

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

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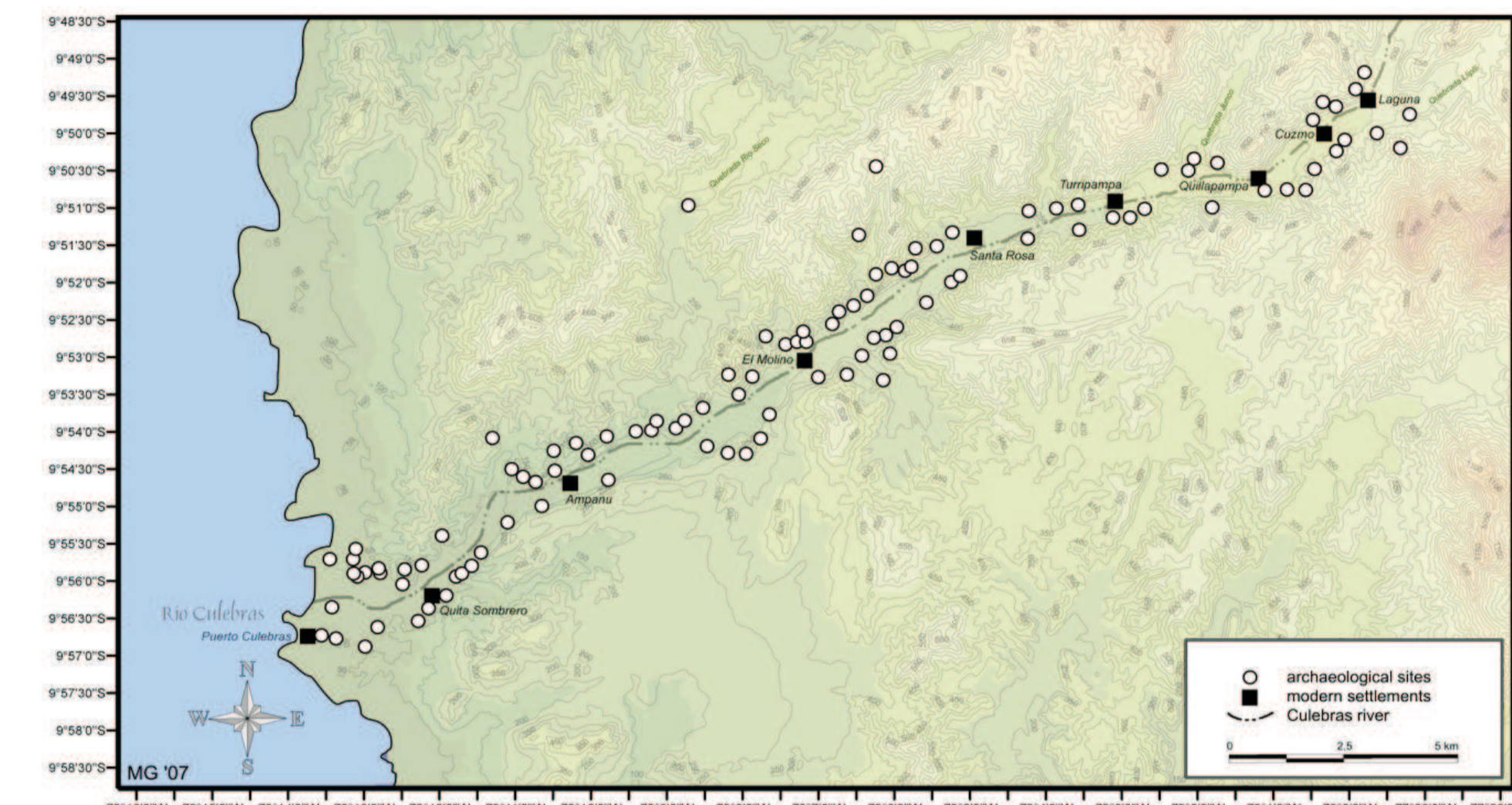
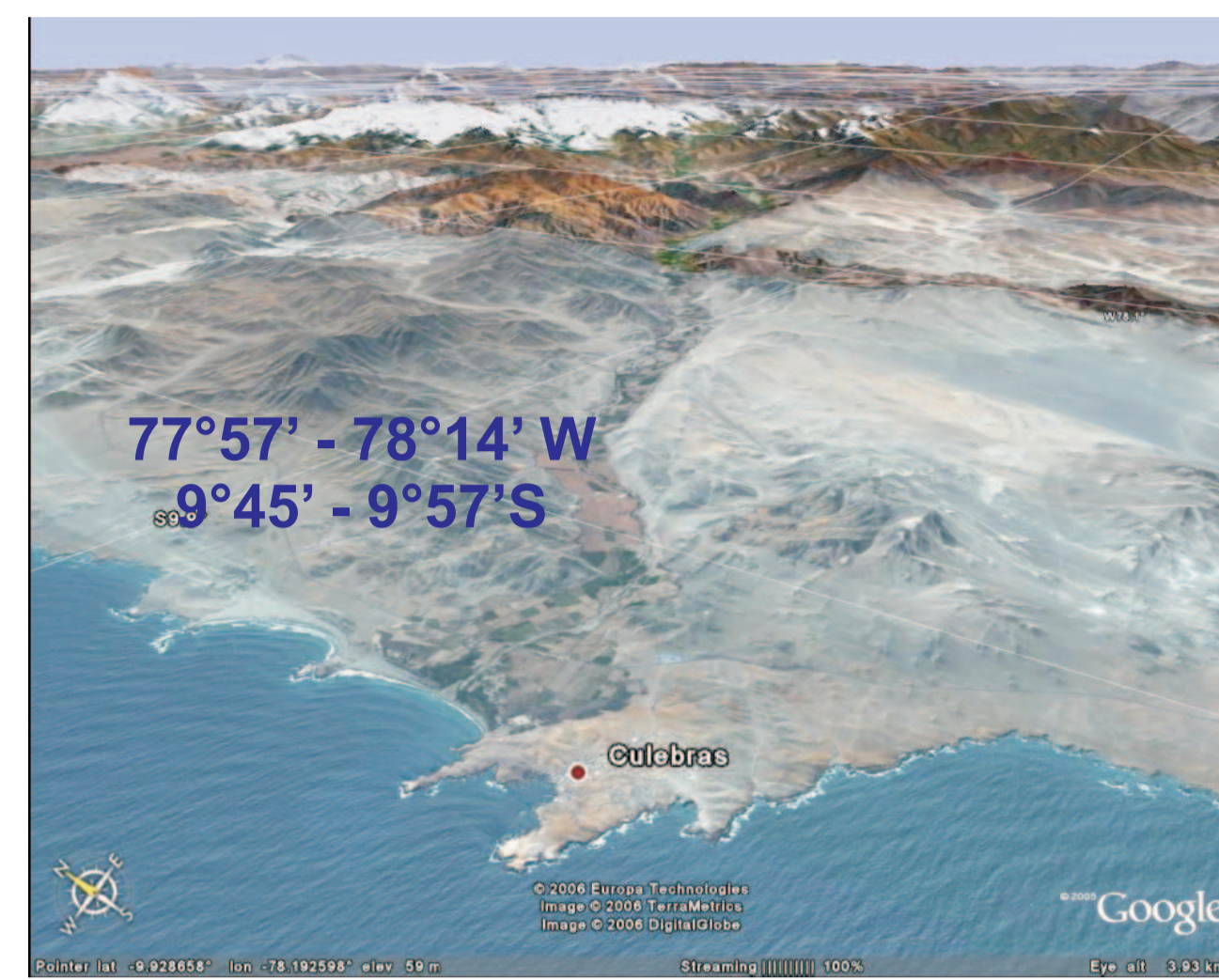
Since 2002 the Culebras Valley has been the focus of an extensive archaeological surface survey and limited excavations in selected sites carried out by Polish and Peruvian scholars. So far, over one hundred previously unknown archaeological sites have been recorded, and tentative interpretations of their chronology, functions and 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.

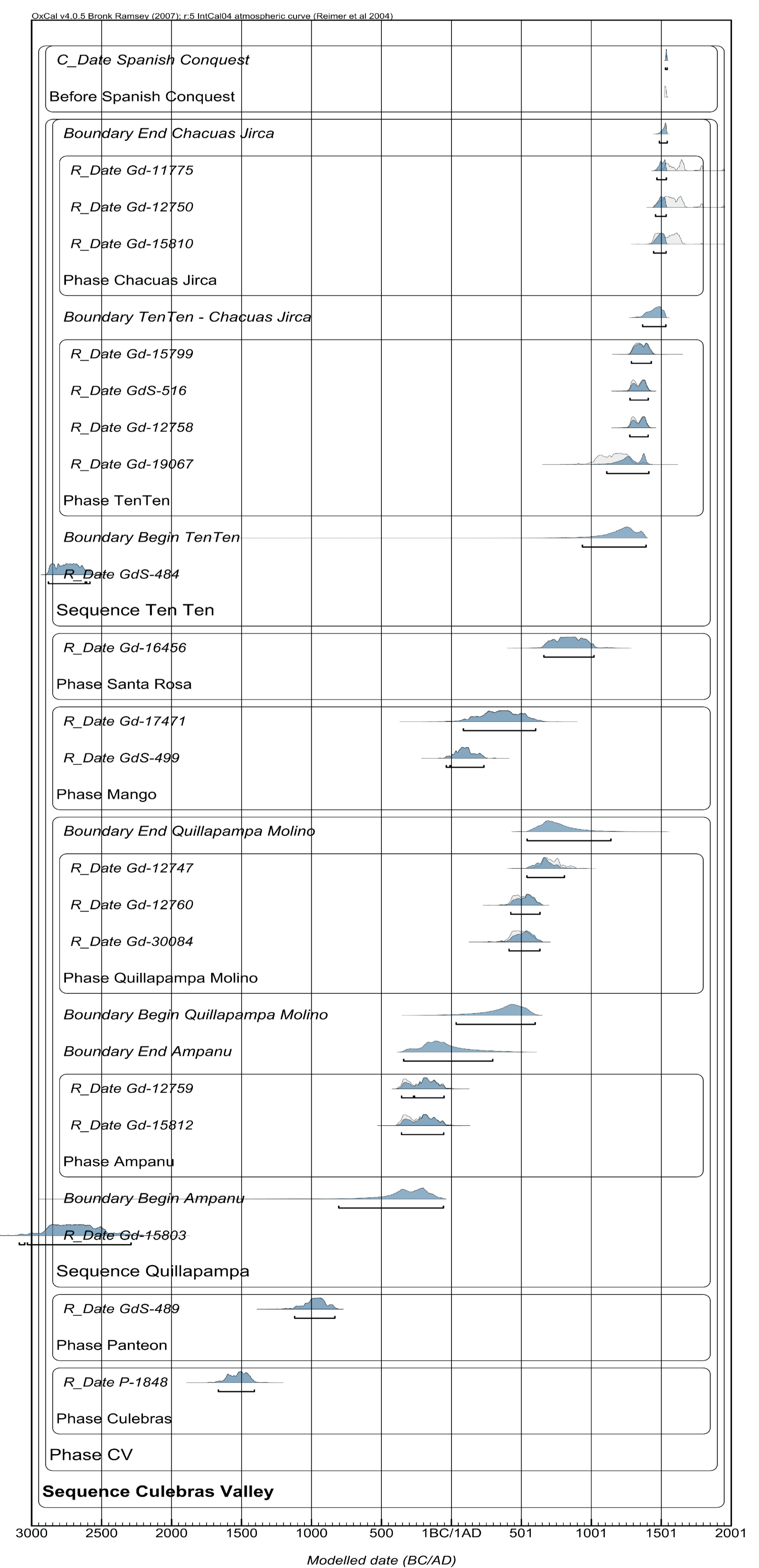
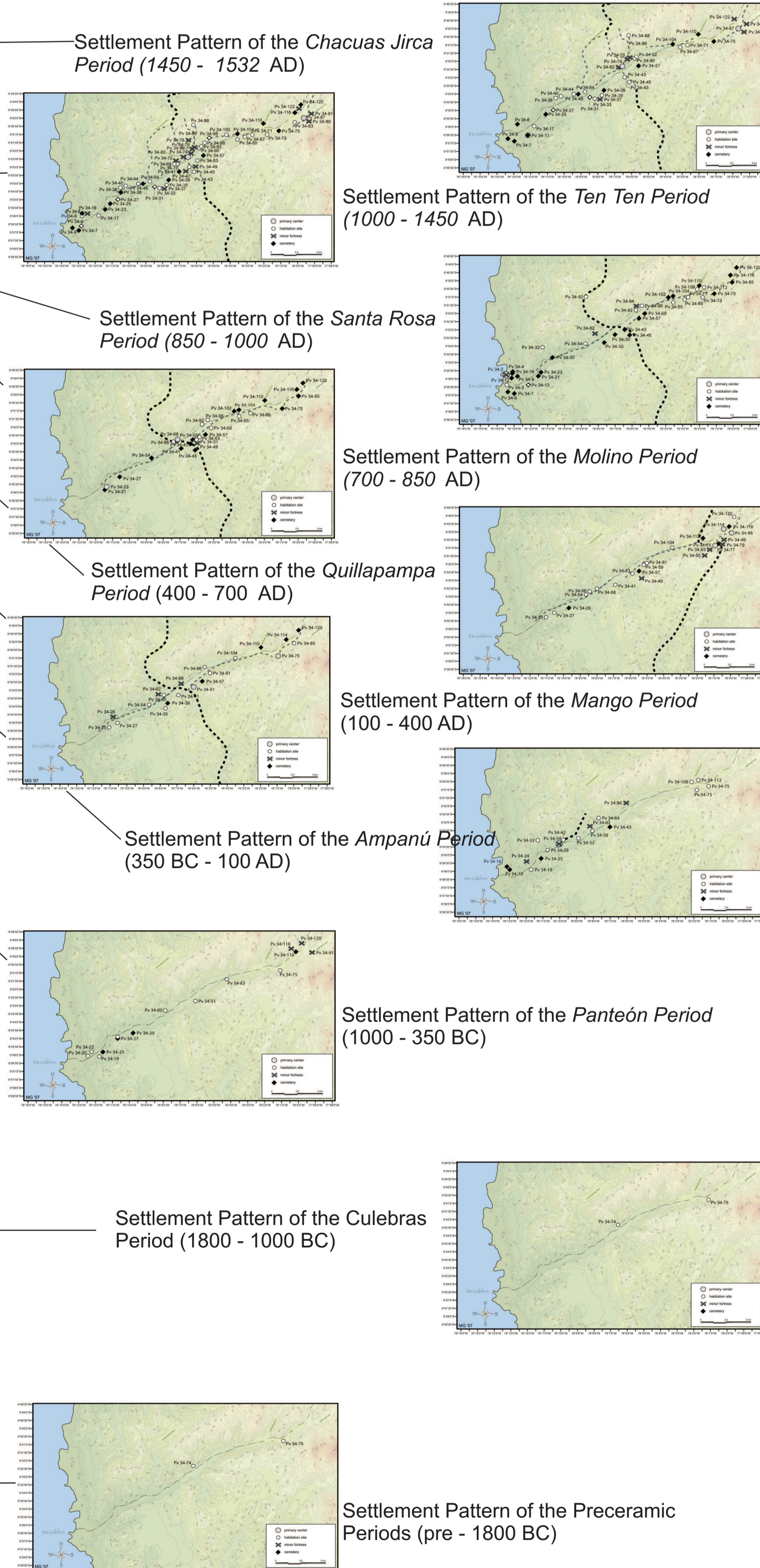
The Culebras Valley is situated at the southern edge of Peru's Northern Coast, between the valleys of Casma and Huarney. The western slopes of the Cordillera Negra are cut by two large mountain ravines: Huanchay and Cotapuquio. The streams flowing through them join their course near the Quián settlement, giving birth to the Culebras River. The Culebras Valley encompasses parts of the Huarney, Aija 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 to allow the cultivation of plants on alluvial terraces and in alluvial soil-rich areas.

The Culebras River, like most Northern Coast rivers, is periodical. Its regime is highly irregular and totally depends on the rainfall in mountains and on the El Niño phenomenon. The river flows only during five or six months of the year. Agriculture in the valley is entirely irrigation-dependent. From a hydrographic aspect, the Culebras River system extends over ca 695 km² (ONERN 1972:12). Despite its diminutive size and problems resulting from the lack of permanent access to water, the Culebras Valley was densely populated in pre-Hispanic times.



Calendar Years	The Principal Central Andean Periods	Culebras Valley Sequence	
1550	Late Horizon <i>Inca</i>	Chacuas Jirca	
1500		Late Intermediate Period <i>Chimú, Casma, Chancay</i> <i>Sican-Lambayeque</i>	Ten Ten
1450			Santa Rosa
1400			
1350	Molino		
1300			
1250	Early Intermediate Period <i>Moche, Recuay</i> <i>Virú-Gallianzo</i> <i>Vicus</i>		Quillapampa
1200		Mango	
1150			
1100		Early Horizon <i>Salinar</i> <i>Cupisnique</i>	Apanú
1050	Panteón		
1000			
950	Initial Period <i>Sechin, Moxeke</i> <i>El Paraiso</i> <i>Salinas de Chao</i> <i>Chupacigarro-Caral</i>		Culebras
900		Preceramic	
850			
800			
750			
700		Preceramic Period <i>Kotosh-Mito, Huaynuna</i> <i>Paijense</i>	
650			
600			
550			
500			
450			
400			
350			
300			
250			
200			
150			
100			
50			
0			
-50			
-100			
-150			
-200			
-250			
-300			
-350			
-400			
-450			
-500			
-550			
-600			
-650			
-700			
-750			
-800			
-850			
-900			
-950			
-1000			
-1050			
-1100			
-1150			
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-1600			
-1650			
-1700			
-1750			
-1800			
-1850			
-1900			
-1950			
-2000			
-2050			
-2100			
-2150			
-2200			



During field explorations carried out between 2002 and 2005 within the scope of the Culebras Project, the Polish-Peruvian team of archeologists 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 web site (www.culebras.mth.pl).

Of particular importance was the technological analysis of ceramics based on paste composition. The conventional macroscopic and 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* (pre-1800 B.C.), *Culebras Period* (1800 - 1000 B.C.), *Panteón Period* (1000 - 350 B.C.), *Apanú Period* (350 B.C - 100 A.D.), *Mango 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 - 1535 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.