 excavations. One of the stone figurines -- that could only fit within the *Palmar Plain* sub-category of Type One if it is a figurine -- is an eight-sided blank that is equivalent in length and diameter to that of an eight-rowed race of South American corn (Damp 1979:74). This figurine has been examined for this study (Figure 54) and is, more or less, eight-sided. Other *Plain* figurines from Loma Alta exhibit the multi-sided style (*cf.* Figure 55) but without an attempt at making the sides equal in size as a corn row would be, and with only five or six sides. In these occurrences it seems an alternative to squaring off or rounding the corners.

By itself this may be pure speculation, but in light of the symbolic elements on the figurines and ceramic decoration, the suggestion that the multi-sided appearance represents a cob of maize is strengthened.

The possibility that symbolic maize found its way onto pots, or even earlier onto stone figurines, prior to the intensification of maize agriculture, does not indicate that maize as a ritual object did not occur. Rather, the presence of this motif and the drawings of corn cobs on stone figurines, along with ceramic maize impressions and designs, and multi-sided objects of corn row similarity, suggests that maize was originally a ritual object before it was an agricultural product, and as such appeared in ritually important contexts.

... AND BEYOND

A different view of the origin of Valdivia stone figurines concerns their suggested relationship to stone figurines of Late Jomón in Honshu, Japan by Betty Meggers (1987:16-20), and their possible connection to a *Northwestern Andean Pebble Figurine Tradition* as proposed by Daniel Sandweiss (1996:43-49) that could have linked the southwestern coast of Ecuador with the northwestern coast of mid-Holocene Peru.

The first theory is based on the diffusionist viewpoint of Japanese contact and influence first suggested by Emilio Estrada and later detailed by Meggers, Evans and Estrada (1965). The relative merits of this theory and its application to Valdivia ceramic development has been the subject of academic discussion for almost 40 years, however, the damage has been done, so to speak, and the attempt to rationalise a relationship between Japanese and Ecuadorian stone figurines of the mid-Holocene obviously still remains.

In an article on transpacific origins for Valdivia ceramics, Meggers (1987:16-20) discusses the three original types of *Palmar* figurines and suggests that their design originated with the Jomón culture of Japan (Meggers 1987:16). Similarities include the design elements of the *Palmar Incised* and the symbolism of the arms, which are thought comparable to the small celts of stone and ceramic found in Late Jomón sites (Meggers 1987). The only evidence offered for this association is the appearance of plain stone celts with vertical striations, or scratches, extending from one end of the stone that could suggest hair, or a skirt made of fibres that extends from the end vertically then meets with a horizontal line (Meggers 1987:20, figure 9; also see Meggers, Evans and Estrada 1965:165-166 and plate 187). In this case it appears that the striations might be the design element of the Jomón stones. Striations can occur as the result of a number of actions -- intentional or unintentional -- and the variety of shapes illustrated does not offer any conclusive proof of similarity to Valdivia plain stone figurines. The striations that occur on Valdivia figurines do not constitute part of the finished design information, and appear in most cases as the remnants of the shaping technique and indicate the lack of a final 'finish' to the stone.

The incised stones of Late Jomón from Honshu in Japan -- as illustrated again by Meggers, Evans and Estrada (1965: fig. 102; and reproduced in Meggers 1987:20) -- show some similarity in geometric design with the T-shaped feline motif, but are not conclusive or convincing in any way. When all the dissimilarities are taken into account, there is little left to support the Jomón - Valdivia association based on stone or ceramic figurines. It is also interesting to note that a later version of the Meggers article (1987) published in English (1992) omitted any reference to the stone figurines of Jomón.

Sandweiss's (1996) suggestion of a Northwestern Andean Pebble figurine tradition is based on his investigations at the Ostra Base Camp site near the Santa River on the coast of Peru. The location of the site and its temporal position indicate that between 5000 and 3000 B.C. a mid-Holocene climate change occurred that saw warm-water mollusks from the

Ecuadorian coast move south approximately 700 km to the coast of Peru in an area that since 3000 B.C. appears to have supported only cold-water mollusks (Sandweiss 1996:43).

During excavations, 26 waterworn elongated pebbles, some with one to three parallel incised lines on one side of one end were recovered (Sandweiss 1996:43-44). It is these pebbles, referred to as Ostra Planed/Incised pebbles, that Sandweiss suggests are contemporary and very similar to Palmar Plain figurines as described by Meggers et al. (1965:95-96). The problem with this association is that it is based on the data as provided by the Meggers *et al.* volume from 1965 and not on more recent research. Stating that *Palmar Plain* figurines and *Palmar Notched* types were only found in Period A (Meggers, Evans and Estrada's designation) and that *Palmar Incised* were positioned in Period A and into Period B (Sandweiss 1996:46), is problematic to the discussion as we now know it.

As previously discussed, there is very little stratigraphic evidence available from Valdivia sites to indicate that the *Palmar Plain*, *Notched*, and *Incised* types occur in a linear development extending over the different phases. Rather, there is every indication that all three types -- as defined by Meggers *et al.* -- appear contemporaneously and do not represent developmental stages. Furthermore, the argument rests on the single area of incised horizontal lines that do not have stylistic variation: "[i]n other words, above the face, Palmar Incised figurines are virtually identical to Ostra Planes/Incised pebbles" (Sandweiss 1996:46).

This is a very weak case to make based on a few incised lines. The incised lines do not necessarily turn the stones into figurines or representative tokens. The stones can be the background on which the lines are stored for purposes other than to create the illusion of being a figurine, and can serve a variety of meanings. This does not suggest that Sandweiss (1996:48) is wrong about the extension of the Ecuadorian environment during the time period in question, his argument in that respect appears to be valid and well documented. I do not, however, find his argument that the pebbles with incised lines are

figurines compelling, nor that they share a common heritage with the *Palmar Plain* figurines. That pebbles or stones of a small size are used in many similar assemblages should not be surprising as they are very portable and rituals sometimes demand that ceremony take place in a variety of locations.

Chapter Seven

CONCLUSIONS,

or,

"WHERE THE HELL DID THOSE EARLY COCA CHEWING FACES GO, ANYWAY?"

> It is clear that anthropomorphic figures had diverse functions and that they operated in a variety of ancient contexts. Archaeologists and art historians have speculated that they were used in ceremonies of passage, marking life crises such as initiation into adulthood or transition to the next world at death; as receptacles for spirits in curing rituals and other shamanistic performances; as votive offerings; in rituals that recreated the cosmos or encouraged the increase of plants, animals, and humans; as idols in ancestor cults; as sacred icons or temple guardians; as substitutes for human beings in sacrifices; or as grave offerings. They may have functioned as focal objects to intensify participants' experiences during ritual, as power objects, or as teaching devices. Again they may have been purely decorative. In most cases we have little idea of their context and less of their meaning to the culture that made them. (Bruhns and Stothert 1999:189)

The above citation is probably the best that we can hope for when trying to define the incised stone figurines of Early Valdivia. What we know, and what we think we know, are thousands of years apart. The use of analogy can offer direction but not definitive answers, and the lack of archaeological information surrounding the bulk of the stone figurine collections makes the situation murky at best. However, that is not reason enough to prevent the attempt at interpretation, or the suggestion of figurine utility, based on the

data described in the previous chapters. In this chapter I will consider the significant points of this study and the implications of this knowledge to our understanding of Early Formative, Early Valdivia culture.

Material and the Life Force

One of the first conclusions that must be considered is that the material used for carving figurines was not exotic. All stones utilised occurred naturally in the Valdivia culture region demonstrating that no form of trade or exchange, or long-distance travel was required to obtain the necessary supply of stone. Any ritual importance ascribed to stone figurines does not come from the material, rather it must be associated with its' intended purpose, or through the act of changing the material form from one state of being to another through the act of carving. In much the same way, when maize is transformed into *chicha* it takes on a new life force (Hastorf and Johannessen 1993:121), and the act of carving, or at least shaping the stone in the simplest forms, might also be one factor responsible for the inherent ritual 'value' attached to these figurines. Value in this sense refers to the position of the figurine in daily life, or ritual, as an object that is created and utilised for a specific purpose.

Phylogeny and Chronology

Variation in stone figurines must be reconciled as the early examples differ from the transitional forms, and can be used to identify different levels of development in conjunction with the elimination of types that do not appear in controlled excavations. I do not agree with Hill (1975:10) that early stone figurine development began as a form of experimentation that later became the established ceramic figurines. The stone figurines and

the Type 3 stone and clay figurines were not early attempts to find what eventually became the 'venus' figurine. It appears that the figurine lines develop separately, not as a form of experimentation leading through a linear development, but as separate use types. I suggest that the early stone figurines were a finished form that fulfilled the needs of the people and their ideology at that specific time.

The separation between stone figurine representation and that of the ceramic design elements can be seen to differ between temporal periods. The faces on the early stone examples are not the same as those of the ceramic figurines and do not appear on ceramic vessels, whereas faces seen on later pots do mirror those of the ceramic figurines. The ideological change is reflected in the ceramic motifs that are bereft of the early faces.

It also appears there is a gender change that might reflect a change in specialists -- those people responsible for the rituals or activities represented -- over time, as seen in the stone figurines, or in the gender of the people represented. The stone forms appear to be more male while the ceramic 'venus' figurines are predominantly female, although the gender is superficial, as they might even be considered bisexual due to the phallic shape of the overall form. This not only changes the ideological implications but also the temporal position. All of these changes combine to position the various figurines into a chronology that identifies the key points of change and development. Ceramic 'venus' figurines are later than stone figurines, and the Type 2 transitional examples which combine attributes of both can be placed later than stone figurines and earlier, or contemporary, with the ceramic figurines.

Style and Representation

The analysis of the stone figurine style has identified actions and representations of ideological metaphors such as the maize motif and the hand to mouth gesture. Ethnographic analogy provides alternative possibilities for actions such as tobacco chewing instead of coca chewing, and the presence or escape of the soul/spirit. These are not just stylised elements that appear randomly on the figurines, but instead represent those actions that indicate ideological activity.

The differences in elements themselves, such as the presence of geometric designs versus the anthropomorphic designs, indicate what was important and what wasn't during a particular time period. Apart form the pseudo-geometric hair styles, where are the geometric designs on later figurines? Why are there no geometric elements on the 'venus' figurines? If they were so important to the Early Valdivians, then why do they also stop being used when the ceramic 'venus' becomes predominant? The geometric symbols and the other motifs disappear. The early geometric motifs and cayman-like skin designs, maize motif, or grids are not present on the ceramic 'venus' figurines. The medium is no longer carrying the same message and consequently indicates that the figurines are not performing the same function. This suggests again that the ideology had changed, representing different beliefs or groups.

While all of this is true as far as we know, it doesn't alter the fact that the early stone figurines and stylistic elements disappear from the archaeological record of the later Valdivia phases; and this is the most obvious indication of cultural change to be identified. Nothing says it better than the symbolism, stylistic elements, and symmetry found on the stones.

Loma Alta

The Loma Alta site does not enter into the transitional phase as indicated by the lack of figurine materials that are found at Valdivia 2 - 3 sites and later. Incipient clay figurines (Type 3) are present that may be antecedent to the 'venus,' although I think not. I suggest that these figurines are contemporary with the stone figurines and might be more regional in production based on the lack of them in other collections. Other sites with Valdivia 3 figurine materials indicate the transitional nature of the figurines that appear in stone and ceramic. This might suggest that Loma Alta did not last through the full Valdivia 2 term as there is no evidence of transitional materials into Valdivia 3. Even though there are no major Valdivia occupations after Early Valdivia at Loma Alta, there are some, but there are no ceramic figurines on site; this could indicate that rituals involving figurines were being conducted at other sites. If these ceramic figurines are identified with Valdivia 3 and later, then this is another indicator that Early Valdivia people at Loma Alta never began the transition to Valdivia 3, at least not in terms of figurines.

The statistical data from Loma Alta does little to alter perceptions about spatial placement of figurines than what is already known. The conditions of the midden layers and the mixed deposition of Early Valdivia artifacts with those of later cultural groups remains problematic. Some small pieces of information can be gleaned from the analysis that raise questions concerning quantities and the dominance of certain sub-types found on the site. There is some indication at Loma Alta that the plain figurine forms correlate strongly with the incised open leg, or completed figurine , but the data is not substantial enough to indicate what that connection might be.

Based on the excavation data there is no way to suggest that a development through time occurred that saw the *Plain* figurines evolve into completely notched and incised figurines. It is also not possible to state with any degree of certainty that all the figurines

were meant to become completely notched and incised figurines. There may have been cases were a simple celt-like figurine was all that was required, or the skill of the carver only extended to crude incising with notched instead of open legs. The variety of carving expertise in all sub-types in Type 1 only adds to the problem.

Figurine Indicators of Valdivia Cultural Change and Complexity

That there were a series of changes taking place across the Valdivia continuum regarding the development of agriculture, ceramics, changing settlement patterns, and in turn, an evolving ideology and increase in complexity, should facilitate our understanding of figurine development and purpose. It is not necessary to look outside Valdivia for external influences of change; a cultural florescence and move towards complexity is explanation enough. The answer might be found within the development of the cultural community itself. One explanation for the frequency of small anthropomorphic figurines in Formative cultures came from Reichel-Dolmatoff (1961:241) who said they "might be explained by the stimulus which sedentary community life and a rapidly developing potter's art provided for a more formalized ritual." In many ways this is a simplified reflection of the changes that took place in Valdivia. Certainly the development of formal ritual activities, and its necessary accoutrements, is facilitated when cultural stability and development occurs.

One event taking place is the onset of increased maize agriculture; another is the increase in ceremonial centres and probably the presence of a group of specialists who might be handling the ritual instead of leaving those duties to the general populace. Ritual in larger ceremonial centres requires specialists, an elite few who operate rituals outside the home unit under greater organisation and control. The ubiquitous ceramic 'venus', with its gender specific appearance might represent a fertility cult, whereas in the early stone figurines other purposes may be found. The change in settlement patterns and ceremonial

activity might represent a break in the pattern of tropical forest culture where people may have represented their deities as stone idols (Lathrap 1970:45), making the early stone figurines objects that symbolised the gods, while the ceramic 'venus' was more terrestrial in its associations.

Other questions arise during the identification of developing complexity. If there were ceramic vessels in Valdivia I, then why did it take so long to start making the ceramic figures that do not become dominant until Valdivia 3? The changes that occur between Valdivia 2-3 include the increase in ceremonial centres; a move towards intensified agriculture; diffusion from the larger coastal and inland valley sites out to smaller communities; the ceramic figurines that represent an altered ideology take over on a large scale; and the stone carved figurines enter a transitional phase and then are replaced. All of these factors indicate a development of group awareness and self-control over daily life and also the possible development of social stratification as the need for specialists increases.

It is obvious from the data presented that there is a consistency through Valdivia 1 and 2 that changes from stone figurines to ceramic figurines in Valdivia 3 and on. The complex faces of the Early Valdivia period are replaced by slit eyes and mouths. The coca/breath cheeks that are so prominent disappear on the female figurines. If the stone figurines are shamanistic aids, then why are they replaced so completely? Why are stone figurines shamanistic aids while ceramic figurines represent stages of female development? The shamanistic aid theory might be appropriate for the stone figurines but did the ceramic figurines fill a similar need? It would be very easy to manufacture ceramic versions of the incised stone figurines, but they do not appear in the Valdivia record. The focus of the figurines changes to a reliance on something else. It is obvious that the figurines of each time period fulfilled the requirements of their time.

A Gesture of Daily Life

The figurines did not exist in a vacuum, and should not be studied as such. While the figurines are the centre of this study, they were only a small component of Valdivia daily life -- possibly objects of routine activity -- and must be kept in the greater perspective of Valdivia culture.

An attempt at 'reading' the stone figurines is necessary in a project such as this, and can only be made once the technical data, spatial and temporal information, interpretative musings, and ethnographic analogy of the preceding pages has been drawn together. It might be said that you could not get here from there, and I think that is true. Without going through the processes of the previous analysis it would not be possible to interpret the figurines on a personal level. Daniele Lavallee (1992) has already pointed out that:

> Although the translation may be realistic, the underlying mental structure remains abstract and eludes us. But it is important to remember this, so as not to separate material expression from that which pertains to thought. Gestures cannot be just the sum of their concrete evolution, so therefore and in order to understand their significance, it is necessary to grasp the thinking and to try to rebuild the context.

Rebuilding the context of the figurines is the purpose of this dissertation. It is time to deal with the interpretative meanings associated with the figurines themselves, not within the broader context of Valdivia cultural change as has been the case until now -- dealing with agricultural development, cultural complexity, and the evolution of ceremonial control and ideology -- but as individual objects that were utilised around the house in daily life. What was the context of their daily use?

It is easy to overlook the fact that individual people and communities used these artifacts in personal ways that were not meant to register socioeconomic change, but instead to reflect, or support, necessary events that were required to complete the daily, monthly, and yearly cycles of birth, living, dying, and regeneration; the rhythmic structure of time. It was for some purpose, somewhere within those cycles, that the figurines were created, and as such I suggest that they can be further reduced in stylistic form and presentation into the categories representing various stages of Valdivia development.

The use of figurines in curing or fertility rituals is ubiquitous. There is no doubt that figurines might have been used in this manner by Valdivians. What is more important is that the purpose of the figurines in this case may have altered from one of curing to fertility. The actions depicted by the figurines must also be considered. These are not simply random designs meant to embellish the morphological form, but rather, they are events, actions that can be read --with some difficulty -- that represent daily life. The hand to mouth gesture can be ethnographically tied to the acts of women, the individual spirit, or the presence of ancestors. When identified as shamanistic in purpose, the gesture can relate to ritual blowing and spirit helpers. These suggestions provide insight into the possible activities of ritual specialists and into who was involved in performing them. The transitional stone figurines do not always look like the ceramic figurines but some appear with a covered mouth -- almost looking like a burial shroud -- that also might relate to this gesture and the possible ritual beliefs of the importance of the mouth (Figures 36 - 38).

The ritual regalia worn by the specialists (?), or an unknown segment of society, appears on stone figurines -- but not on the ceramic figurines -- and indicates a more complicated design than just shaman's figurines. They appear to represent the shaman and not the patient. In the later transitional figurines a specialist dressed in removable clothing can be identified. The complexity of carving, the act of removing the hood, the curvilinear design, and the transitional phase headdresses, indicate that specialists were being modelled.

The use of analogy seems to centre more on the ceramic 'venus' figurines and is less applicable to the stone figurines. The design elements of the early stone figurines are symmetrical in all cases until the transitional period begins. The ceramic figurines and similar stone reproductions hold the greatest amount of asymmetry. I think that there is too much evidence to indicate that we are discussing two different things to successfully use ceramic figurine based analogy to interpret the stone figurines in any complete manner. But it is a starting point nevertheless.

THE FINAL WORD

The main points of this study can be summed up in the following way.

1. - The material used in the manufacture of stone figurines was not exotic or found outside the range of the Valdivia culture area, and as such indicates that the figurines were important for themselves and their purpose rather than for the material itself. Unlike *Spondylus* figurines that would be tied to the 'value' of *Spondylus* as well as the purpose of the figurine.

2. - The typological attributes of the stone figurines can be broken down into categories that produce a meaningful system of classification that separates the stone figurines into stages of development -- stylised design elements; transitional from stone to ceramic figurines -- that can be identified chronologically.

3. - A breakdown of stylistic elements and the areas of placement on the figurines helps to isolate specific gestures or activity areas that can be utilised to identify important repeatable actions.

4. - The analysis of excavation records from Loma Alta and the recovered figurine materials confirm previous suggestions about the lack of stratigraphic separation necessary to the identification of stylistic elements and chronological development.

5. - The presence of the uneven notch indicating separation of the buttocks does not appear at Loma Alta, but does appear in surface collections throughout the Valdivia Valley indicating its later development, and also that Loma Alta did not begin a transitional stage from Early Valdivia (1 and 2) to Middle Valdivia (3 - 6).

6. - Ethnographic analogy indicates several possible uses for the actions that are displayed by some of the stone figurines. The most identifiable gesture is the 'hand to mouth' action that I believe involves the mouth more than the hands. The hands are secondary indicators of the intended action.

7. - As previously mentioned in Chapter Three, there is no way of identifying assertive elements within the emblemic style of Valdivia that might indicate site specific associations until further controlled excavations increase the figurine database.

Based on the above, I suggest that the incised stone figurines of Valdivia were not a stage of experimentation, but rather a fully functioning part of Early Valdivia life. They represent a completely different set of needs than those of the later ceramic 'venus' figurines. The importance of the stone figurines is that they could have been duplicated in

ceramic, but were not. The radical difference in facial traits between stone and ceramic figurines attests to the importance and deliberate presentation of stylised stone elements for the Early period. The stone figurines of the transitional stage were also distinct from the ceramic 'venus' but incorporated features that were similar in both. In some ways a major change in Valdivia is identified while developmental stages from one period to the next indicate the undeniable continuation of Valdivia culture. The ceramic vessel changes are identifiable and build on the materials of earlier periods, but it is the stone and ceramic figurines that exhibit the greatest amount of cultural change. Because of this, it is the stone figurines and their stylised elements, transitional stages, and eventual disappearance and replacement by the ceramic figurines that prove to be the most identifiable indicators of the move towards complexity and ideological development.

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Figure 1.

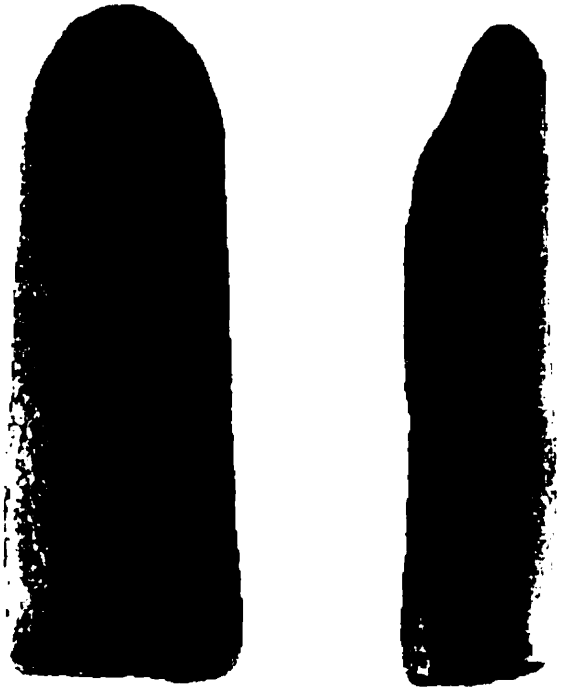


Figure 2.

Figure 1. Category 1(a), Palmar Plain, Project No. 0132 (Loma Alta OGSEMa 182-790). Dimensions: 55 x 18 x 12 mm.

Figure 2. Category 1(a), Palmar Plain, Project No. 0315 (Loma Alta OGSEMa 182-302). Dimensions: 70 x 16 x 15 mm.

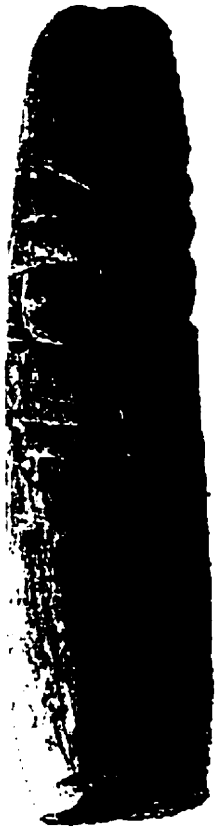


Figure 3.

Figure 4.

Figure 3. Category 1(a), Palmar Plain, Project No. 0117 (Loma Alta OGSEMa 182-901). Dimensions: 36 x 13 x 10 mm.

Figure 4. Category 1(a), Palmar Plain, Project No. 0683 (GA-73-915-78). Dimensions: 63 x 17 x 6 mm.

Figure 5.

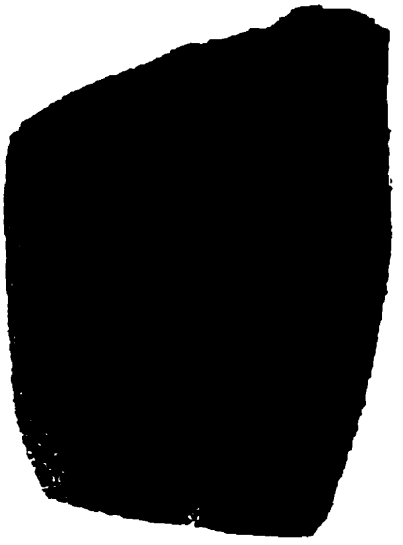


Figure 6.

Figure 5. Category 1(b), Palmar Short Notched, Project No. 0068 (Loma Alta OGSEMa 182-738). Dimensions: 37 x 17 x 7 mm.

Figure 6. Category 1(b), Palmar Long Notched, Project No. 0064 (Loma Alta OGSEMa 182-669). Dimensions: 22 x 16 x 11 mm.

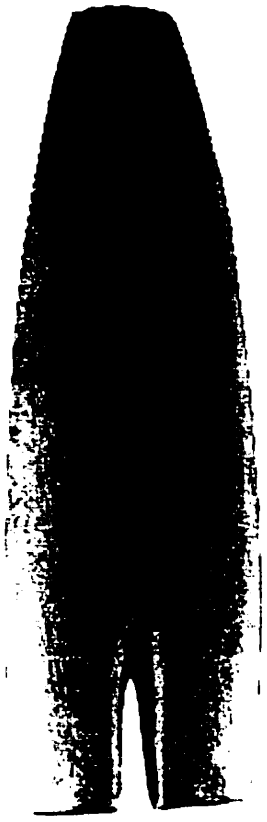


Figure 7.

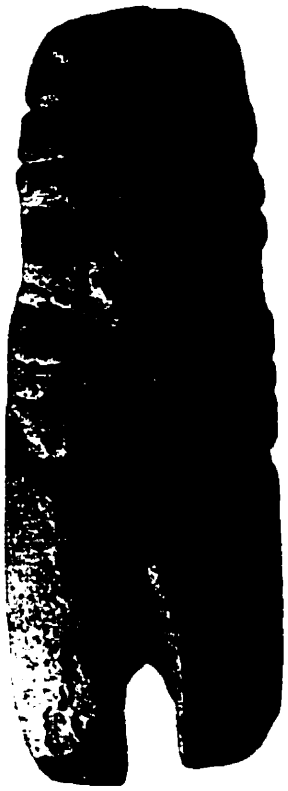


Figure 8.

Figure 7. Category 1(b), Palmar Open Notched, Project No. 0072 (Loma Alta OGSEMa 182-782). Dimensions: 48 x 15 x 10 mm.

Figurine 8. Category 1(b) Palmar Open Notched Incised, Project No. 0316 (Loma Alta OGSEMa 182-901). Dimensions: 42 x 10 x 7 mm.

Figure 9. Category 1(b), Palmar Open Notched (Geometric), Project No. 0497 (Loma Alta OGSEMa 182-719). Dimensions: 37 x 25 x 11 mm.

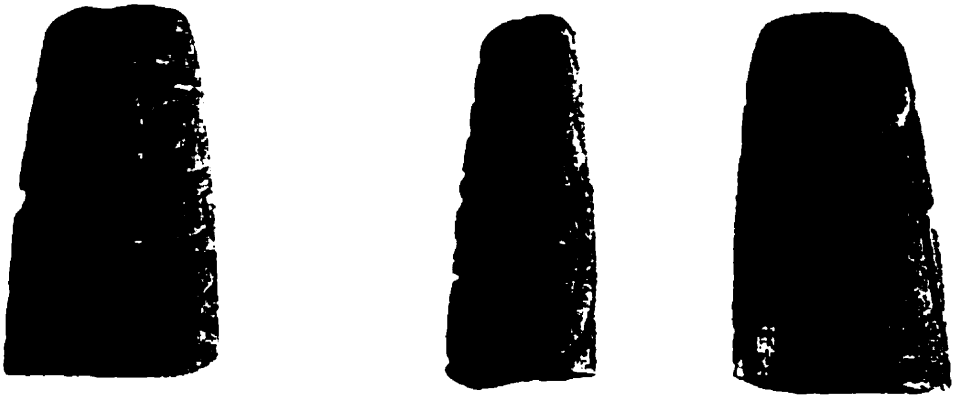


Figure 10 Category 1(c), Palmar Curvilinear Incised, Project No. 0751 (GA-3-2373-82). Dimensions: 46 x 28 x 17 mm.

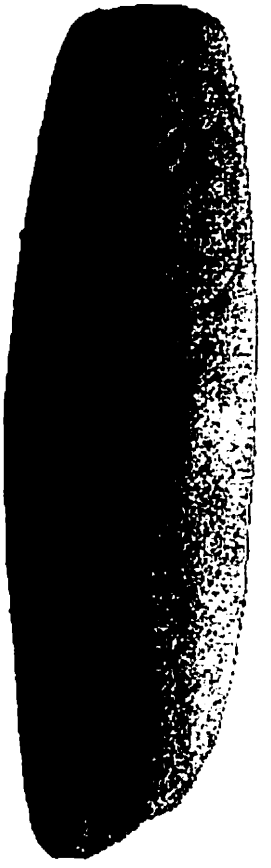


Figure 11.

Figure 11. Category 2(a), Palmar Transitional, Project No. 0787 (Valdivia Valley). Dimensions: 65 x 18 x 17 mm.

Figure 12.

Figure 13.

Figure 12. Category 2(b), Palmar Terminal, Project No. 0765 (GA-11-523-77). Dimensions: 42 x 15 x 12 mm.

Figure 13. Category 2(b), Palmar Terminal, Project No. 0629 (La Clementina GU-SE-Clem). Dimensions: 33 x 15 x 10 mm.

Figure 14 (Front).

Figure 14 (Back).

Figure 14. Category 2(b), Palmar Terminal, Project No. 0731 (GA-2-875-78). *Dimensions:* 97 x 28 x 23 mm.

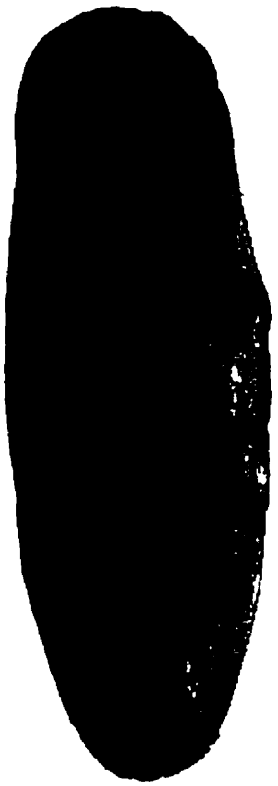


Figure 15.

Figure 16.

Figure 15. Category 3(a), Valdivia Plain Breasted, Project No. 0608 (La Clementina MW-674-98). Dimensions: 47 x 17 x 14 mm.

Figure 16. Category 3(b), Valdivia Notched Breasted, Project No. 0778 (Valdivia Valley). Dimensions: 38 x 12 x 10 mm.

Figure 17.

Figure 18.

Figure 17. Category 3(c), Valdivia Breasted Incised (Pregnant), Project No. 0772 (Valdivia Valley). Dimensions: 41 x 18 x 19 mm.

Figure 18. Category 3 (Ceramic), Project No. 0758 (GA-17-520-77). Dimensions: 62 x 29 x 23 mm.

Figure 19.

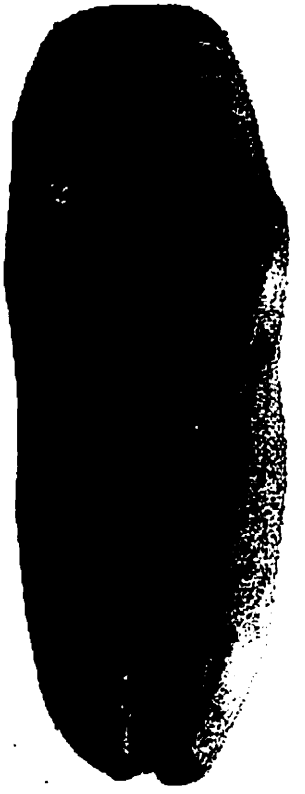


Figure 20.

Figure 19. Category 3(b), *Valdivia Notched Breasted*, Project No. 0613 (La Clementina MW-678-98). Dimensions: 50 x 15 x 9 mm.

Figure 20. Category 3 (Ceramic), Project No. 0757 (GA-4-524-77). Dimensions: 67 x 25 x 18 mm.

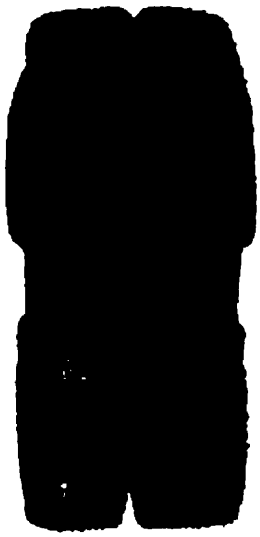


Figure 21.

Figure 22.

Figure 21. Category 4, Valdivia Late Stone, Project No. 0803 (Alexander Hirtz Collection). Dimensions: 78 x 32 mm.

Figure 22. Category 4, Valdivia Late Stone, Project No. 0689 (San Isidro GA-14-1255-79). Dimensions: 126 x 89 x 53 mm.

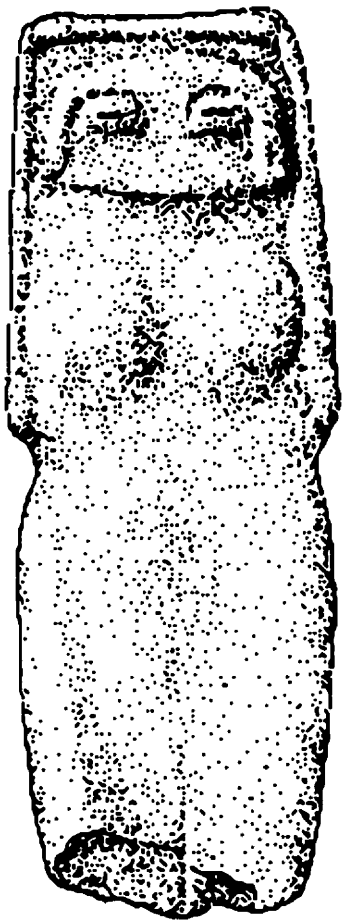


Figure 23.

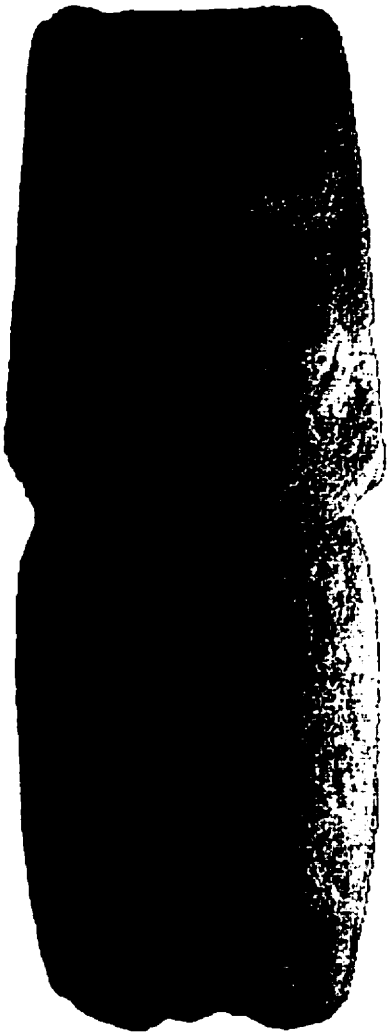


Figure 24.

Figure 23. "Unique" Valdivia Phase stone figurine
(Meggers, Evans and Estrada 1965:101, Fig. 61). Dimensions: 120 x 45 mm.

Figure 24. Palmar Terminal figurine, Project No. 0688. 18 x 6.2 cm
Banco Central del Ecuador (GA-6-875-78). Dimensions: 180 x 62 x 20 mm.

Figure 25.

Figure 26.

Figure 25. Category 2(b), Palmar Terminal, Project No. 0725 (GA-1-793-77). Dimensions: 42 x 13 x 10 mm.

Figure 26. Category 2(b), Palmar Terminal, Project No. 0616 (La Clementina, MW-670). Dimensions: 62 x 24 x 18 mm.

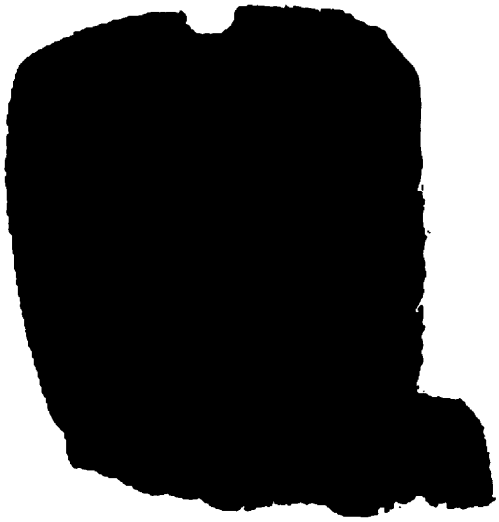


Figure 27. Ceramic 'venus' Figurine with hand to mouth gesture.
(Banco Central del Ecuador, Guayaquil, Accession No. GA-26-555-77).

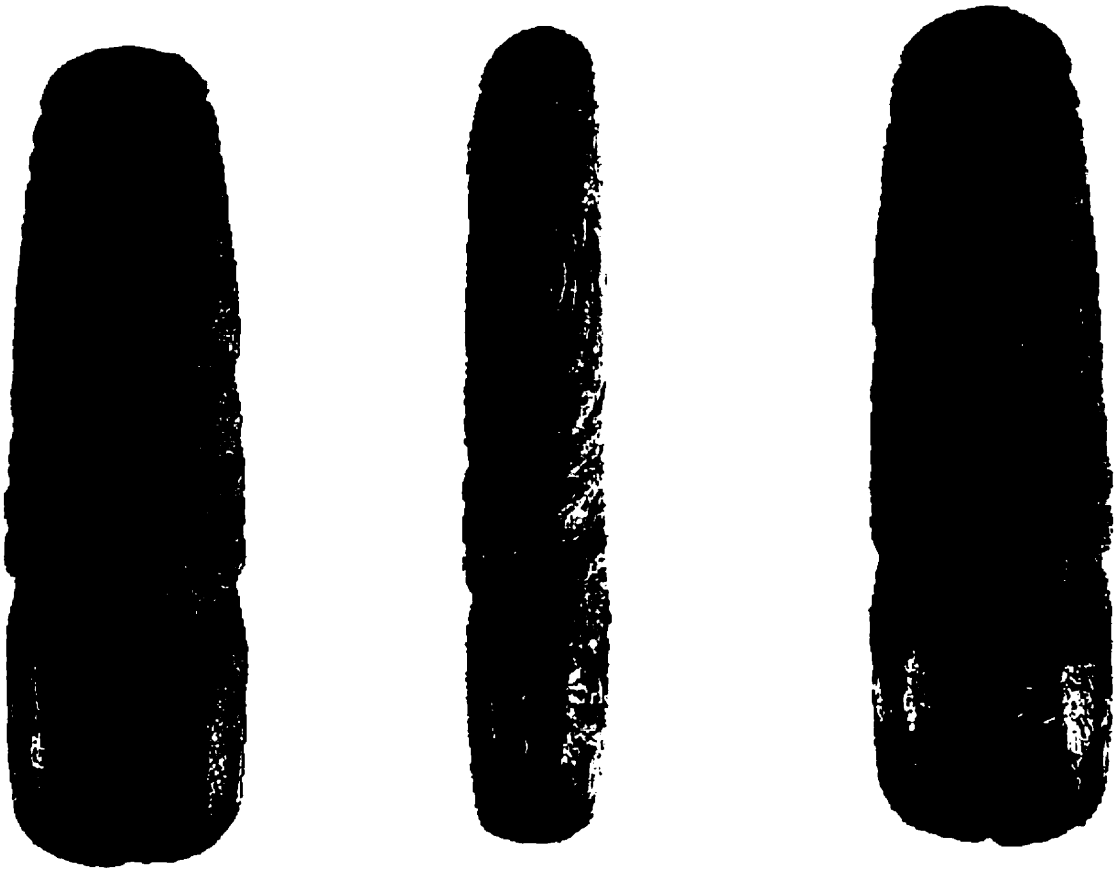


Figure 28. Category 1(c), Palmar Curvilinear Incised, Project No. 0750 (Museo del Banco Central - Guayaquil GA-18-530-37). Dimensions: 55 x 16 x 9.5 mm.

Figure 29. Category 1(b), Palmar Incised, Project No. 0008 (Loma Alta OGSEMa-182-?). Dimensions: 22 x 19 x 08 mm.

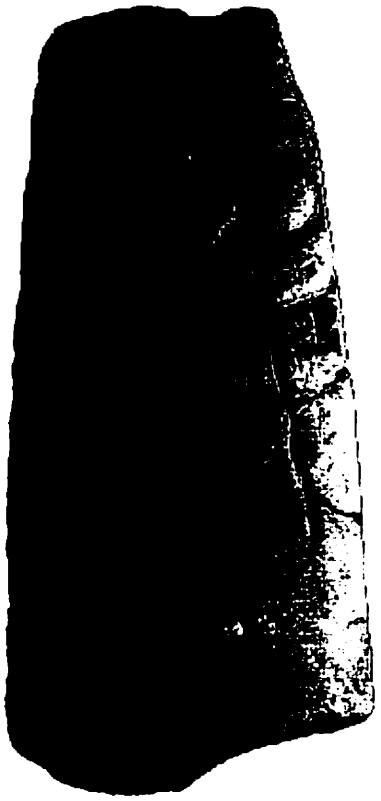


Figure 30.

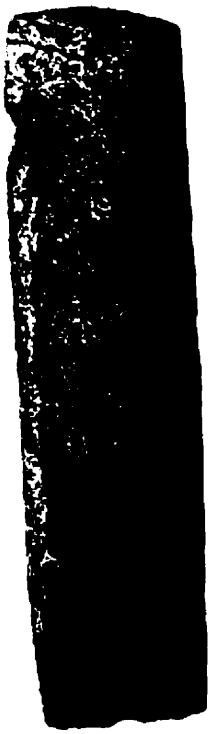


Figure 31.

Figure 30. Category 1(b), Palmar Incised, Project No. 0693 (Loma Alta OGSEMa-182-841). Dimensions: 62 x 30 x 21 mm.

Figure 31. Category 1(b), Palmar Long Notch, Project No. 0802 (Colonche GA-8-2385-82). Dimensions: 72 x 18 x 10 mm.

Figure 32 (Side 1).

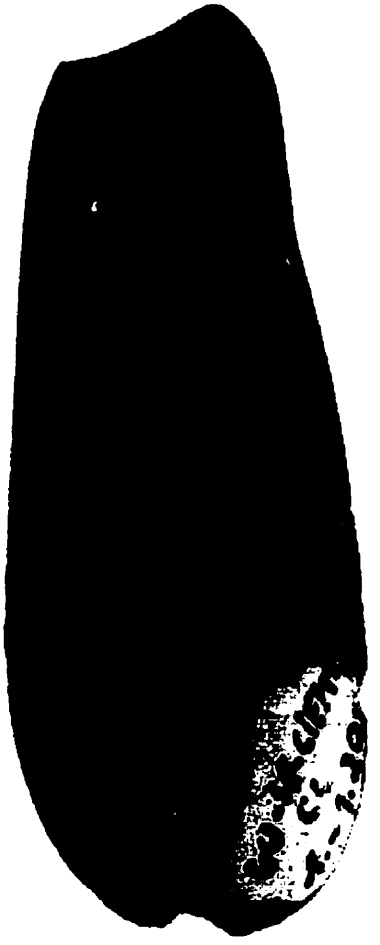


Figure 32 (Side 2).

Figure 32. Category 1(b), Palmar Long Notch Incised, Project No. 0627 (La Clementina GU-SE-CLEM). Dimensions: 44 x 18 x 10 mm.

Figure 33.

Figure 34.

Figure 33. Category 1(a), Palmar Plain Incised, Project No. 0637 (La Clementina GU-SE-CLEM). Dimensions: 64 x 26 x 11 mm.

Figure 34. Category 1(a), Palmar Long Notched Incised, Project No. 0477 (Loma Alta OGSEMa-182-1018). Dimensions: 39 x 25 x 11 mm.

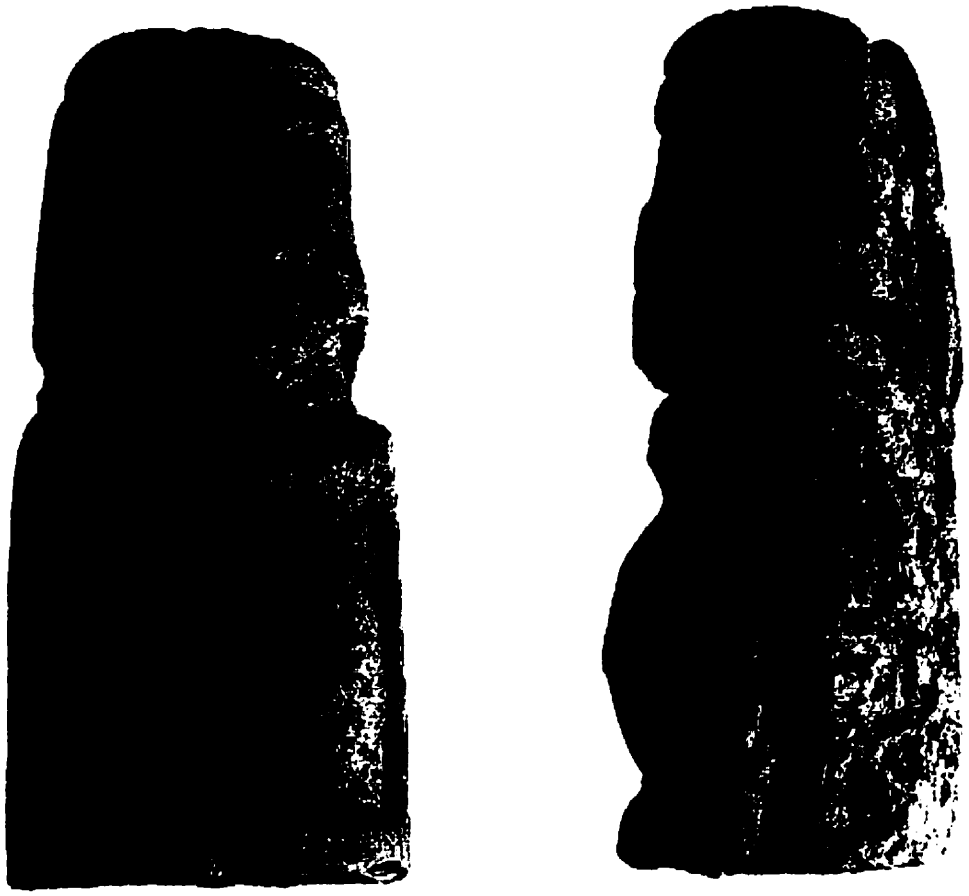


Figure 35. Category 2(a), Palmar Transitional, Project No. 0633 (La Clementina GU-SE-CLEM). Dimensions: 50 x 24 x 19 mm.

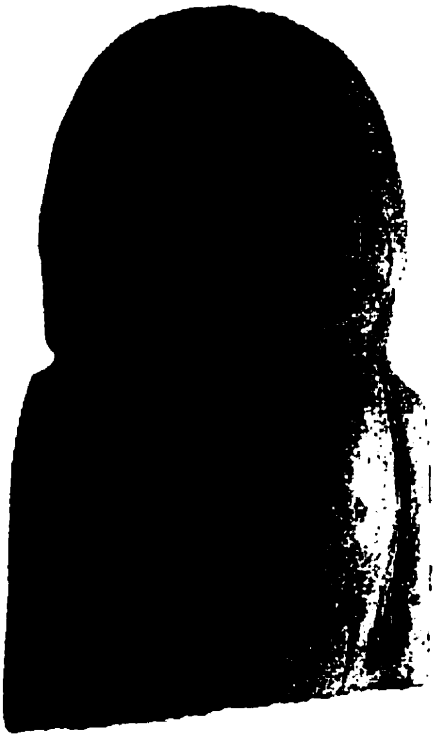


Figure 36.

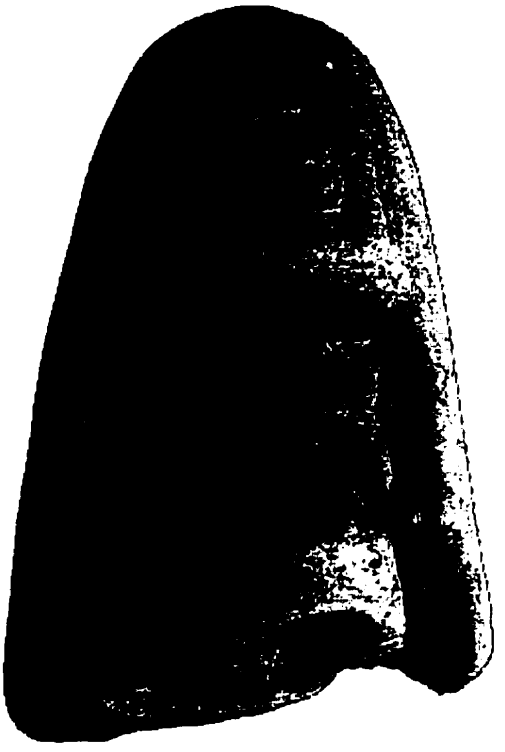


Figure 37.

Figure 36. Category 2(a), Palmar Transitional, Project No. 0639 (La Clementina GU-SE-CLEM). Dimensions: 34 x 20 x 15 mm.

Figure 37. Category 2(a), Palmar Transitional, Project No. 0611 (La Clementina MW-676-98). Dimensions: 44 x 28 x 25 mm.

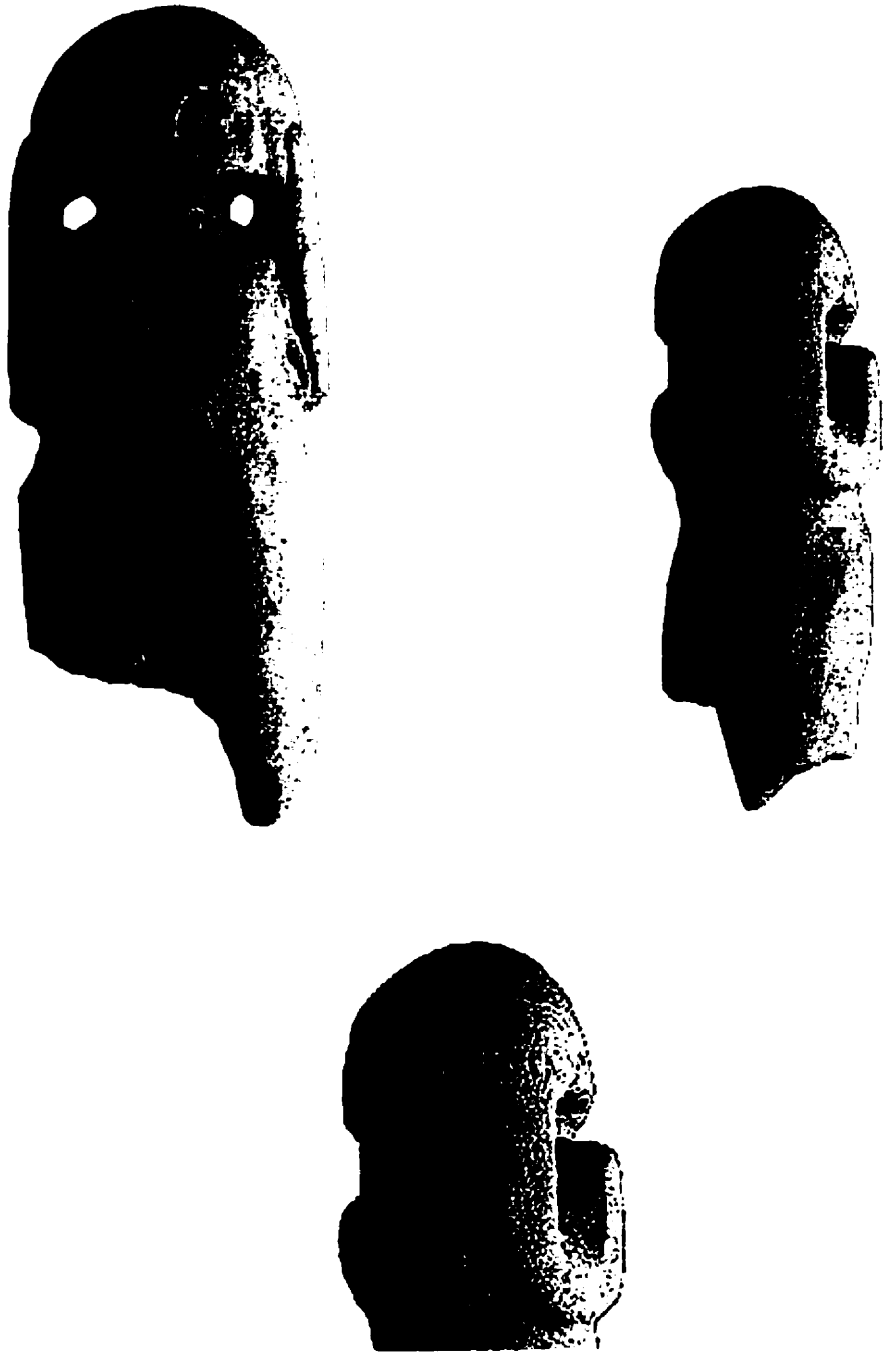


Figure 38. Category 2(a), Palmar Transitional, Project No. 0785 (Valdivia Valley). Dimensions: 38 x 15 x 12 mm.

Figure 39 (Front)

Figure 39 (Side)

Figure 39. Category 2(a), Palmar Transitional, Project No. 0793 (Valdivia Valley). Dimensions: 64 x 24 x 20 mm.

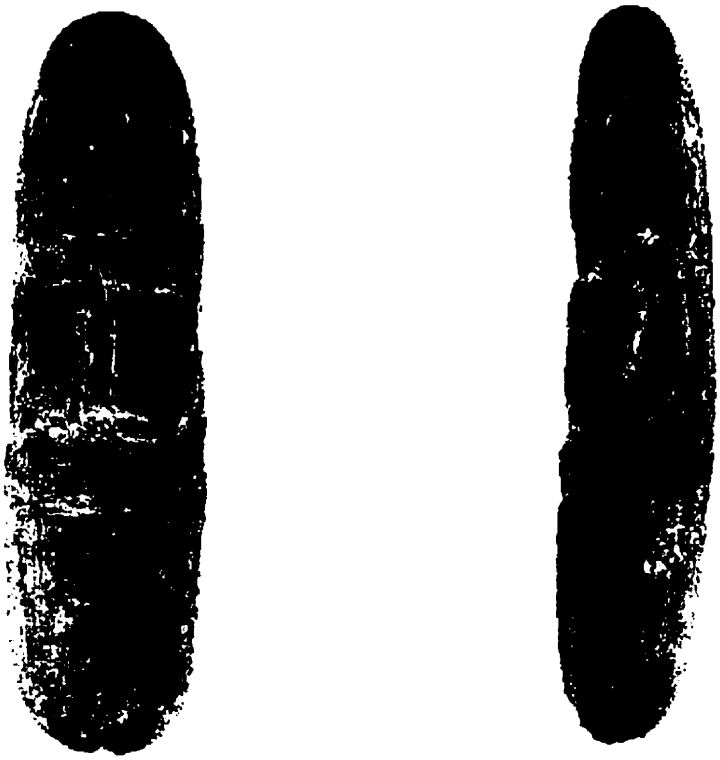


Figure 40. Category 2(a), Palmar Transitional, Project No. 0749 (GA-18-1115-79). Dimensions: 46 x 12 x 10 mm.

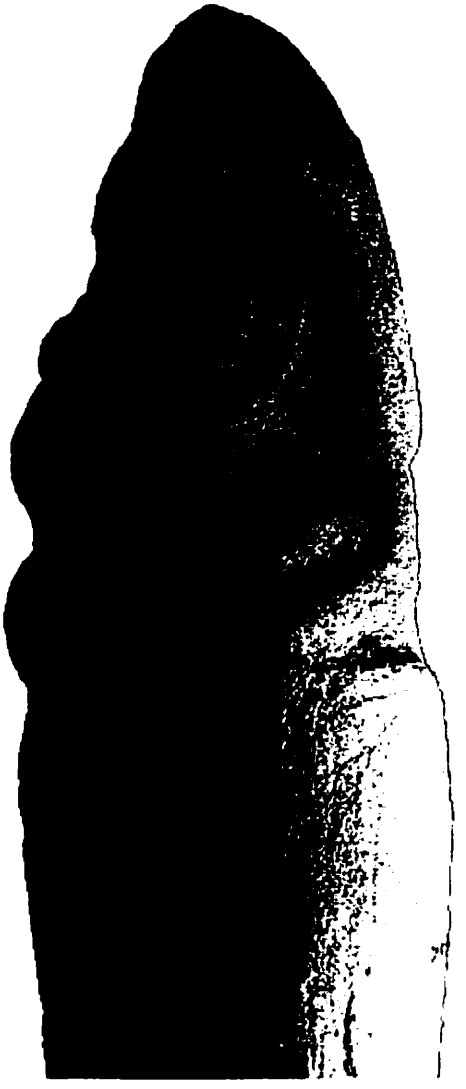


Figure 41. Category 2(a), Palmar Transitional, Project No. 0704 (San Pablo GA-10-851-78). Dimensions: 183 x 71 x53 mm.

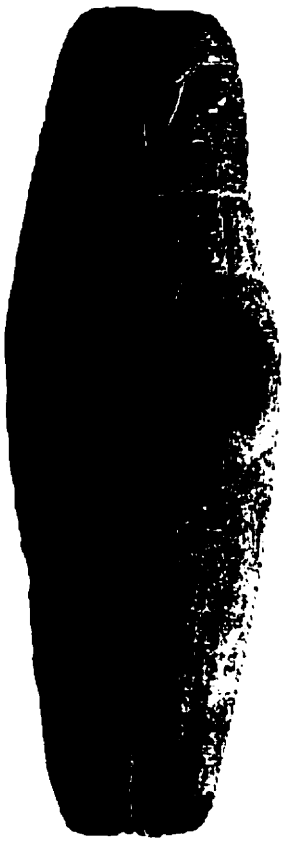


Figure 42.

Figure 42. Category 3(c), Palmar Breasted Incised, Project No. 0737 (GA-31-2323-83). Dimensions: 55 x 17 x 16 mm.

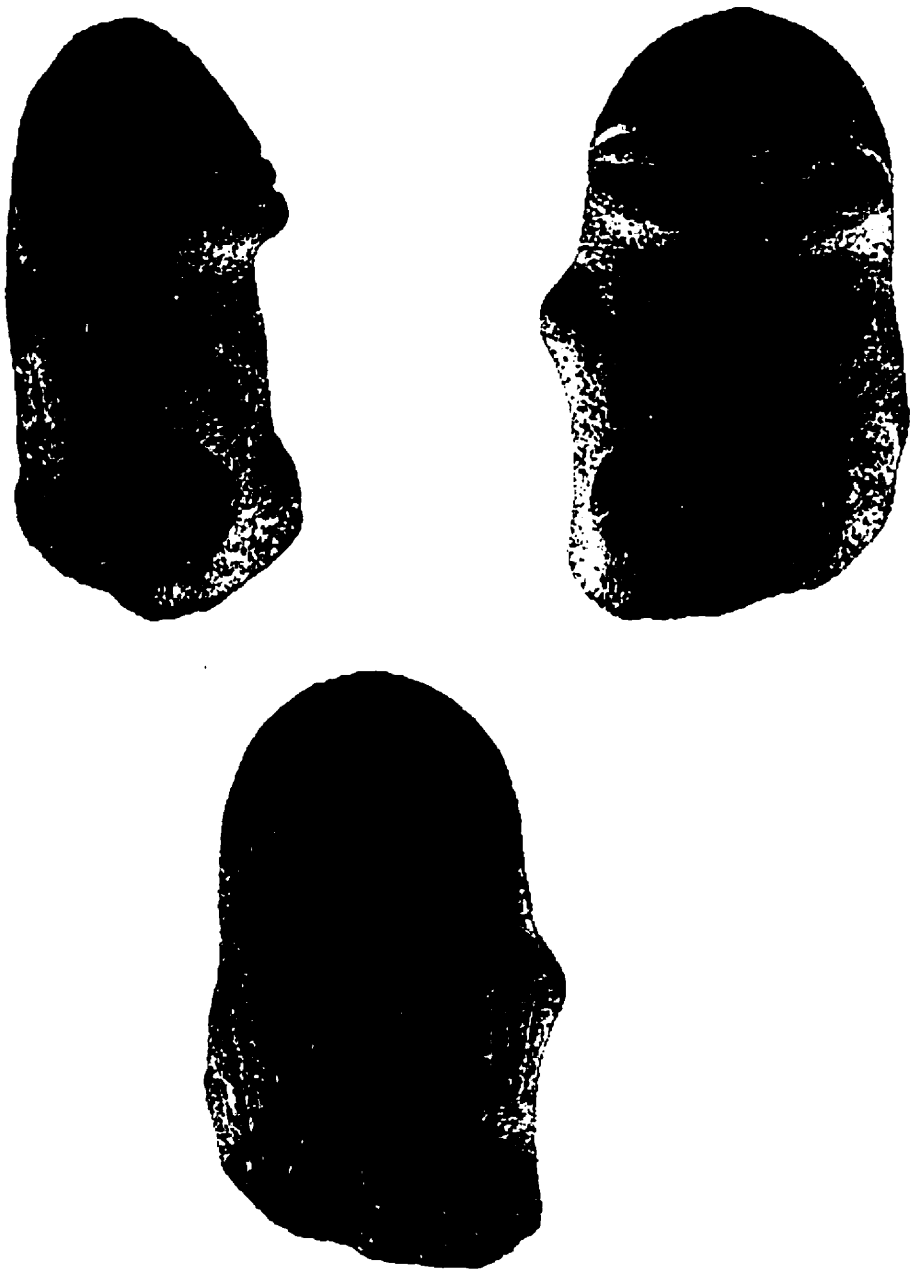


Figure 43.

Figure 43. Ceramic, Project No. 0810 (Colimes/Daule). Dimensions: 36.4 x 22.5 x 14.8 mm.

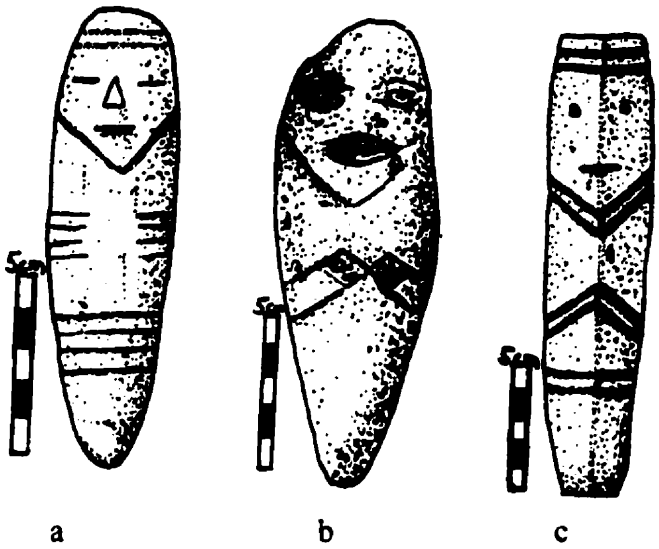
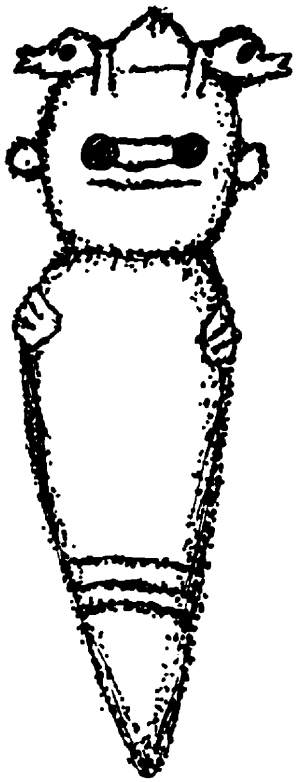
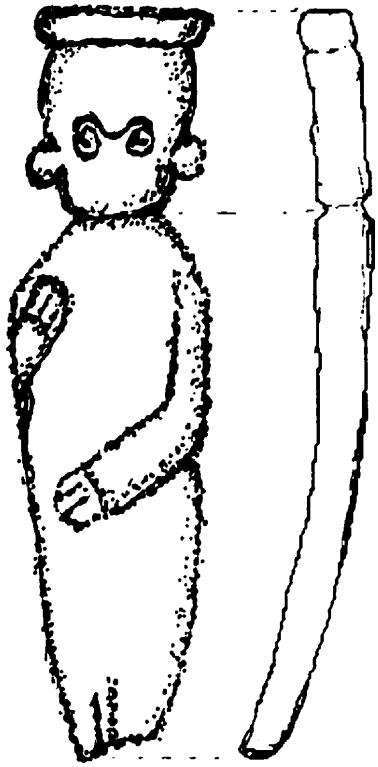


Figure 44. Tusk-shaped Bahía lithic figurines (Hahn 1991:37, Figs. 1 - 3 in original).



Composite-head figurine with ducks. Flat face and polished on both sides.



Common flat-head figurine. Chubby cheeks and forehead with mother-of-pearl inlays in the eyes.

Figure 45. Figurines from Cerro Narrío. (Banco Central Collection, Quito, Ecuador).

Figure 46.

Figure 47.

Figure 46. Category 1(b), Palmar Short Notched Incised, Project No. 0670 (La Clementina 1M5-05892). Dimensions: 42 x 10 x 5 mm.

Figure 47. Category 1(b), Palmar Short Notched Incised, Project No. 0536 (Real Alto OGCH 12-200). Dimensions: 36 x 13 x 9 mm.

Figure 48.

Figure 48. Category 1(b), Palmar Open Notched Incised, Project No. 00510 (Loma Alta OGSEMa-182-991). Dimensions: 58 x 14 x 9 mm.

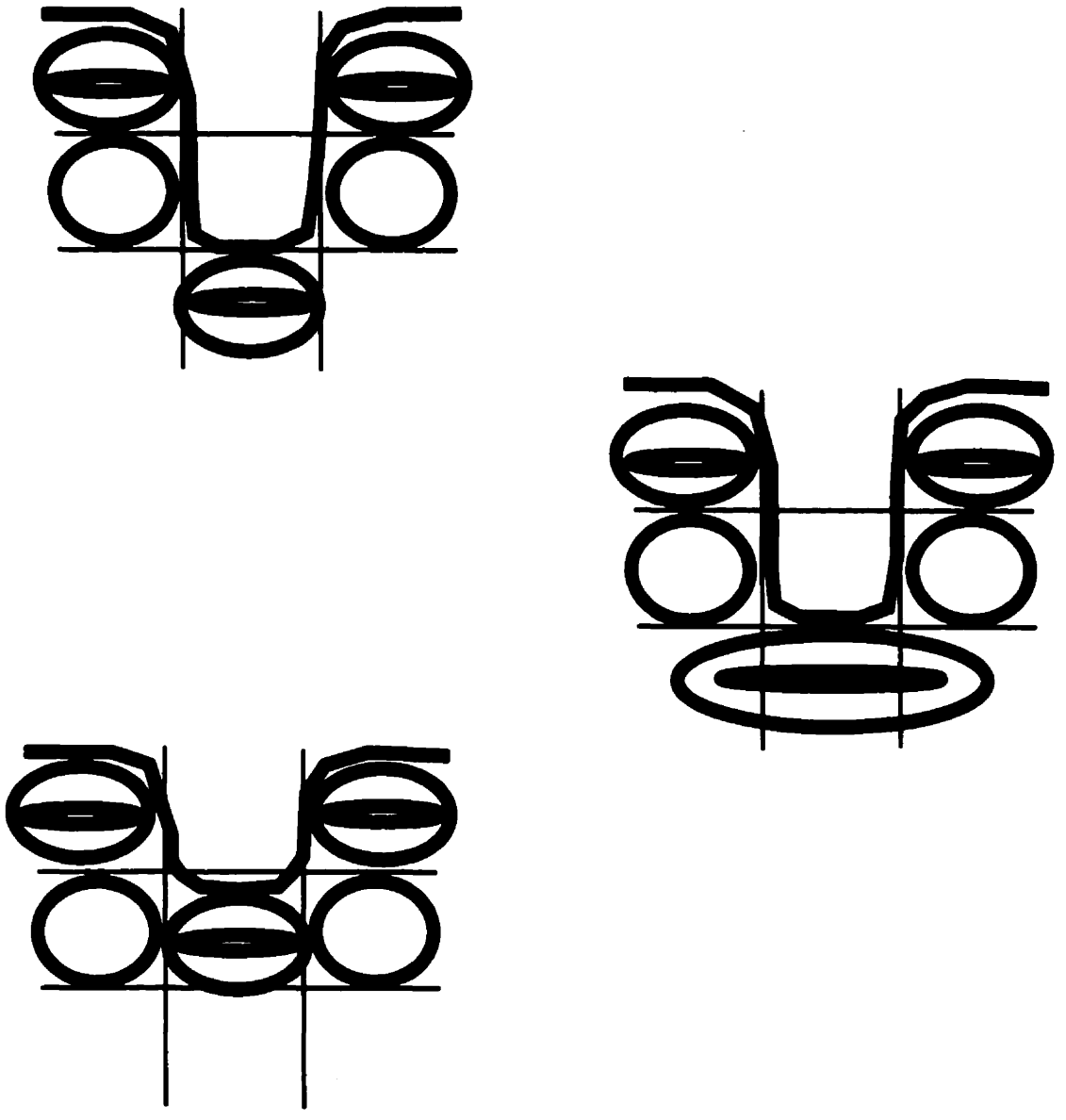


Figure 49. Possible patterns of facial features on a geometric grid.

Figure 50. Category 1(b), Palmar Incised, Project No. 0529 (Loma Alta OGSEMa-182-26). Dimensions: 27 x 24 x 13 mm.

Figure 51. Category 1(b), Palmar Incised, Project No. 0084 (Loma Alta OGSEMa-182-841). Dimensions: 20 x 10 x 8 mm.

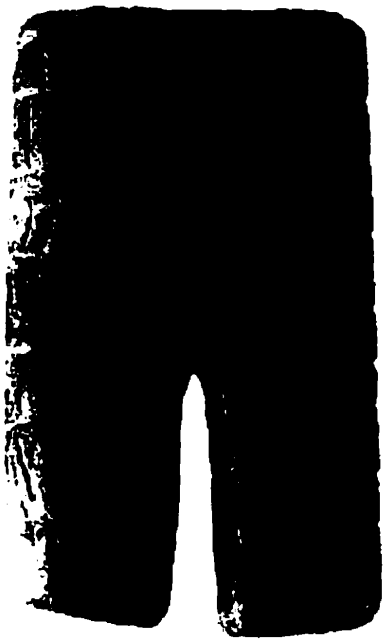


Figure 52.

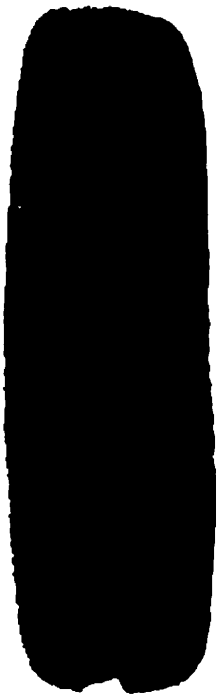


Figure 53.

Figure 52. Category 1(a), Palmar Incised, Project No. 0308 (Loma Alta OGSEMa-182-22). Dimensions: 24 x 15 x 6 mm.

Figure 53. Category 1(a), Palmar Open Notched Incised, Project No. 0799 (No Provenience). Dimensions: 62 x 18 x 8 mm.

Figure 54.

Figure 55.

Figure 54. Category 1(a), Palmar Plain, Project No. 0533 (Real Alto OGCH-12-450). Dimensions: 29.4 x 6.7 x 6.2 mm.

Figure 55. Category 1(a), Palmar Plain, Project No. 0004 (Loma Alta OGSEMa-182-9). Dimensions: 36.8 x 9.5 x 8.6 mm.