

A Contemporary Analysis of the Valdivia, a Formative Period Coastal Ecuadorian  
Culture

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**Abstract**

The Valdivia culture of coastal Ecuador was a sophisticated Formative Period culture which is best known for being among the earliest ceramic makers in the whole of the Americas. Although it was discovered in 1956 by amateur archaeologist Emilio Estrada, it took ten more years before accredited archaeologists studied the culture and since then few other studies have been made. However most of these studies have since been criticized and outdated, so it has become necessary for contemporary studies on this culture to be made.

This project is an examination of the Valdivia culture. By using the earliest published works on the subject including works from archaeologists Betty J. Meggers and Emilio Estrada as source material, and by comparing their research with much more current research this project will present a contemporary description of several aspects of the Valdivia. These aspects will include the Valdivia culture and its relation to the environment, their production of agriculture, the ceramic and lithic technologies they employed and the reasons why they settled in this part of the world. Hopefully this project will not only provide an insight to the cultures of Formative Period Ecuador but will also foster a greater interest into further studies of the Valdivia.

## **Introduction**

For years the cultures of pre-Incan Ecuador have gone unnoticed due to a lack of interest in early Ecuadorian societies and a much greater interest in the cultures that were functioning at the time of the Spanish conquest. Since its first discovery around the mid-1950's by amateur archaeologist Emilio Estrada, the Valdivia culture and some of its later phases have only been lightly examined with the bulk of the research having occurred during the 1970's by researchers such as Betty Meggers and Clifford Evans of the Smithsonian Institution. The majority of the research has since then come under a great deal of scrutiny and criticism due to far fetched origin theories of trans-pacific migration from Neolithic Japan. Even then only a few research articles have been published on the Valdivia and any major studies which disregard the Valdivia Jomon correlation, have yet to be published in English. That's why this project seeks to produce a contemporary analysis of the Valdivia and several of its aspects.

The Valdivia culture is one of the first settled cultures in South America. They are often given the term precocious because of the aptitude they had for cultivating crops and producing ceramics while other cultures around them including those of coastal Peru and Chavin would trail by several hundred years. Early researchers split the culture into eight different phases which were spread between 3500 B.C and 1800 B.C. encompassing the entire length of their habitation (Damp 1984). Toward the later periods of their culture the Valdivia would become proficient at not only utilitarian pottery but also specialized ceremonial pottery and figurines. They were also some of the earliest people in South America to produce agriculture such as maize, kidney beans, squash, cassava, hot peppers and cotton.

In this paper a few of the major sites pertaining to the Valdivia culture are examined in terms of their village architecture and their relation to the environment, their production of agriculture, ceramics and lithic technologies as well as their participation in trade and why the Valdivia settled in this region of the Ecuadorian coast. Theories as to which possible cultures they originated from, and a discussion of how the earlier theories of cross Pacific diffusion are flawed will also be advanced.

## **Background**

In 1956 Emilio Estrada, an amateur archaeologist performed a survey in what is known as the Santa Elena Peninsula, a region that is known for its fertile valley and rivers that ran even during the dry seasons. It was there that he discovered an early ceramic sequence which likely appeared around 3000B.C. Since its discovery was made on the fringes of the modern day town of Valdivia, the culture of site G-31 was also named Valdivia. Artifacts discovered at the site such as highly stylized clay figurines and sophisticated ceramics brought the attention of archaeologists from the United States, especially those of the Smithsonian. Archaeologists Betty J. Meggers and Emilio Estrada were the first to begin working in the region and handled all the excavations by the early 1960's. Their goal was to perform an environmental reconstruction of the site and the factors that contributed to its early production of ceramics and agriculture. However in an effort to answer why the Valdivia culture appeared to have no local developmental antecedents, Meggers and Evans formed an impossible theory of diffusion from the Neolithic Jomon culture of Japan which seemed to share some similarities in ceramic design (McEwan 1978). Adding to the problem was that investigators were not looking

into the possible correlations between the Valdivia and other major groups which inhabited the region. It wasn't until research was performed at the sites of Real Alto and Las Vegas that much more reasonable explanations for the Valdivia's early production of agriculture and pottery could be advanced. These new sites, as compared to the Valdivia site, highlighted the cultures from which the Valdivia emerged as well as how the culture grew until its end somewhere around 1500 B.C.

## **Method**

The first half of my project covers the settlement patterns of the Valdivia culture and its relation to the environment. Using *Architecture of the Early Valdivia Village*, I can show that they mainly inhabited the alluvial valleys in the region and often produced U shaped villages which were reminiscent of tropical forest cultures on the Amazon basin (Damp 1984). Using these same articles I can discuss how the Valdivia arranged their villages and the function of the mounds that they built. I can also discuss the distinct climates which the Valdivia culture inhabited including arid regions perfect for sustaining certain crops and the numerous moisture traps in the Manabí region which produced lush forests.

I can then describe the most recent findings and data regarding their production of agriculture. Such as the evidence collected from the San Pablo site located south of the modern town of Valdivia which suggests that this culture was producing corn and jack beans by the fourth millennium B.C. I will also describe how aside from occasionally producing agriculture, they engaged in large amounts of fishing and hunting.

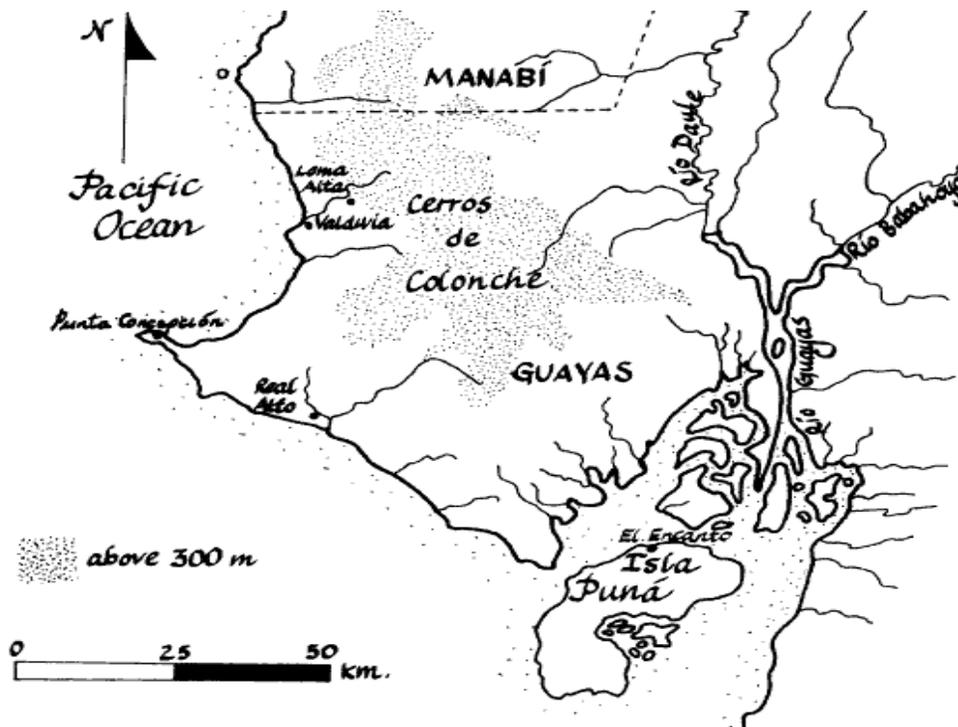
My next focus is on the technologies of the Valdivia which will include a description of their ceramic and lithic technologies. Special attention will be placed on the ceramic assemblage of this culture primarily because they're among the earliest ceramics in South America. They consist primarily of durable ollas, jars, and serving bowls in the Valdivia earlier phases and fine ware towards later phases. For these sections I used the information gathered by the first researchers of this culture as source material and I then compared it to articles published within the last five years such as the research collection of the Dumbarton Oaks library.

The last focus of my project will use journal articles to establish the origins of Valdivia. I will mention earlier research on their arrival in the region including theories of trans-pacific migration from Neolithic Japan. I hope to establish that the Valdivia culture emerged from the Amazon basin and became sedentary in a region with varying climates and high resources in which they began to produce early ceramics and agriculture.

### **Real Alto**

The Valdivia culture was able to spread well over coastal Ecuador but few sites can best describe the progression of the culture such as the Real Alto site. Located by Jorge Marcos in 1971 the site is located in the Chanduy valley less than 3 kilometers in from the coast of southwestern Ecuador. Real Alto was later excavated in 1974 and 1975 by several researchers including Donald Lathrap, Jonathon Damp, Peter Stahl, Betsy Hill, and James Zeidler (Shwartz and Raymond 1996). In contrast to the eight phase chronology presented by Meggers and Evans, the site of Real Alto or OGCH-12 indicated

to the researchers that the Valdivia can efficiently be broken into four different phases which fit into the years between 3300 and 1500 B.C. These dates have been expanded to include the recent findings of a deeper pre-ceramic culture which had been functioning in the area as early as 4000 B.C. as well as the introduction of the Machalilla culture and the rapid disappearance of the Valdivia during the fourth and final phase (Myers 1976).

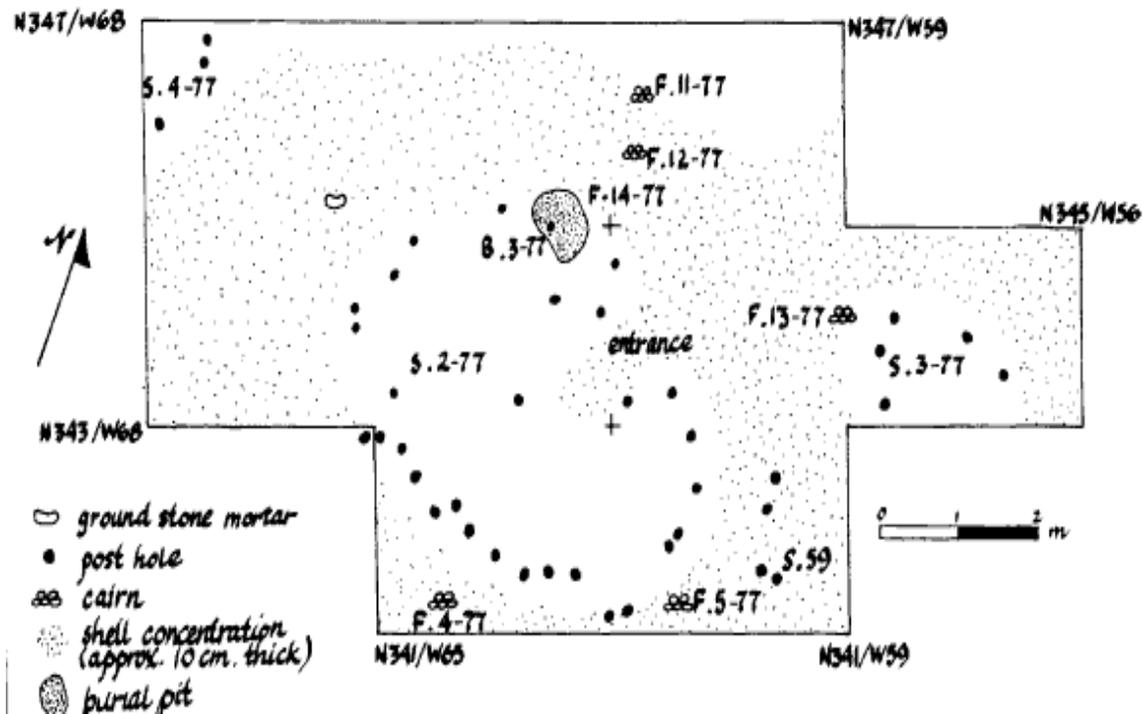


**Map of Southwestern Ecuador and selected early Valdivia sites (Damp 1984)**

The site is positioned south of the modern city of Valdivia, upon one of the highest points in the Chanduy valley near the Verde River. During its earliest phase the site was constructed in a U shaped pattern or horse shoe pattern not unlike those of Chavin de Huantar. The village held around 50 to 60 individuals living in small single family huts (Slovak 2000). The architecture of Real Alto was composed of three different phases deemed Valdivia I, II, and III. From the first phase of habitation we see

an exceedingly early usage of the U shaped village pattern. At least seven houses were identified from the phase I village and have been dated roughly to 3545 B.C. The houses themselves are usually a one room thatched roof structure between 450cm wide and 320cm from the point of the entrance to the back wall. During the excavation 30 post holes were uncovered, many of which were faced inwards and done in pairs, presumably to improve the tensile strength of the posts. Homes were generally kept clean and were kept sturdy by using a wattle and daub technique mixed with grass along the walls. Just outside the structures however, researchers found large deposits of shell fragments about 10 cm thick surrounding the three of the four sides of the village. Together these refuse zones correspond with each other to form the large U shape of the village layout. Although refuse pits were found mostly on the outside fringes of the village, each of the homes contained at least one refuse pit along its northern edge.

An interesting discovery was that several burials were found under the walls of the structure and that post holes were often repositioned according to where the burials were, resulting in high amounts of fragmented bones. Jorge Marcos notes that “human bones buried below the walls of Valdivia houses are a typical feature of Real Alto and these, he infers, were guardian burials serving as protectors of the structure” (Marcos and Scott 1978).

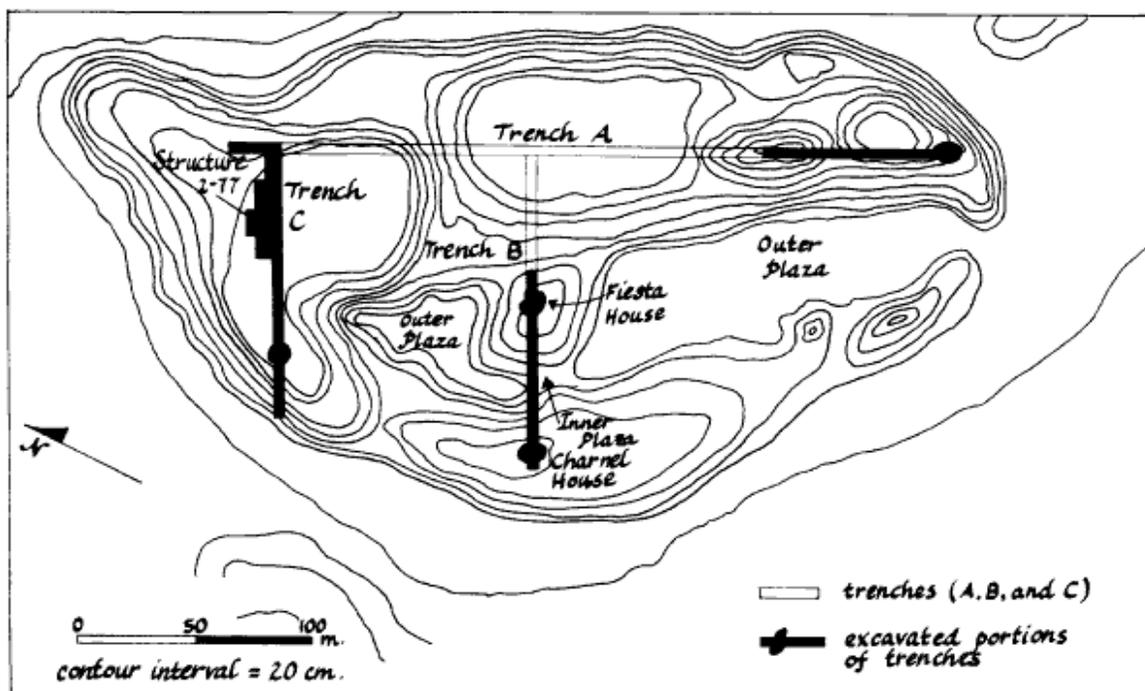


Map of Phase I Real Alto house (Damp 1984)

### Phase II Real Alto

At the end of the first Valdivia phase the population was a steady 150 to 250 people but by about 2500 B.C during Real Alto's sixth phase, also known as Valdivia II, the population of the community spiked to around 1200 people. At this point the small community of Real Alto took on the role of a regional center. The architecture of the village also changed to presumably accommodate much more trade with outlying groups. The elliptical shape that had typified the Valdivia phase I village was now turned into a rectangular layout and the size of the central communal area was also increased to support a trade plaza. During the Lathrap and Damp excavations, investigators recovered large amounts of maize and marine remains from this trade plaza. Houses surrounding the central plaza were also subject to change and were now much larger and sturdier

through the use of upright posts. It's possible that the single-family huts of earlier times had been converted to large homes in order to house extended families (Slovak 2000). Towards the end of Valdivia phase II the central plaza of Real Alto began to evolve into ceremonial grounds through the construction of large mounds which would typify the third phase of Valdivia village architecture.



Map of Phase III Real Alto (Damp 1984)

### Phase III Real Alto

It is from this period that investigators have been able to recover the most research. Phase III for the Valdivia began around 1800 B.C. and constituted a strong evolution in architectural and social complexity. Similar to Valdivia II, Valdivia III at Real Alto saw a large boost in the population which spiked from 1200 people to 1800 (Damp 1984). Although the population capped around 1800 people, there were

noticeable fluctuations before the site of Real Alto was abandoned around 2000 B.C. These fluctuations can probably be attributed to the dispersion of Real Alto residents towards the middle sections of the river valleys where smaller communities and farms were being constructed.

As mentioned before this phase was highlighted by central plazas in which politico-religious buildings were built upon earthen mounds (Marcos and Raymond 2003). From the two largest mounds, evidence suggests that one structure was a fiesta house associated with meetings and large feasts and the other was a charnel house associated with the communities' mortuary practices (Damp 1984). In addition to the construction of new ceremonial buildings, several hamlets began to form on the outlying areas of Real Alto. These hamlets became centers for agriculture, tool production and were also used for trade. It's from these sites outside of the Real Alto site that we begin to see the production of highly sophisticated ceramics and while the first phases of Valdivia were producing utilitarian ware with little sophistication, it's during Valdivia III that we see up to thirty different styles of precise and elegant ceramics.

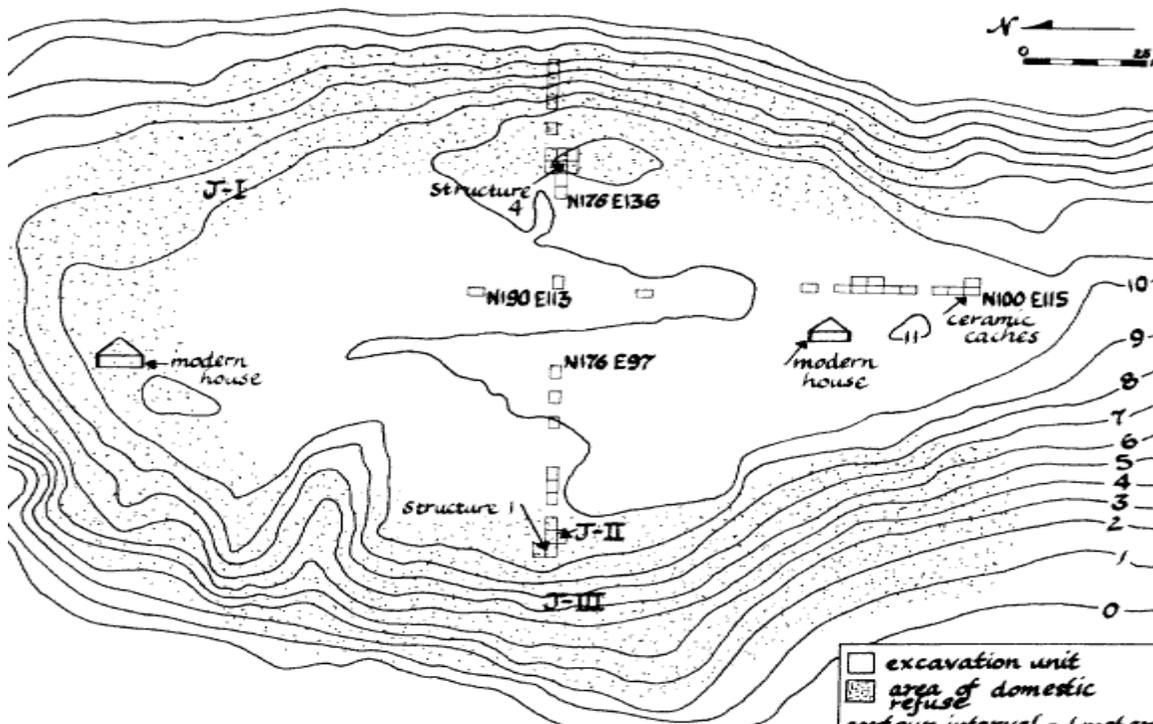
Overall 72 out of 100 distinguishable human burials can be attributed to the Real Alto site and from those remains the majority of them belong to the Valdivia III period. From these burials, which were associated with the remains of the charnel house as well as a cemetery to the south, investigators have been able to produce a demographic study of Real Alto. According to their findings the average life expectancy from birth was 21 years of age and by age 15 the subject had a life expectancy of 33. From the few remains that were capable of being studied they postulated that juvenile mortality was low and that there was an increasing adult mortality. Unfortunately due to the practice of early

Valdivia burials being used as support for household structures many of the remains from earlier periods were indistinguishable. There is also a great deal of ambiguity concerning the status associated with burials within the central charnel house against those of the outlying cemeteries. Archaeologist Linda Klepinger, who performed the paleodemography, believes that if burials were class related then it would seem likely that class was hereditary as their were young children buried within the mounds (Klepinger 1979). These children would not have had an opportunity to attain status and were more than likely buried within the mounds because of their association to upper status members. This holds especially true for one such burial in which a fully articulated female is buried in a stone lined grave at the entrance to the charnel house and is flanked by two adult males and six juveniles, leading investigators to believe that burials were grouped by families and that status was likely hereditary.

### **Loma Alta**

In 1980 another site was investigated by Donald Lathrap and Jonathon Damp known as the Loma Alta site. Researchers have estimated that people have inhabited this river terrace at least 5000 B.P. (Pearsall 2003). The site which is much larger, but less complex than Real Alto is located on the Valdivia River and is at least 10 km from the original site of Valdivia (G-31). Like Real Alto this site gave investigators a clear view of an early Valdivia village's architecture as well as the Valdivia's settlement patterns according to the environment. Among the finds at the site were a several houses where a series of well preserved ceramic vessels combined with radio carbon dating from nearby hearths, have allowed archaeologists to identify the site as belonging to the Valdivia I and

II periods or roughly 2680 B.C. Unlike Real Alto this site never reached the grand scale of its counterparts. Homes in this village were elliptical, modest and contained very little if no space for specialized tasks, which led researchers to believe that all specialized tasks took place just outside of the homes. Evidence for this includes fire treated lithic materials as well as several burnt stones surrounding the small homes.



**Map of the Loma Alta site with special attention to domestic refuse regions outside of the settlement (Damp 1984)**

An interesting discovery made at the site was evidence that showed how the construction of Valdivia homes was performed. Unlike the buildings of Real Alto the inhabitants of Loma Alta dug an oval shaped pit into the ground and laid the framework of the structure. Once all the posts were in place, the builders filled the pit with sterile clay and covered the structure with palm thatching.

The site of Loma Alta, like many other Valdivia sites is located along the river basins of the Ecuadorian coast. For a time archaeologists believed that all Valdivia age sites would be located directly on the coast or at least close to mangrove flats. Recent reports however discredit this hypothesis as many sites have been located further inland where it is presumed that settlers purposefully took advantage of the lush environments near the local hills rather than settle along the arid coastline.

### **The Ecuadorian Coastal Environment**

Since the first examinations of the Valdivia culture, most of the attention of researchers has been focused on the early ceramics which they produced. In more recent years the attention of many has shifted to the possibility that the Valdivia Village structure may represent the first permanent village in South America. However the environment surrounding these early formative cultures has been greatly ignored. The Ecuadorian coastline is a varying environment between dry tropical forests, humid ecotones, and micro climates within valleys which produce moisture traps (Harris 2004). The best examples of these environments can be found in two areas which will be observed in this project which are the Valdivia and the Chanduey river valleys.

The environment is only briefly described in the earliest works of Meggers and Estrada and from their surveys of Valdivia sites along the coast they stated that “Between 3200 and 1500 B.C. sedentary life on the Ecuadorian coast appears to have been restricted to the margin of the sea, which provided a localized food supply that could not be equaled inland until after the development of agriculture” (Meggers 1966). However, contemporary surveys conducted by Jonathan Damp, and James A. Zeidler have

established that the majority of Valdivia sites are not located on the coast as was surmised by Betty Meggers. Although surveys of the coast were far easier than those performed in the dense tropical valleys, there would appear to be no bias in the Zeidler and Damp surveys as earlier Valdivia sites have been discovered along the rivers inland rather than the flat and less vegetated coastline.

The Chanduey is the first river valley that should be examined as it's the valley that produced two of the earliest villages in the Valdivia culture which are the sites of Real Alto and Centinela. The terrain here is flat and is only broken up by the occasional coastal hills. Rain here is less than in areas to the north and to the east (Damp 1984). In the early stages the Valdivia culture including period I and II, the settlements of Real Alto and Centinela had still not become larger administrative posts but did correspond with several small catchments along the tributaries of the Chanduey, but by Valdivia III the city of Real Alto had become a large colonizing center which regulated 600 acres of farmland in the valley bottom floodplains.

The Valdivia Valley unlike the Chanduey is a much smaller valley that reaches up to the Colonche hills and is located near the Valdivia river which is a small, meandering stream that travels 100 meters to the North East. Just like the Chanduey valley, the Valdivia valley demonstrates how major communities located in a single valley branch out between each other by the third Valdivia period. In this case at least five separate satellite communities sprung up by 1800 B.C. between the sites of G-31 and Loma Alta.

What makes this valley particularly interesting is that the Valdivia Valley lies in a transitional environment in which two different currents cut through the region and produce two separate environments. On the southern coastal half of the Valdivia valley

the environment is xerophytic or dry and arid and can only sustain desert plants which require minimal water. This area is known to have very little rainfall, but is sustained by garua or misty fogs which provide most of the precipitation. Even during dry years the garua fog is capable of supporting of xerophytic vegetation consisting of shrubs and dwarf trees (Stahl 1991). During wet seasons very little rainfall actually occurs but when it does it produces savannas on inland slopes. It's in these areas that a type of fox known as the Dusicyon inhabited and was hunted. Yet in a stark contrast the regions both to the north and directly to the south of the Valdivia valley are lush tropical rainforests which are formed because of the protective nature of the Colonche hills which act as barriers against the incessant coastal winds (Stahl 1991). It was in these environments that inhabitants of the valley did their small game hunting for animals such as the small deer and peccary.

Another factor that weighs heavily on the Ecuadorian coastal valleys is the strong short term changes that can occur in the environment. The phenomenon of El Nino for example is a short term shift in the environment which can last from a few short months to a few years at most. The introduction of heavy rains from the west towards the coast provided both the devastation of severe flooding but also an opportunity for settlers at least at Loma Alta, where the environment is known to be sensitive to change, to grow much more maize and beans. The opportunities provided by drastic climatic shifts such as El Nino and the unceasing precipitation provided by tropical fog (la garua) were likely to have been the reason that the earliest cultures of Ecuador decided to settle in this region and evolve into the culture known as the Valdivia.

## **Animal and Plant Resources**

The Valdivia culture earned its fame due to the relatively early nature of its ceramic production but up till now the importance of another factor in their formation has been highly disregarded. The Valdivia and the San Pedro culture which preceded them were likely practicing agriculture by the early formative period. Although researchers are unsure of the level of dependence the Valdivia had upon domesticated plants, they mostly agree that maize had an important role during the Formative Period even before the introduction of ceramics (Pearsall 2003).

During the 1980's production of agriculture was identified at two separate sites which were the Loma Alta site and the Real Alto site. Unfortunately due to the very acidic nature of the soil in this region of Ecuador as well as the overall age of the sites, few specimens were recovered during excavation. However enough was collected to show what was being grown at the sites and possibly to what extent the Valdivia relied upon agriculture for subsistence.

### **Loma Alta**

Agriculture was certainly practiced at Loma Alta but evidence suggests that it was performed at this site during the later Valdivia phases. Researchers discovered phytoliths of Maize, palm, achira, arrowroot and gourde through out the site but since mere phytoliths don't usually represent solid evidence for the production of crops. However Maize and beans were consumed by the residents of the Loma Alta site as evidence such as corn kernels and jack bean fragments. Along with monocot and sugary roots found at

the site, several types of fruit trees were found in situ outside of one of the home structures including some from the sapotaceae family (Pearsall 2003)

Along with some evidence for several types of possible plant foods, there was a large quantity of faunal remains recovered from Loma Alta. We can see from the faunal collections that the Valdivia culture hunted in order to supplement their diet. From the arid regions, tapirs, ibises and several medium sized birds from the rallidae family were consumed. In forested regions towards the Colonche hills, foxes, new world deer, opossums, armadillos and even monkeys were hunted. The majority of finds however were maritime and included mackerels, jack, snapper, catfish, tuna, puffers and a few hammerhead sharks and barracudas. Researchers who studied this site believe that while maize did play a role for the community of Loma Alta, it was not grown specifically to supplement the entire diet of its inhabitants. Instead the majority of the research suggests that the community of Loma Alta practiced hunting and fishing while harvesting some form of early maize to supplement their diet.

### **Real Alto Agriculture**

During the earliest excavations performed at the Real Alto site, archaeologists concerned themselves with recovering evidence to support wide scale agriculture. Their results however proved to be ambiguous, due to sampling biases and poor preservation. What they did discover was that Valdivia's earlier phases differed from their later phases in the amount of plant food consumption in their diet.

Earlier Real Alto can best be described as hunters and gatherers which supplemented their diet with achira and arrowroot plants. Both plants had edible roots

which could be consumed for starch or used in the preparation of other foods. Aside from these two plants, some types of tree fruits, tuber foods and wild and cultivated legumes contributed substantially to the plant portion of their diet (Pearsall 2003). Although the Real Alto inhabitants grew some plant foods, few charred maize remains were recovered which indicated that while maize was indeed present at the site, it was uncommon and only rarely used.

During the middle phase of Valdivia, maize and jack beans became much more common yet the production of cotton and other specific tree fruits cannot be confirmed (Pearsall 2003). Evidence for maize production includes maize phytoliths located in every home and charred remains in a number of refuse pits at the site. It wasn't until Real Alto reached its third phase that agriculture in the area began to expand. Maize phytoliths and Jack bean phytoliths were well represented but there was a decrease in the use of achira. During this time, people began to disperse into hamlets in the proximity of Real Alto and began to grow cotton and plant foods.

It's difficult to prove that the Valdivia were mass producing agriculture for a number of reasons including initial sampling biases, poor preservation and an overall lack of collected samples. From each site tied to Valdivia the remains are exactly the same as those of Loma Alta and Real Alto. At each of the sites there are few faunal and floral remains, but from these remains we can establish that maize, squash, several types of beans and cotton were present but unfortunately the extent to which these resources evened out the diets of the Valdivia will never be known.

## **The Valdivia Artifact Record**

During the earliest excavations of the Valdivia (G-31) site, archaeologist Emilio Estrada noticed that the ceramics associated with the site dated to 4000 B.C, marking them as some of the oldest ceramics in South America. While we now know that the earliest ceramics were probably from the shell mound sites in the Caribbean lowlands of Colombia along the coast. However the ceramics of the Valdivia are unique in that they developed quickly and became complex 800 years before other cultures (Deboer 2003). Along with an extensive ceramic assemblage, the Valdivia also produced lithic, bone and shell tools which will be described in this section.

### **Lithic Tools**

Due to an environment which was better suited for fishing than hunting, the production of stone tools was made with expedience in mind. Lithic tools were often no more than large flakes which were used once and then discarded. Among the tools found at the site of G-31 were blades, choppers, cores, hammer stones, reamers, saws, scrapers and sinkers (Meggers 1966)

Blades were often irregularly shaped flakes made from chalcedony, quartzite, opal and chert. As previously mentioned most tools showed no clear cut evidence of wear (Meggers 1966) and so were likely discarded after only a few uses. Choppers were also made from chalcedony or quartzite flakes that were irregular but would cut effectively. Along with stone tools for cutting and scraping, some stones were used in the production of ceramics, such as paint stones which were irregular fragments of hematite are probably the source of red slip color (Meggers 1966). Aside from tools the Valdivia also used

limestone, marble and gypsum to make fertility figurines with exaggerated female attributes. These stone figures known as the “Venus of Valdivia figurines” would later be made of clay and were typically small with individualized hair and shape. Researchers suggest that Venus figurines were used in a variety of ways such as being interred with the dead, buried under homes, and used during fertility rituals.

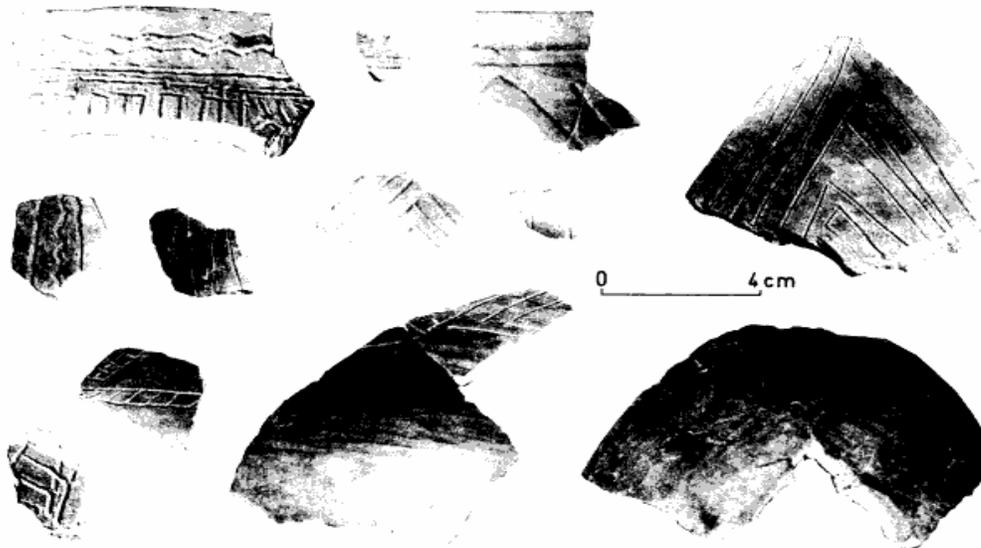
### **Shell and Bone Tools**

However the use of stone tools was not used in hunting as there seemed to be little need for hunting animals when their diet could be satisfied by plant foods and marine life even during early phases. So instead of using stone points the Valdivia used deer antler tips for projectile points. Deer scapulas were also used as awls as was common for most cultures during this period. When they weren't hunting they fashioned fish hooks out of pearl oyster shells or used spondylous shells to create pendants, fishing and household tools such as thread spools.

### **Ceramics**

Ceramics produced by the Valdivia fit into three different categories, ollas, jars, and serving bowls. At the site of Real Alto, the ceramic pieces that were analyzed give us reliable markers which have allowed researchers to split the Valdivia into their four different phases. Although the Valdivia produced thirty different styles of pottery, the focus of this portion of my project will explain how ceramics were used and how they varied between phases.

Valdivia pottery initially was rough and practical, but it became splendid, delicate and large over time. They generally used red and gray colors; and the polished dark red pottery is characteristic of the Valdivia period (Reyes 2000). According to Eduardo Reyes, the initial production of ceramics was meant to satisfy man's fundamental necessities such as subsistence and ritual life. With the appearance of maize agriculture, specialized pottery makers became indispensable.



**Decorated sherds from the Valdivia G-31 site (Bischof and Gamboa 1972)**

The earliest forms of pottery were coarse and simple and to some extent the coiling techniques first implemented would see little change but as Collier and Lathrap believe, it's possible that new techniques from the Amazon began to emerge in Valdivia pottery making (Deboer 2003). By the Valdivia phase II both jars and especially bowls were increasingly decorated. New styles such as the red engobe technique, in which a type of slip made from iron oxides was applied to damp clay to color its surface dark red,

were now being introduced and used often. As more and more details were added to the decorations, the role of the bowl became different as well. Much less jars were being decorated and ollas were decreased in size yet towards the later phase of Valdivia, bowls began to show special refinement and new forms such as incurving lips. Geometric decorations in the form of triangles, rectangles, hexagons, and semicircles were in wide usage while other techniques placed fine incises, finger nail indents, beaded rims and the application of paint after firing were all used in the decoration of bowls (Castelo 2006).



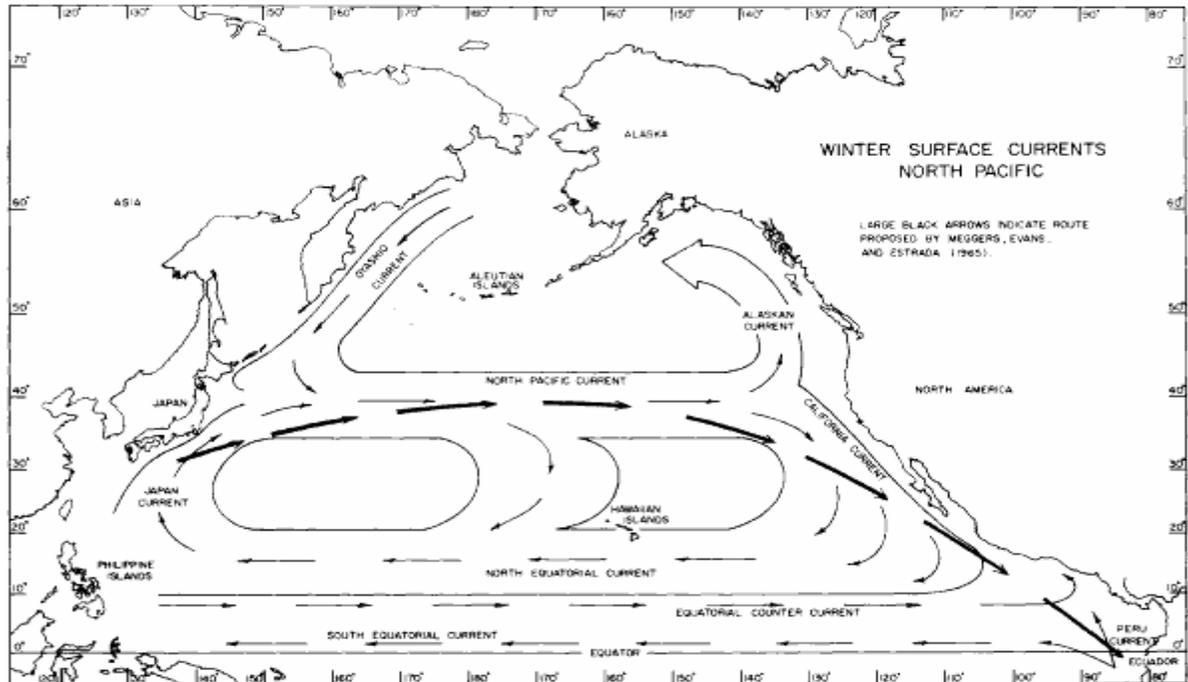
**Ceremonial Bowl used by phase III Valdivia (Castelo 2006)**

New aesthetic techniques mark the point in which the bowl became an important object within community activities. Studies by Lathrap and Marcos suggest that it's possible that the Valdivia bowl became a prominent serving vessel as small scale communities (where several bowls and jars would have been necessary) became largely vacant ceremonial plazas that regularly catered to large congregations (DeBoer 2003).

Another theory is that while the Valdivia never really produced fine ware as is recognized among many other cultures, they did create elaborately designed bowls for ceremonial purposes including ritualized drinking. There is evidence for this as decorated bowls discovered at the site of La Emerenciana contained maize residue indicating that they may have been drinking Andean maize beer known as chicha. Another possibility was that these small bowls could have been used for the consumption of ayahuasca, a very powerful hallucinogen and to some extent a medicinal drink.

### **Origins of the Valdivia**

The earliest published study on this culture was released by the Smithsonian Institution in 1966 by Betty Meggers, Clifford Evans and Emilio Estrada and while its analysis attempted to appropriately reconstruct the Valdivia culture, it reached a highly questionable conclusion of an accidental migration of fisherman from the Neolithic Japanese Jomon culture due to the similarities between the potteries of both cultures. This theory was quickly discredited as further ceramic analysis proved the two styles were different and that a voyage of 9006 miles would have been impossible for poorly supplied Japanese fishermen (McEwan 1978).



### **Hypothetical course by which Jomon fisherman stumbled onto the Americas (Meggers and Evans 1966)**

Unfortunately the presence of a pre-ceramic culture that was located in the same region and just prior to the entrance of Valdivia ceramics was largely ignored. The archaeological sequence in southwestern Ecuador begins with the Preceramic culture known as Vegas, which dates roughly from 8000 to 4600 B.C. and is followed by the Valdivia, which marks the beginning of pottery making and a change toward increased sedentism (Stothert 1985). Evidence suggests that this culture reached a population similar to that of the Valdivia's earliest phases and was likely to have been its predecessor. Although a gap in the record of habitation in the region occurs between these two cultures it's possible that the environment of the coast may have degraded due to drought and the residents may have transferred elsewhere and returned later to form the Valdivia.

The Valdivia, like the inhabitant of the Las Vegas site also degraded and disappeared. We know now that environmental factors were key contributors to their removal from the area. Tephra I, a volcanic feature located several miles away seems to have erupted, blanketing the valley toward the end of the Valdivia 3 phase which was marked by relatively low population densities (Ziedler 2003). Archaeological evidence seems to indicate that for a short time the Valdivia survived the detrimental effects of the volcanic ash fall. “At least two occupation surfaces uncovered at San Isidro clearly postdate the tephra deposit, so abandonment did not seem to have occurred as an immediate result of the eruption.” (Ziedler 2003) However in a matter of months, the region was abandoned and was not repopulated for almost 560 years when the Chorrera peoples appeared in the valley.

## **Results**

Since the discovery of the first Valdivian villages in the mid 1950's, archaeologists have quarreled over how and why the Valdivia chose to build their communities as they did. Contemporary investigations seem to prove that the Valdivia chose to reside deeper into these river valleys, as it was easier to grow near the humid forests of the east instead of the windy arid and semi arid regions of the western coast. The environment which they chose also produced heavy fogs known as garua which helped irrigate even during the dry seasons.

In terms of construction the Valdivia were originally thought to have been related to the Chavin due to the shape of their villages which took a U shape. However the Valdivia was never in contact with the Chavin culture. What archaeologists did discover

was that the first villages that the Valdivia constructed held only small single family huts. These small villages that began around 3545 B.C. then evolved into large scale regional centers housing around 1800 people by 1500 B.C. Village plazas were constructed and in later phases, mounds were built in these plazas and capped with ceremonial buildings such as charnel houses and fiesta houses.

During the 1980's, new researchers began to examine the possibility of Valdivia agriculture. They examined most of the plant remains from several sites and concluded that while the people of the early Valdivia had produced maize and jack beans they were however not relying upon them completely. Hunting and especially fishing were heavily performed activities at least for early Valdivia. By later Valdivian phases, maize, beans, squash and cotton were in higher usage and it is evident that outlying hamlets were producing these resources.

The discoveries that made the Valdivia culture initially popular were those of ceramics. Although the ceramics of Valdivia are not the first ever made, they are notably early and quite unique. The ceramic assemblage for the Valdivia consists of bowls, jars and ollas. However the bowls are very interesting because of the level of detail that was placed on them. Countering earlier statements that the Valdivia produced fine ware for special occasions, recent analysis of the ceramic assemblage suggests that they never produced fine ware but may have used highly decorative bowls for ceremonial purposes. These bowls which were complex and intricate may have only been used for ceremonial drinking of chicha or possibly an early version of ayahuasca, a powerful hallucinogen.

Along with serving ceramics they also produced elaborate figurines known as the Venus of Valdivia. These feminine ceramic figures were likely used in a variety of

rituals of fertility. They were also highly individualized as each piece has displayed different hairstyles and shapes. These figures although simple, have demonstrated a variety of uses such as being interred with the dead, buried under homes and built to several feet high for possible ceremonial uses. Whatever their usage, the figurines grant a view of Valdivia iconography and the importance of the female figure.

The last portion of this project pertains to the origins of the Valdivia. The earliest published study on this culture was released by the Smithsonian Institution and while its analysis attempted to appropriately reconstruct the Valdivia culture, it reached a highly questionable conclusion of an accidental migration of fishermen from the Neolithic Japanese Jomon culture due to the similarities between the potteries of both cultures. This theory was quickly discredited as further ceramic analysis proved the two styles were different and that a voyage of more than 9000 miles would have been impossible for poorly supplied Japanese fishermen. At the advancement of this theory several archaeologists who included Donald Lathrap and Jonathan Damp, questioned whether it was feasible and what cultures in Ecuador were much more likely to have been their predecessors. The immediate source of Valdivia, then, according to Lathrap, was not from across the sea but more probably from the southern floodplains of the neighboring Guayas basin.

## **Conclusions**

The Valdivia represents a significant feature of Ecuadorian history and has unfortunately been ignored for many years. This precocious culture was one of the earliest tropical forest cultures in South America, outdating other cultures such as the

Pacopampa culture by almost 800 years. Their villages were also interesting because they produced architecture similar to that of cultures that were formed later on such as the Chavin. During a period of 3500 B.C to 1500 B.C this community grew from a small village to a regional center and finally to a large city with specialized buildings, mound structures and outlying hamlets and farms meant to support its larger communities. These outlying hamlets likely managed small farms where maize, beans, squash and cotton were grown. Earlier Valdivia phases grew foods to supplement their diets but were likely practicing hunting and gathering, while later Valdivia phases relied much more upon maize and other resources while continuing to hunt and fish. The Valdivia also produced specialized ceramic pottery which was among the earliest ever made. Along with being unique the Valdivia used their pottery for ceremonial purposes, such as the whole community using their own specialized bowls in possible drinking rituals.

The styles of pottery created by the Valdivia are also very similar to those of other cultures that were found around the area such as the San Pedro complex and may have shared the same region with the earliest Valdivia phases. However it seems likely that the Valdivia originated from the pre-ceramic culture which inhabited the Las Vegas site by as early as 8000 B.C. This culture, like the Valdivia cultivated early maize and gourde, created similar communities and buried their dead in the same manner. Although more investigations should be performed in the region to identify the greater presence of agriculture and the relationship between earlier non-ceramic cultures and those of the Valdivia, it appears that research regarding their ceramic assemblage and their architecture has been very reliable. From the combined journals and books used to form this project, the Valdivia culture can be defined as one of the earliest tropical forest

cultures during the formative period in South America which prospered significantly because of its position in a valley with excellent natural conditions. Due to abundance in resources such as ocean fishing, hunting and some agriculture the Valdivia were able to promote specialized tasks which led to the creation of complex ceramic assemblages and increasingly large communities.

### References Cited

Castelo, Hernán Rodríguez

2006 *Panorama del Arte*, Biblioteca Ecuatoriana de la Familia, No. 9, Corporación Editora Nacional.

Damp, Jonathan E.

1984 Architecture of the Early Valdivia Village. *American Antiquity*. Vol. 49: 573-585

DeBoer, Warren

2003 *Archaeology of Formative Ecuador*. Dumbarton Oaks Research Library and Collection, Washington.

Gamboa, Julio Viteri and Bischof, Henning

1972 Pre-Valdivia Occupations on the Southwest Coast of Ecuador. *American Antiquity*. Vol. 37: 548-552

Harris, Michael

2004 *The Complex Interplay of culture and nature in Coastal South Central Ecuador*. University of Pennsylvania Publications. Vol 46. 38-43

Klepinger, Linda

1979 Paleodemography of the Valdivia III Phase at Real Alto, Ecuador. *American Antiquity*. Vol. 44, No.2 305-309

Marcos, Jorge

1978 The Ceremonial Precinct of Real Alto: Organization of Time and Space in Valdivia Society. Ph.D. dissertation, University of Illinois.

Marcos, Jorge and Raymond, J. Scott (editor)

2003 *Archaeology of Formative Ecuador*. Dumbarton Oaks Research Library and Collection, Washington.

McEwan, Gordon F.

1978 Valdivia, Jomon Fishermen, and the Nature of the North Pacific: Some Nautical Problems with Meggers, Evans, and Estrada's (1966) Transoceanic Contact Thesis. *American Antiquity*. Vol. 43: 362-371

Meggers, Betty Jane

1966 *Early formative period of coastal Ecuador: the Valdivia and Machalilla phases*. Smithsonian Institution Press, Washington.

Myers, Thomas P.

1976 Formative Period Occupations in the highlands of Northern Ecuador. *American Antiquity*. Vol. 41: 353-360

- Pearsall, Deborah M  
2003 *Archaeology of Formative Ecuador*. Dumbarton Oaks Research Library and Collection, Washington.
- Reyes, Eduardo Almeida  
2000 *Culturas Prehispánicas del Ecuador*, Quito Ecuador.
- Shwarz, Frederick and Raymond, J. Scott  
1996 *Formative Settlement Patterns in the Valdivia Valley, SW Coastal Ecuador*. University of Calgary, Alberta.
- Slovak, Nicole  
2000 Real Alto. *In Timeline of Art History*, The Metropolitan Museum of Art.
- Stahl, Peter W.  
1991 Arid landscapes and environmental transformations in ancient southwestern Ecuador. *World Archaeology*. Vol. 22 No.3
- Stohtert, Karen E.  
1985 The Preceramic Las Vegas Culture of Coastal Ecuador. *American Antiquity*. Vol. 50 No.3: 613-637
- Ziedler, James A.  
2003 *Archaeology of Formative Ecuador*. Dumbarton Oaks Research Library and Collection, Washington.