A View from the Andes: Prehispanic Settlement Patterns and Absolute Chronology of the Culebras Valley, North Coast of Peru

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Since 2002 the Culebras Valley has been the focus of an extensive archaeological surface survey and limited excavations in selected sites carried out by Polish and Peruvian scholars. So far, over one hundred previously unknown archaeological sites have been recorded, and tentative settlement patterns have been suggested. In this paper we will present how the application of radiocarbon measurements, widely correlated with archaeological data and new research into palaeoclimatic change, helps to reveal over 4000 years of Andean prehistory. The research is promising for achieving significant advances in the current understanding of local pre-Hispanic societies.

The Culebras Valley Archaeological Project is a long-term, international and interdisciplinary investigation that aims to shed a new light on the discussion of complex pre-Columbian societies on the North Coast of Peru. The project began in 2002 as a cooperative effort between the Center for Pre-Columbian Studies of Warsaw University and the Pontifical Catholic University of Peru at Lima under bilateral agreement between the two universities.

The Culebras Valley is situated at the southern edge of Peru’s Northern Coast, between the valleys of Casma and Huarmey. The western slopes of the Cordillera Negra are cut by two large mountain ravines: Huanchay and Cotapuquio. The streams flowing through them join their course near the Quin settlement, giving birth to the Culebras River. The Culebras Valley encompasses parts of the Huarmey, Alja, and Huaraz provinces in the Ancash Department. It is one of the smallest river valleys of the entire Peruvian coast, with a length not exceeding 40 km.

The valley itself is very narrow and closed at both extremities by steep mountain slopes with ravines rich in scree and rubble. Only in some sections, the valley opens up allowing the cultivation of plants on alluvial terraces and in alluvial soil-rich areas.

During field explorations carried out between 2002 and 2005 within the scope of the Culebras Project, the Polish-Peruvian team of archaeologists inventoried 107 sites, of which 95 were completely unknown until present. The results of these investigations are available in book form and accessible on a special website (www.culebras.org).

Of particular importance was the technological analysis of ceramics based on paste composition. The investigational macroscopic, microscopic analysis of ceramic wares in the sample comprising 4863 diagnostic fragments chosen from 20581 sherds, enabled to define 32 different technological traditions of pottery making and numerous artistic styles. It helped to identify ten periods of the Culebras sequence. 20 radiocarbon measurements of samples from reliable archaeological contexts, mainly associated with diagnostic artifacts, provide the basis of an absolute chronology.

Tentative analysis of dating results enabled to establish following time intervals of individual periods:

- Preceramic Periods
- Culebras Period
- Valley Period
- Early Horizon Period
- Middle Horizon Period
- Late Horizon Period

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Tentative analysis of dating results enabled to establish following time intervals of individual periods:

- Preceramic Periods (pre-1800 B.C.), Culebras Period (1800 - 1000 B.C.), Pantenon Period (1000 - 350 B.C.), Ampanío Period (350 B.C. - 100 A.D.), Mungo Period (100 - 400 A.D.), Quillapampa Period (400 - 700 A.D.), Molino Period (700 - 850 A.D.), Santa Rosa Period (850 - 1000 A.D.), Ten Ten Period (1000 - 1450 A.D.), Chacuas Jirca Period (1450 - 1532 A.D.). Bayesian analysis presented in the figure above takes into considerations additional archeological data from sites Quillapampa and Ten Te. It confirms obtained chronology of the Culebras Valley and refines the limits of time intervals mentioned above.

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