AS KNOWLEDGE of the early pottery-making cultures in the New World has expanded, it has become increasingly evident that widely separated regions were influenced by a common source. Similarities in vessel shape, surface finish and technique of decoration are too close and too complex to be considered independent invention. In the developmental terminology used by American archaeologists, this early period is known as the Formative. Formative period cultures in Middle America and in Peru have been known for many years, and the discovery of new sites constantly expands their description and distribution. However, knowledge is meager in the intervening area, making it difficult to provide satisfactory answers about the nature of the movement involved and the direction in which it went.

Until recently, Ecuador was one of the regions in which Formative period remains had not been reported. In 1954 a deep stratigraphic excavation at Chorrera on the Río Babahoyo in Guayas province uncovered the first material related to the Formative horizon of Middle America and the contemporary periods (Chavín-Cupisnique and Salinar) of Coastal Peru. Lately the sequence has been pushed back still farther with the discovery of the Valdivia culture, identified as Early Formative.

In May 1956 Emilio Estrada, Director of the Museo Arqueológico “Víctor Emilio Estrada” in Guayaquil, found some badly eroded sherds in a shell midden at Punta Arenas de Posorja, on the north shore of the Gulf of Guayaquil. Some of these had polished surfaces and were decorated with excision, zoned cross-hatch, broad-line incision or pebble polishing, traits reminiscent of Formative period ceramics from Peru and Middle America. The identification of the Punta Arenas pottery as Formative was conclusively established in October 1956, when Estrada discovered the site of Valdivia farther north along the coast of Guayas province. The surface of this large site produced quantities of sherds representing all of the Punta Arenas types and several additional ones. Estrada dug two test pits and two deep cuts on the lower flanks of the site. The first cut went to a depth of 4.40 meters and the second to 3.80 meters before virgin soil was encountered. Recognizing the importance of the find, Estrada prepared a preliminary report, Valdivia: Un Sitio Arqueológico Formativo en la Costa de la Provincia del Guayas, Ecuador. He summarized the ceramic traits that link this site with the Early Formative of Peru, especially the Guañape culture of the North Coast, and with the Formative in Mexico.

At the end of December 1956 Estrada invited us to excavate further with him at Valdivia in order to deter-
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**VALDIVIA continued**

MAP OF GUAYAS PROVINCE, ECUADOR, SHOWING LOCATION OF FOUR SITES OF THE VALDIVIA CULTURE.

*Left:* Small tetrapod bowl, diameter 13 cm. *Right:* Low, squat stirrup spout, width 9 cm.

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mine the exact limits of the Formative period occupation and to obtain a larger sample of pottery for classification and comparison. In four days of intensive work five additional stratigraphic cuts were completed and a detailed map was made of the site.

In the latter part of 1956 Francisco Huerta Rendon, Carlos Zevallos Menendez and Olaf Holm, all of Guayaquil, discovered another site belonging to this complex near San Pablo, on the coast about twenty miles south of Valdivia. Our own survey of the Valdivia Valley produced a smaller site at Buena Vista, on the left bank of the Valdivia River not far from its mouth. More recently, Estrada has found Valdivia-type figurines in collections from Olón and Guale farther up the Ecuadorian coast. These suggest that concentrated search might reveal additional sites.

All the sites of the Valdivia culture are along the coast. Since the people appear to have derived a large portion of their food supply from shell fishing, it is unlikely that their remains will be found far from the sea. Three of the sites are now a kilometer or more from the shore, but each of these is on the margin of a former salt-water bay that probably formed part of the shore line at the time of occupation.

Valdivia is the largest of the known sites. It occupies a low hill, eleven meters high, projecting from the range forming the south side of the Valdivia River valley, about four hundred meters from the shore. The present village of Valdivia lies to the north, between the site and the mouth of the river. Another small village, San Pedro, is on the shore immediately to the south. The inhabitants of both villages make their living predominantly by fish-
ing, exploiting an abundance of excellent fish that the ancient Valdivians also drew upon.

Habitation refuse of the Valdivia culture varies from 40 centimeters to 3.40 meters thick. It extends from the base of the hill up and over the summit, and continues part way up the flank of a higher hill behind, covering an area of 160 by 125 meters. The lower third of this deposit is overlaid with refuse of the later Guangala culture. Of the nine test pits in the site, five were in the reoccupied section, while four produced only Valdivia pottery. Fire-cracked stones were found mixed with numerous shells of a dozen different species. Pottery was abundant: four 2 x 2-meter cuts produced more than 26,000 sherds of the Valdivia period. Almost every level produced one or more fragments of small clay figurines.

The Valdivia pottery forms a distinctive complex including features typical of the Formative period of both Peru and Middle America. The ware tends to be thick (6-12 mm.) and is tempered with sand. A distinctive characteristic of the paste is the poor mixture of clay and temper particles, so that sand grains are often clustered together, and air pockets or layered regions are frequent. The surfaces of vessels decorated with broad-line incision or excision are well smoothed and polished but sometimes slightly uneven. One of the plain wares has a well polished surface ranging in color from tan to brown to gray-brown to red-brown. Another common type has a pol-
ished red slip covering both surfaces. A polished red slip is sometimes used for decorative effect on the interior of a peculiarly shaped, outflaring, cambered jar neck. Other surfaces tend to be less well smoothed, often only hand-swiped, and are unpolished. Typical vessel shapes include rounded jars curving inward to a constricted mouth and short-necked jars with a rim thickened by a coil added outside and pressed with the fingers to produce a crenelated or wavy lower edge. Four small feet are characteristic, especially on vessels with a red-slipped surface. Stirrup spouts are rare; the two found recently by Estrada are of the squat, stubby type associated with the Formative horizon in Mexico.

A variety of well defined and consistent decorative techniques was employed, each associated with a different type of design motif. The techniques are broad-line incision on a well polished surface, excision involving large cut-out areas on a polished surface combined with zoned or outlined areas of broad-line incision, rocker-stamping, narrow appliqué fillets with finger-pressed undulations on top, brushing or combing, a row of bumps produced by finger punching on the interior, and pebble polishing varying from barely visible ripples to deep, wide grooves almost like gadroons. A number of the excised and broad-line incised sherds have red pigment in the lines and cuts, added after firing and hence somewhat fugitive.

Pottery figurines of a unique style occur throughout
Front and back views of figurines, showing two variations of hair styles.

VALDIVIA continued

the refuse. Seventy-six fragments of heads or torsos and a large number of legs were recovered from the Valdivia site. Unfortunately only one figurine is complete. Another lacks only one leg, and several lack both legs. However, since all the legs are much alike, it is possible to give a general description. The body and head are constructed over a foundation of two parallel coils. Over this the face and body features were modeled by the addition of coils, lumps or fillets of clay. Eyebrows, eyes and mouth are indicated by deep gashes. No nose is shown. The hair was apparently added last, when the surface had begun to dry and adhesion was poor, since it frequently has fallen off. Workmanship varies from exceedingly crude to very fine, but no chronological se-

Figurines showing the range from crude, ugly to well made, beautiful specimens.
quence could be determined on this basis. The better figurines have the surface red-slipped and polished to some extent, the finest modeling being associated with the best polished surfaces.

The bodies are standardized. Most of them are female, with prominent rounded breasts. The pubic area is usually smooth, but three have stippling to represent hair and five have a small conical projection the same size as the breasts, suggesting bisexuality. Arms are suggested by an angular shoulder or a slight projection at the shoulder, or are represented as folded below the breasts, or are absent entirely. One exceptional example has the right hand raised to the chin. The back of the body is smooth, with slightly projecting, squared buttocks. Legs are typically straight, separated, bulging in the back just above the knee and tapering to a rounded end with no foot. Five fragments show a bent knee, suggesting a seated position. The only specimens complete from head to toe measure 8.8 cm. and 4.6 cm. The height from shoulder to buttocks on complete torsos varies from 2.0 to 6.3 cm.

The most interesting aspect of this figurine style is the great variety and elaborateness of the coiffures. The hair in all cases stands out around the face, forming a raised frame. The many variations in length of hair and in decoration are shown in the accompanying illustrations. Only rarely is the hair smooth instead of incised. Two heads with the hair arranged in large coils at the sides do not have the fine line incisions, and incision is also lacking on some of the crudest examples. On a few, half of the head is smooth and painted red.

The function of these figurines is uncertain. The most common explanation is that they form part of a fertility cult. However, observations made by Gerardo and Alicia Reichel-Dolmatoff on several Indian tribes of Colombia suggest another possibility:

One of the main elements in many shamanistic practices of the modern Chocó, Chami, Emberá, and Cuna Indians of Colombia consists in the use of certain small human figurines. These figurines are made by the shaman, generally of balsa wood, and are carefully painted with vegetable dyes, after which the shaman introduces into them a benevolent spirit. As soon as the figurine has thus been imbued with this power, it becomes a sacred object and is used above all in ceremonies connected with the curing of disease. During these ceremonies at least two anthropomorphic figurines are placed next to the sick person, and it is understood that they act as the shaman’s helpers while he tries to cure the patient.

As soon as the curing ceremony is over the figurines lose all their sacredness and practically no value is attached to them. Often they are discarded immediately, but sometimes they are kept around the house, maybe in a basket, an old box or simply stuck in rows under the thatching of the roof. Broken and discarded specimens can be seen on the trash heap or in the bush near the houses. As curing ceremonials are by far the most frequent exterior expressions of tribal religion and magic, it is clear that in a single household a great many of these figurines will be used in the course of a year, only to be discarded once the ritual is over.

We are inclined to believe that the anthropomorphic clay figurines of certain prehistoric cultures might have had a similar or identical function, which would explai
Valdivia continued

their frequent occurrence in midden sites.” (Personal communication, May 20, 1957.)

The Valdivia culture has been identified as belonging to the Formative horizon because of ceramic features it shares with Formative cultures of known antiquity in Middle America and Peru. To make a valid comparison, it is necessary to distinguish the initial characteristics of the Valdivia culture.

Stratigraphy indicates that the Valdivia culture can be divided into early and late manifestations. In the early period, the predominant plain ware has coarse temper, and decoration is limited to broad-line incision on polished surfaces, incision on unpolished surfaces, and a type of finger-punching to produce a row of small bumps on the exterior. Plain or polished, red-slipped tetrapod bowls are also characteristic of the early period. At a later time, several additional types of decoration appear. These include excision, punctation, brushing, appliqué fillets and pebble polishing giving a ripply effect. Rocker-stamping occurs in the late period, but the sample is too small to permit the conclusion that it is absent earlier.

The early Valdivia complex most closely resembles Guanape, the earliest Formative culture on the North Coast of Peru. Carbon 14 dating gives Early Guanape an antiquity of 4300 ± 200 years (shell sample L-122D), or 3100 ± 200 years (carbon sample L-122C). In Colombia the comparable wares come from a shell midden called Barlovento on the Caribbean coast near Cartagena, for which Carbon 14 dates are not yet available. Not far away in Central America the site of Monagrillo (see Archaeology 5 [1952] 173-181), on the Pacific coast of Panama, presents a series of features that have parallels in the early Valdivia complex. These include almost exclusive dependence upon the sea for food, a series of crude stone tools, and a ceramic complex similar in paste characteristics, vessel and rim forms, and decorative technique and motifs. There is no Carbon 14 date for the early culture at Monagrillo.

Jumping into Middle America, we find broad-line incision and polished red-slipped tetrapod bowls among the pottery at Early Formative sites. Excision, characteristic of the later part of the Valdivia sequence, has never been reported from Formative sites in Peru, but occurs in Colombia, Panama and Middle America, and is one of the characteristics of the Tlatilco culture of the Valley of Mexico. Carbon 14 dating from the Tlatilco site is not very satisfactory because charcoal samples collected from various burials and different depths representing the Early to Middle Archaic period were lumped together as sample C-199. This material gave a date of 3407 ± 250 years ago.

There was not sufficient charcoal for dating in any level of the Valdivia site, but tests were made on uneroded shell of a single species from three different levels. The earliest sample (W-631) from Cut A (Level 4.00-4.20 m.) dates 4450 ± 200 years ago, which is the beginning of the Valdivia culture. The next dated sample (W-632) from Cut A (Level 1.20-1.40 m.) is 4190 ± 200 years ago, and the third sample—which by pottery type analysis should be slightly later—is from Cut H (Level 1.30-1.40 m.) and dates 4050 ± 200 years ago.

These dates equate well with the shell dates from Guanape, and tend to substantiate the stratigraphic identification of Valdivia as the earliest pottery-making culture on the coast of Ecuador, possessing a complex of traits characteristic of the Early Formative period in Middle America, Colombia and Peru. Its discovery adds one more stepping stone to the reconstruction of the early paths of migration and diffusion between Middle and South America.

Bodies of some of the figurines.