



# Ecuador:

## Following an Unusual Archaeological Hypothesis

A. V. TABAREV, J. G. MARCOS, A. N. POPOV



The map of the Ecuador Pacific coast with the Valdivia and Real Alto sites

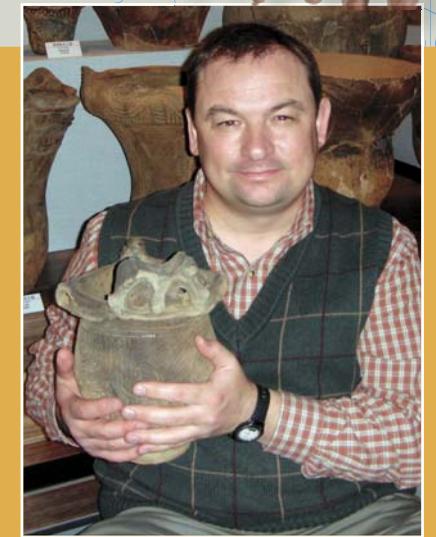
*Key words:* Ecuador, Valdivia, Jomon, Real Alto, pottery



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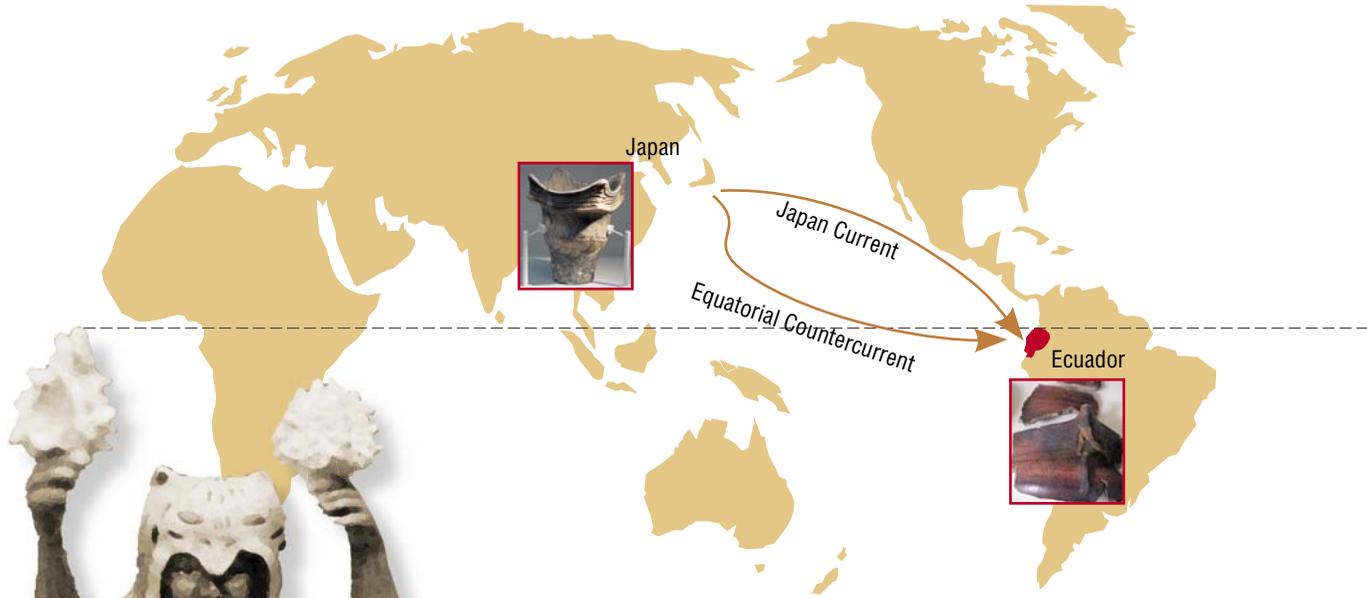
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Over half a century ago, the Ecuadorian archaeologist Emilio Estrada and his American colleagues proposed a bold hypothesis on "foreign" roots of the local ceramic technology; they based their ideas on the studies of Valdivia pottery discovered in the coastal part of Ecuador. It was supposed that the bearers of this culture had made a trans-Pacific journey from the Japanese archipelago to South America. The hypothesis split the scientific community into its violent opponents and its supporters, and has been a topic of active discussion for several decades. The authors of this paper directly participate in the archaeological research aiming to solve the riddle of the origin of pottery in the New World



According to Emilio Estrada's hypothesis, the bearers of Jomon culture crossed the ocean from the Japanese archipelago to the Ecuadorian coast (Estrada, 1961)

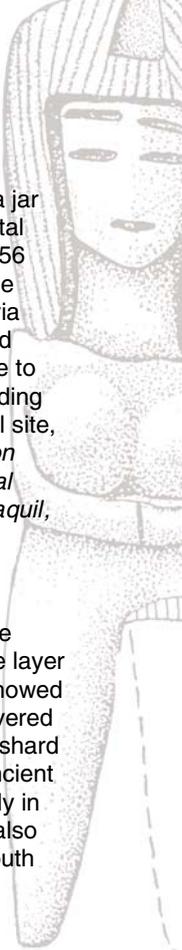
The coast of Ecuador remained a white spot on the archaeological map of South America until the mid-1940s. The pioneer studies by J. Jijon y Caamano, M. Ulle, M. Saville, J. Bushnell, and other archaeologists, conducted in the 1910s–1930s, just lifted the veil of mystery over the ancient cultures of the region.

A new stage of the search for and interpretation of archaeological data started in Ecuador largely thanks to the activities of Thor Heyerdahl, the famous researcher and traveler. In 1946–1947, Heyerdahl was constructing the Kon-Tiki raft of balsa wood in the Ecuadorian city of Guayaquil for his first experimental voyage across the Pacific Ocean, which was to verify his ideas of transoceanic voyages in ancient times. Servicemen, representatives of local administration, and businessmen were involved in the search for construction materials for the raft, its transportation, design, and tests. One of the businessmen was Emilio Estrada Icasa, who became a key person in the developing of the Jomon–Valdivia hypothesis.



The shard of a jar found in Coastal Ecuador in 1956 gave rise to the Jomon–Valdivia hypothesis and gave the name to the corresponding archaeological site, Valdivia. Simon Bolivar Cultural Center, Guayaquil, Ecuador

Radiocarbon analyses of the shells from the layer with pottery showed that the discovered artifact was a shard of the most ancient pottery not only in Ecuador, but also throughout South America





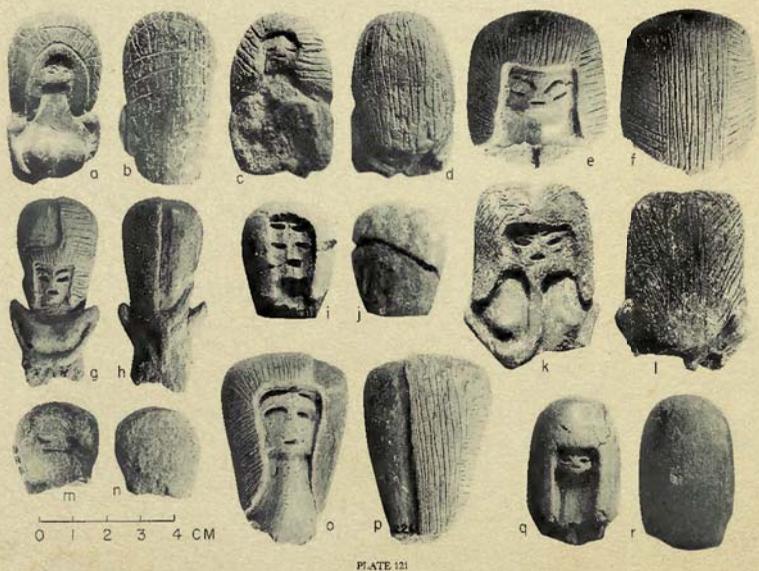
The key player in creating the Valdivia–Jomon hypothesis was Emilio Estrada Icasa (in the center), an Ecuadorian businessman and amateur archaeologist. B. J. Meggers and C. Evans, a married couple, became his “comrades-in-arms”

In the papers on Valdivia culture, Estrada is referred to as an Ecuadorian archaeologist. In fact, Estrada, a rich person by birth, who acquired a perfect education in economics in European and American universities, had represented General Electric in Ecuador since 1939, and was a prominent figure in many areas of social life in his country. He was fascinated by archaeology in the early 1950s and founded his own museum in 1954.

Heyerdahl’s ideas were not the only source of Estrada’s interest in archaeology: in the late 1940s–early 1950s, transoceanic voyages were a popular topic for discussion

both in the scientific community and in popular science publications. In particular, the comprehensive exhibition devoted to the parallels between the ancient cultures of the Old World and the New World, organized by the American Museum of Natural History, went through to a full house; several subject collections on transoceanic voyages were published.

In the fall of 1953, Estrada went to the United States, where he visited the Smithsonian Institution and got acquainted with a married couple of American archaeologists, B. Meggers and C. Evans; he consulted them about



Figurines of Valdivia culture that demonstrate different styles of hairdressing. B.J. Meggers, C. Evans, and E. Estrada, *Early Formative Period of Coastal Ecuador: The Valdivia and Machalilla Phases*, Washington: Smithsonian Institution, 1965

## Early Formative Period of Coastal Ecuador:

THE VALDIVIA AND MACHALILLA PHASES

Betty J. Meggers, Clifford Evans, and Emilio Estrada

SMITHSONIAN INSTITUTION  
Washington 1965

Title page of the monograph *Early Formative Period of Coastal Ecuador: The Valdivia and Machalilla Phases* by B. J. Meggers, C. Evans, and E. Estrada, published by the Smithsonian Institution in 1965



Jomon Valdivia

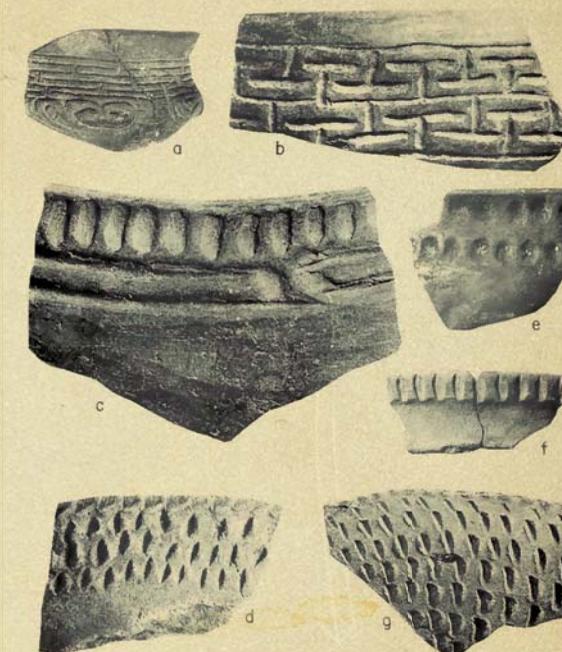


PLATE 170



PLATE 161

Decoration patterns on the shards of Jomon and Valdivia pottery have much in common. B. J. Meggers, C. Evans, and E. Estrada, *Early Formative Period of Coastal Ecuador: The Valdivia and Machalilla Phases*, Washington: Smithsonian Institution, 1965



Below: Valdivia pottery, early period.  
Photo by the courtesy of A. Popov.

Left: Jomon pottery. The jar shapes are characteristic of Valdivia culture.

B. J. Meggers, C. Evans, and E. Estrada, *Early Formative Period of Coastal Ecuador: The Valdivia and Machalilla Phases*, Washington: Smithsonian Institution, 1965



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the prospects of Ecuadorian archaeology. Apparently, it was this meeting that made him start archaeological excavations in the coastal areas of Ecuador to search for the evidence of existence of the most ancient ceramic cultures of the so-called “formative period.”

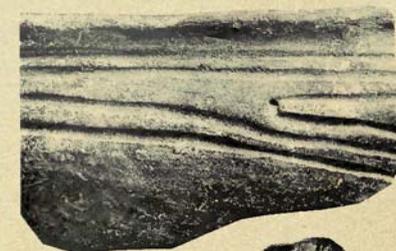
This acquaintance appeared to be a seminal event for the American scientists as well. At the time they met Estrada, Meggers was only 32 years old, and her husband was a year older. They already had broad experience in archaeological research in North and South Americas and were ready for new projects.

Thus, the search for early cultures on the coast of Ecuador began. An important milestone took place in 1956, when F. Martinez, who worked for Estrada, discovered a many-layer archaeological site with earlier unknown pottery in a small fishing village called Valdivia. In 1957–1961, Meggers and Evans thoroughly examined the site. The radiocarbon dating of the shells from the layer with pottery helped to determine the age of Valdivia culture as 4,500–4,000 years old, which meant that they had found the most ancient pottery not only in Ecuador, but also throughout South America.

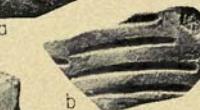
Patterns imitating “waves” are characteristic of both Valdivia and Jomon cultures.

Below: Shards of Valdivia culture (Simon Bolivar Culture Center, Guayaquil, Ecuador);

right: shards of Jomon pottery. B. J. Meggers, C. Evans, and E. Estrada, *Early Formative Period of Coastal Ecuador: The Valdivia and Machalilla Phases*, Washington: Smithsonian Institution, 1965



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PLATE 150





### The birth of legend

Each significant discovery in archaeology necessarily entails a multitude of questions. Valdivia culture was no exception. The main question concerned the origin of the culture, namely, whether it was local or imported. And if imported, was it from Peru or from Mexico? Estrada's interpretation was completely unexpected: he suggested that the source of the unknown Ecuadorian culture was the Japanese archipelago and its Jomon culture.

Strictly speaking, the opinion about the similarity and possible genetic affinity between the ceramic complexes of the Japanese archipelago and Pre-Columbian America had

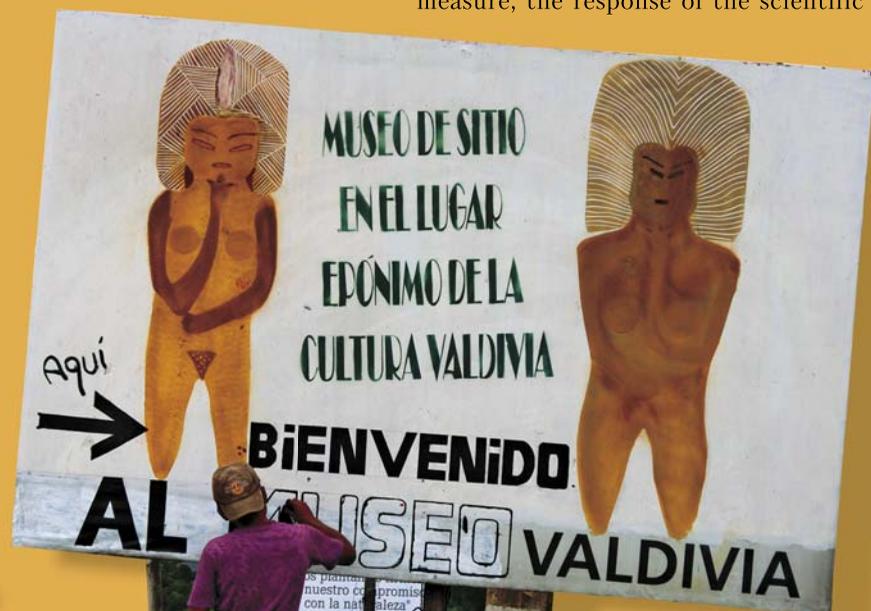
Castellated rims of jars are one of the similar elements in Japanese Jomon and Ecuadorian Valdivia cultures. Above and right: Early Jomon jars from Kyushu Island, Kagoshima Museum, Japan.

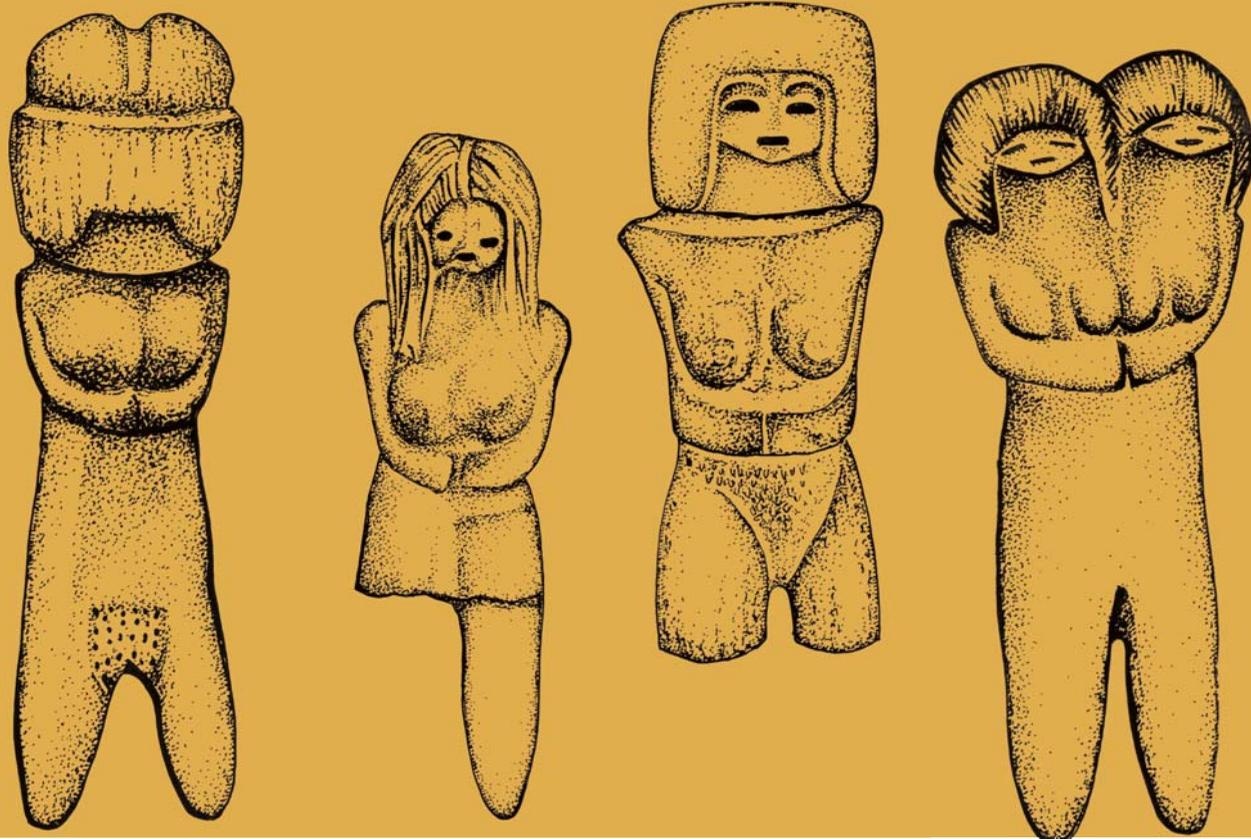
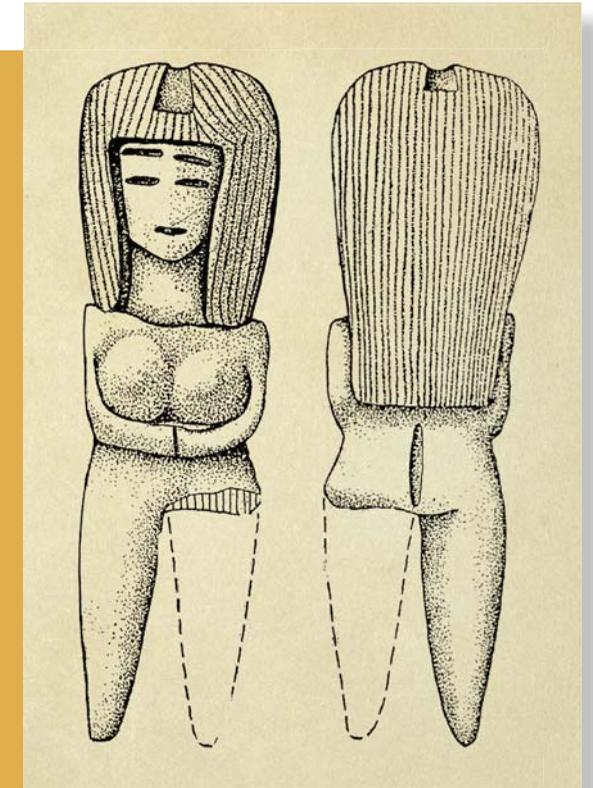
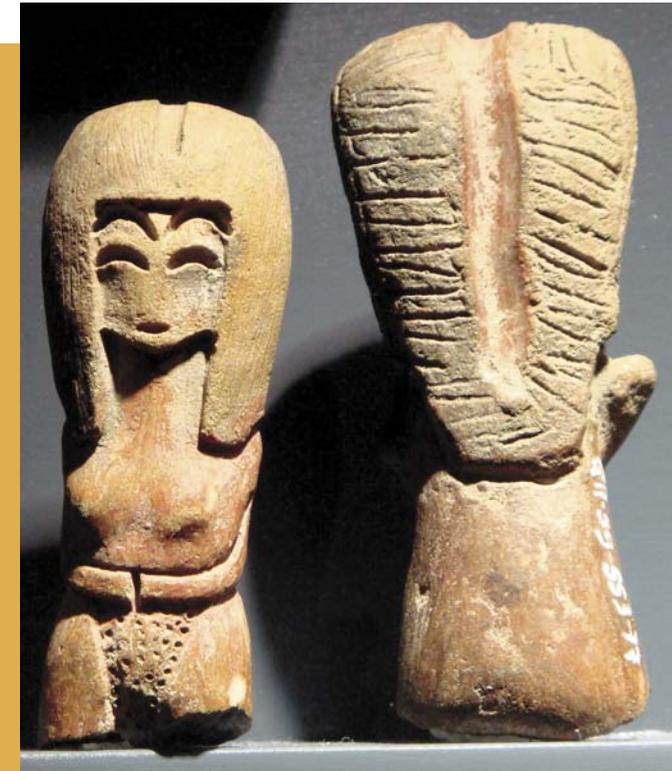
Photo by the courtesy of A. Popov  
Left bottom: A ceramic shard from the Valdivia archaeological site. Simon Bolivar Culture Center, Guayaquil, Ecuador

been proposed and discussed some time earlier. For example, such a hypothesis was formulated in the presentation given by I. Yawata, a Japanese archaeologist, at the 31st International Congress of Americanists in Sao Paulo (Brazil) in 1954. However, Estrada was the first who associated Jomon ceramics with South America.

According to the published and oral sources, the jar shards with an unusual rim that were found on the Valdivia site stimulated the formulation of the hypothesis. Later Meggers and Evans elaborated a comprehensive typology of the Valdivia pottery, which was based on the technique of laying ornament on pottery, on the rim profile, and on jar shapes. Estrada saw the analogies to Japanese Jomon pottery in the shards belonging to the Valdivia Red Incised ornament type and to the Castellated rim type. In this rim, four symmetrically arranged indentations attracted the attention of the researcher.

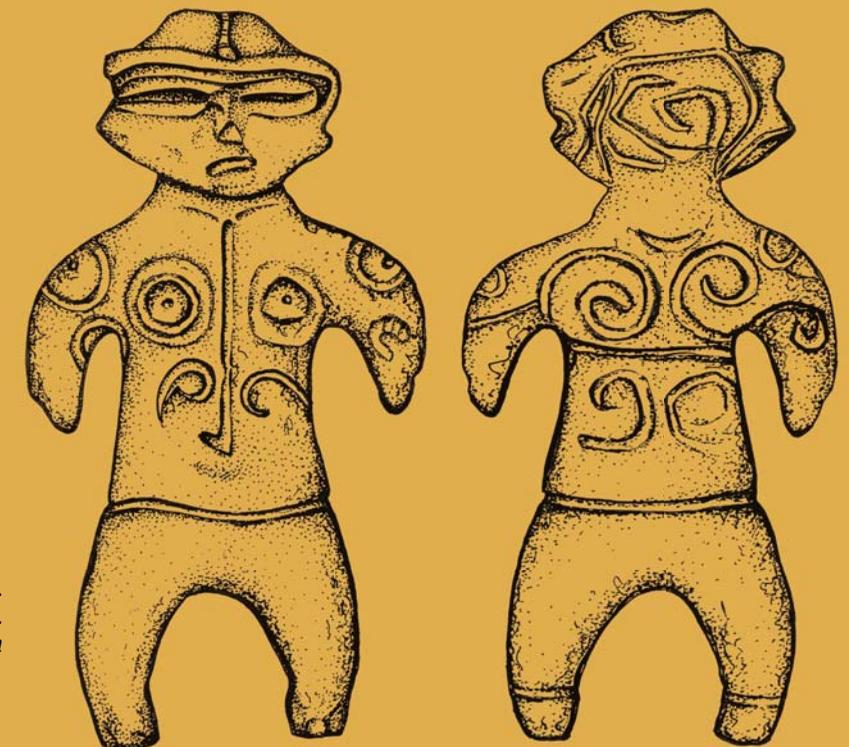
Unfortunately, Estrada was never to know, in full measure, the response of the scientific community to



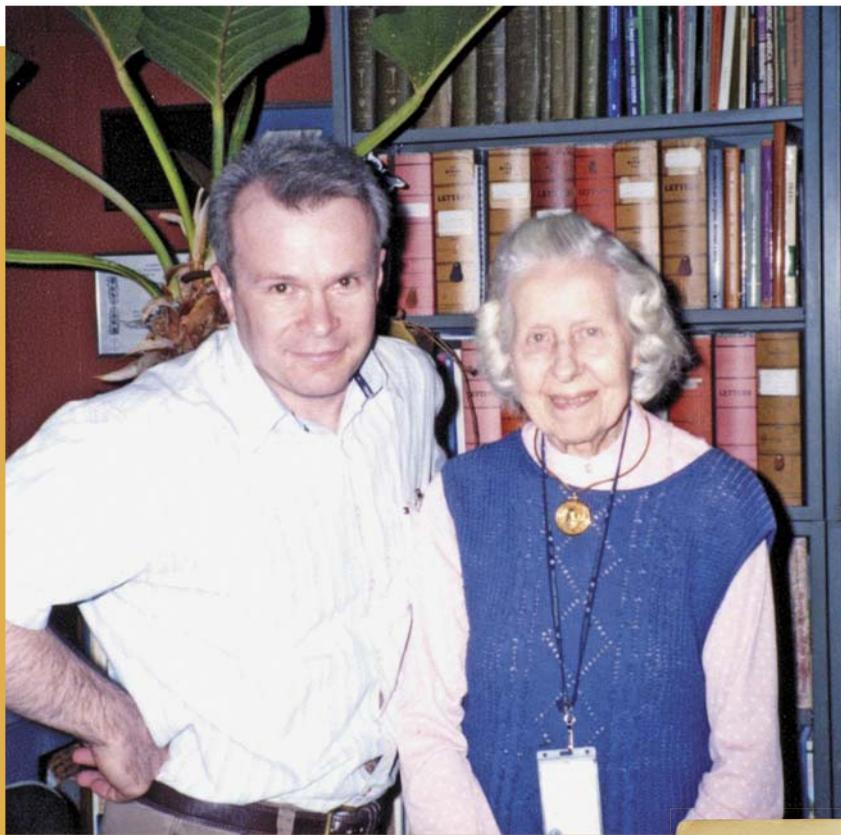


Clay female figures are one of major similar traits in Jomon and Valdivia cultures. They are referred to as dogu in Japan and Valdivia Venuses in Ecuador.

*Photo:* Ceramic figures discovered on the Valdivia archaeological site. *Above and left:* Valdivia Venuses. *Simon Bolivar Culture Center, Guayaquil, Ecuador*  
*Photo by the courtesy of A. Tabarev*  
*Drawing by Yu. Tabareva*



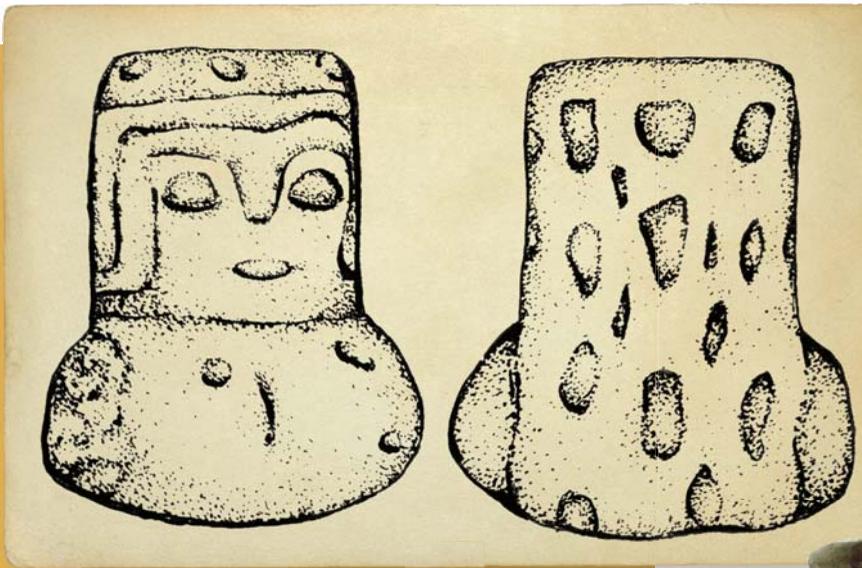
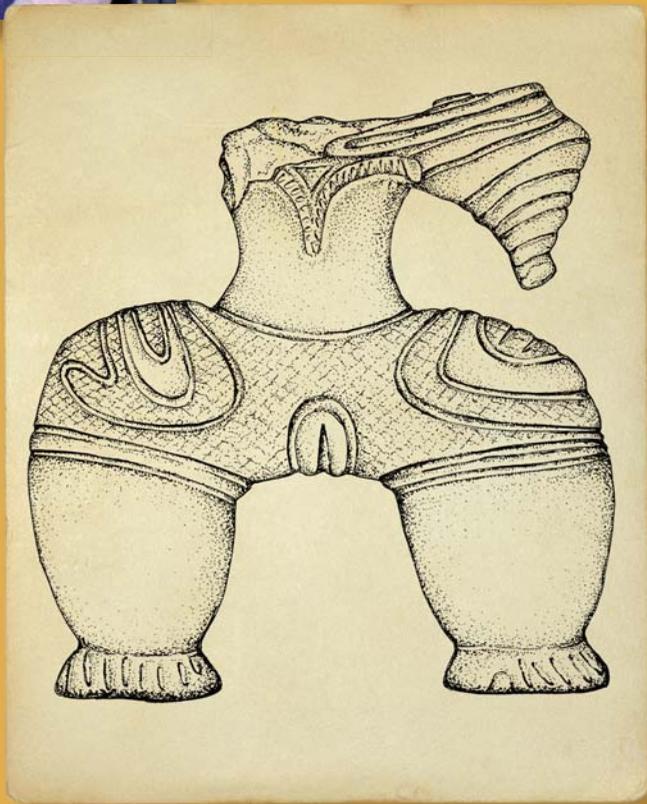
*Dogu* clay female figures. *Tohoku University, Sendai, Japan.*  
*Drawing by Yu. Tabareva*



After her companions passed away, B. Meggers, for over 30 years and almost alone, continued to defend the hypothesis on the association of Jomon and Valdivia.  
*Photo by the courtesy of A. Tabarev*

Below you will find the key points of the hypothesis.  
 The most ancient New World pottery, dating back to five thousand years ago, appeared in Coastal Ecuador in pre-farming Valdivia culture. This was already a well-developed technology permitting the fabrication of pots of different shapes and with intricate decoration.  
 Some ornamental styles found on the pots from the Valdivia archaeological site have no prototypes or close analogs in the New World but display an amazing similarity to the Jomon

his hypothesis: on November 19, 1961, he suddenly died, at the age of 45. He passed away at the peak of his political, public and scientific career, full of archaeological plans for a large-scale expedition to the coastal regions in the Manabí and Esmeraldas Provinces. The obituary written by Meggers and published in *American Antiquity* said that when Estrada started his archaeological activities in 1953, the coast of Ecuador was one of the most obscure regions in the New World. By 1961, it had become one of the most famous.  
 This was an extremely important moment for the developing of the Jomon–Valdivia hypothesis. Meggers and Evans could have distanced themselves from promoting the “Japanese trace” further, but they continued to actively develop Estrada’s hypothesis. To get more arguments for the hypothesis, in the spring of 1963 they went to Japan to get acquainted with the collections of Jomon items. The American researchers succeeded in seeing numerous objects belonging to different Jomon periods (nine collections in Honshu Island and twelve collections in Kyushu); they also visited several excavated settlements near Tokyo.  
 This trip strengthened their confidence in Estrada’s hypothesis. On their return, they announced additional arguments in favor of the Jomon–Valdivia hypothesis, giving international presentations and publishing papers.



A fragment of a ceramic figurine wrapped in a jaguar pelt. *Drawing by Yu. Tabareva. Simon Bolivar Culture Center, Guayaquil, Ecuador*

ceramics from Honshu and Kyushu islands. For example, the castellated rims of jars were observed only in the earliest Valdivia layers, while an analogous motif was abundant in the Honshu and Kyushu Jomon items seven to five thousand years ago. Another important element suggesting a similarity between these cultures is numerous female figures which are referred to as “Valdivia Venuses” in Ecuador and “dogu” figurines in Japanese Jomon.  
 Such a coincidence cannot be accidental: the pottery technology was introduced to South America by the Jomon culture bearers as a result of their transoceanic voyage. The most favorable time for crossing the Pacific (between 40° and 55° N) is October–November, since the helping

The similarity between the Ecuadorian and Japanese clay female figures catches one’s eye.  
*Right: a figure of Chorrera culture, Ecuador. Simon Bolivar Culture Center, Guayaquil, Ecuador. Photo by the courtesy of A. Tabarev. Left: A dogu of late Jomon from Honshu Island. Tohoku University, Sendai, Japan. Drawing by Yu. Tabareva*

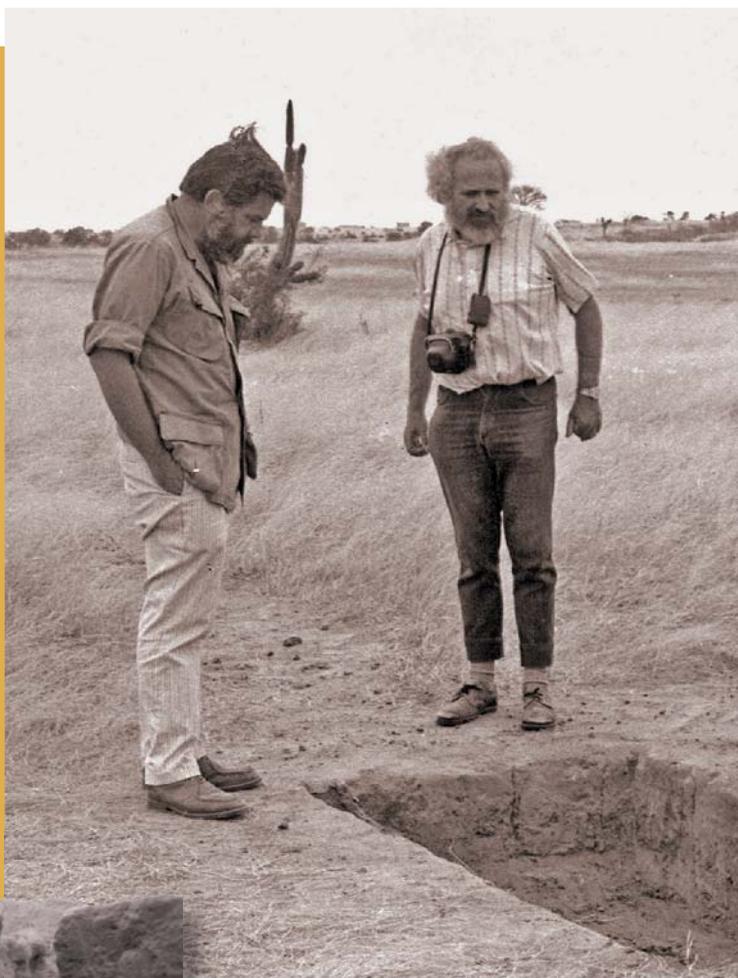


currents and winds allow the boats to build up a speed of 24–34 miles per hour and reach the opposite coast in several months. The Pacific currents could bring Jomon fishermen's boats from the region of Kyushu to the coast of South America.

### Ecuadorian counterarguments

The Jomon–Valdivia hypothesis caused a sensation: papers, broadcasts, and interviews with the authors were published by the well known journals and newspapers, such as *Time* (1961), *Newsweek* (1962), *The Evening Star* (1962), *The New York Times* (1966), and *Scientific American* (1966); it acquired numerous supporters and furious opponents.

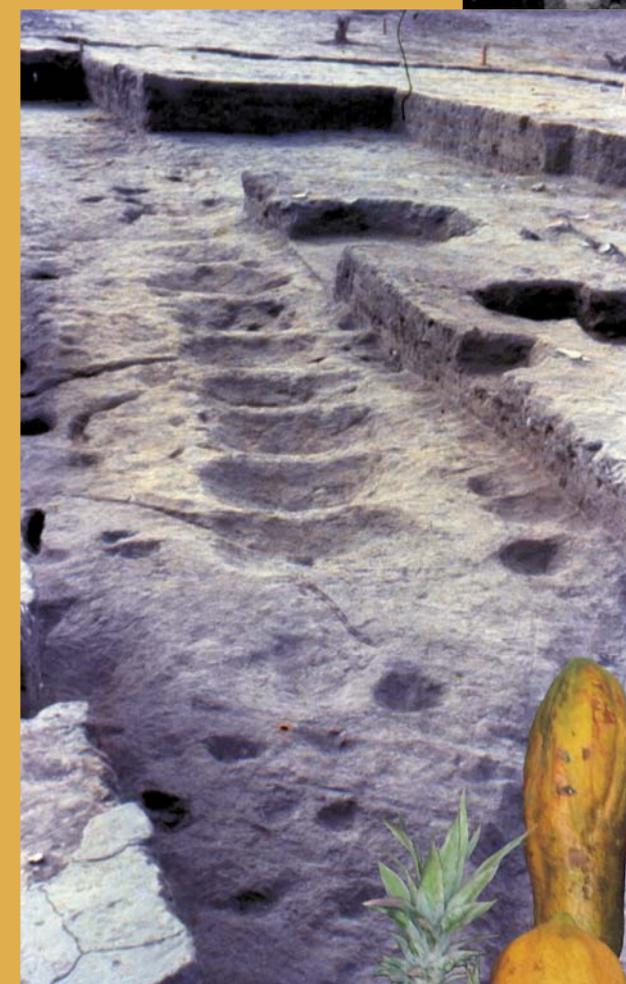
New discoveries resulting from archaeological excavations in Coastal Ecuador in the 1970s–1980s intensified the interest in the origin of pottery in South America. First, archaeologists discovered the traces of an even more ancient culture, Las Vegas, on the Santa Elena Peninsula. Its bearers lived off hunting, foraging, and fishing and did not know any pottery. According to the radiocarbon analysis, this culture dates back to 10.0–6.6 thousand years ago.



The beginning of archaeological studies on the Real Alto site: the first pit.  
*Photo by the courtesy of J. Marcos*

Stratigraphic cross-section on the Real Alto archaeological site. The layer of shells that covers the most ancient occupation horizon of this archaeological site is clearly visible.  
*Photo by the courtesy of J. Marcos*

On the Real Alto archaeological site, not only the remains of huts (left), but also the remains of ritual facilities with mounds and steps (right) were excavated.  
*Photo by the courtesy of J. Marcos*



the evolution of the site from a small settlement of several simple huts to a large center for ceremonies, with a plaza for rites, with mounds, and with burial places for the local elite. It was convincingly demonstrated that this was an early farming civilization. Besides, it is of paramount importance that the inhabited horizons discovered in Real Alto date back to 6.0–5.5 thousand years ago, i.e. they are much older than Valdivia culture. Pottery was also discovered there; however, it did not display any evident similarity to Japanese Jomon ceramics.



Second, new Valdivia sites were discovered and studied. In 1971, one of the authors (J. Marcos) discovered the Real Alto site in the Santa Elena Peninsula; the discovery considerably changed the views on the origin and character of this culture. The excavations made it possible to trace



A museum with buildings for expositions was constructed on the Real Alto site; laboratory facilities were also built there. Photo by the courtesy of A. Tabarev

According to the discoverer of Real Alto, Valdivia culture appeared in the continental part of Ecuador and later spread to the coasts. The pottery technology emerged there independently of external impacts, the earliest ceramic pots imitating wicker containers or pumpkin pots.

Thus, the chronological gap between Las Vegas and Valdivia cultures shortened to some 600–500 years, which means that the traces of the earliest pottery should be searched for in this time span.

Nonetheless, for more than 30 years Meggers, practically alone (Evans died in 1981), continued to defend the hypothesis on the association between Jomon and Valdivia cultures, indicating inaccurate datings, providing new examples of similarity in pottery decoration, and giving examples of successful transoceanic voyages.

Examining the Real Alto site seems to be the most promising way to resolve the lingering discussion: actually, in the 1970s archaeologists excavated only 5% of the Real Alto site area. Moreover, there are places here where the occupation layer is the thickest. A museum has been constructed on the Real Alto site; there are also buildings for expositions, laboratories, and even accommodation facilities. All this made Real Alto a perfect site for archaeological expeditions. It only required a new project and a willing research team – in fact, things began to move in 2010–2013.

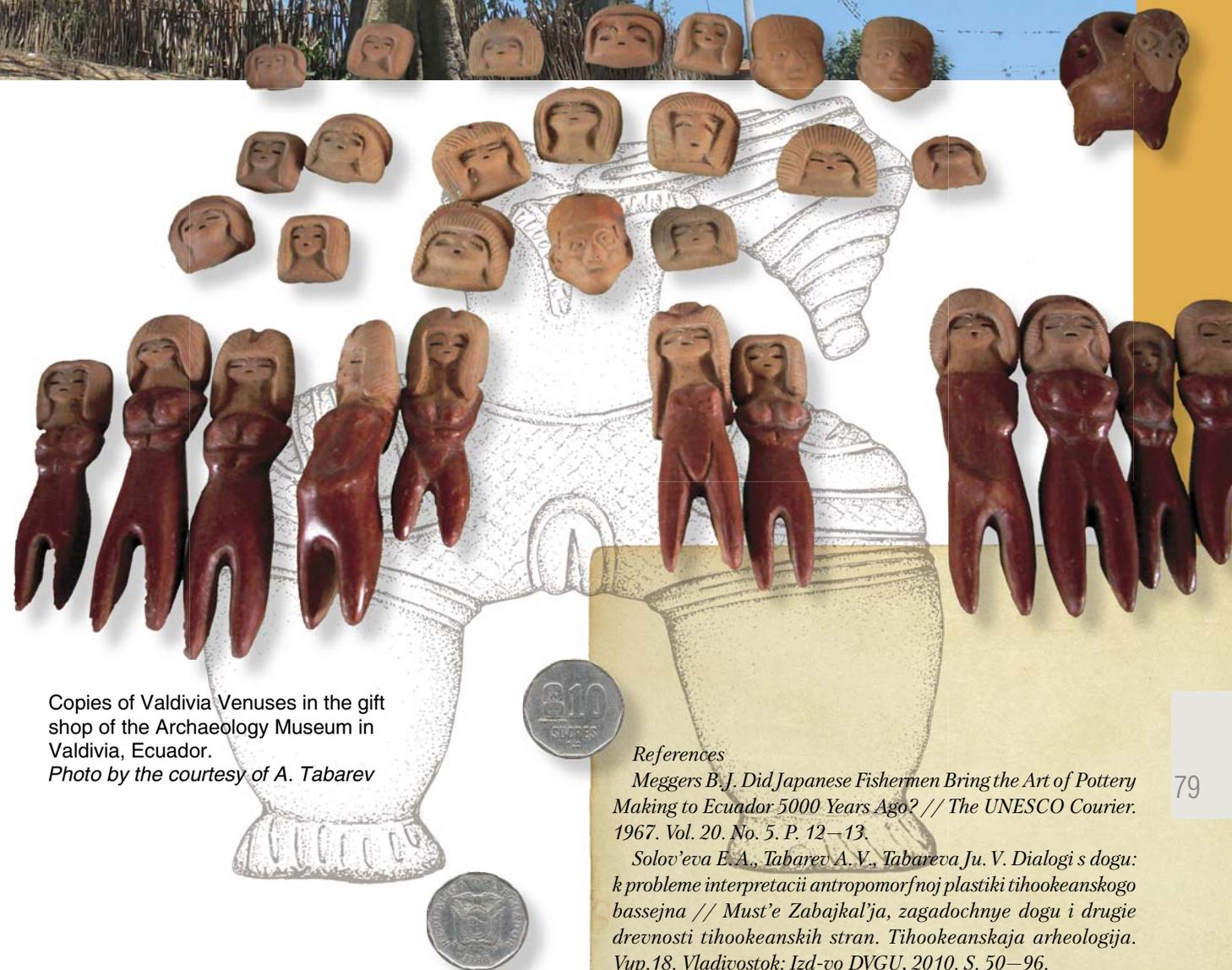
The core of the new team, whose aim is to study the Real Alto site, includes Russian researchers—the authors of this paper. A.V. Tabarev, a Novosibirsk archaeologist, has been interested in the Jomon–Valdivia hypothesis since the early 1990s. He met with Meggers several times and actively corresponded with her until her death in 2012.

He examined the archaeological collections of Valdivia and Las Vegas objects in the United States, Canada, and Ecuador. A.N. Popov, a scientist from Vladivostok, examined a huge number of Jomon ceramic items in the museums and science centers in Japan; he also studied the ancient cultures of the Pacific region while being on probation at the Research Institute for Humanity and Nature (Kyoto, Japan) and at the University of California (Berkeley, the United States).

In 2010, the future partners met Jorge Marcos, the discoverer of the Real Alto, in Ecuador; actually, it was the first visit of Russian archaeologists to that country. Over the next three years, Marcos got the government's support and succeeded in restoring the master's program for training professional archaeologists at the Littoral Polytechnic Institute (Guayaquil, Ecuador); the program includes archaeological field practice. As for Russian archaeologists, they gained support of Russian research foundations and recruited experts in paleogeography, paleomagnetic survey, and in other fields of knowledge.

At the end of November 2013, Russian archaeologists visited Ecuador again. The official meeting of the experts from various departments with Russian officials of the consulate in Ecuador, as well as with the representatives of the Indian community that owns the Real Alto site took place in the Littoral Polytechnic Institute. The first Russian–Ecuadorian archaeological project was highly commended by the participants.

A new stage of excavations on the Real Alto site is planned for September 2014. Who knows, this may bring to an end the long-term hot discussion.



Copies of Valdivia Venuses in the gift shop of the Archaeology Museum in Valdivia, Ecuador. Photo by the courtesy of A. Tabarev

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