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## The Earthen Mounds (*Cerritos*) of Southern Brazil and Uruguay



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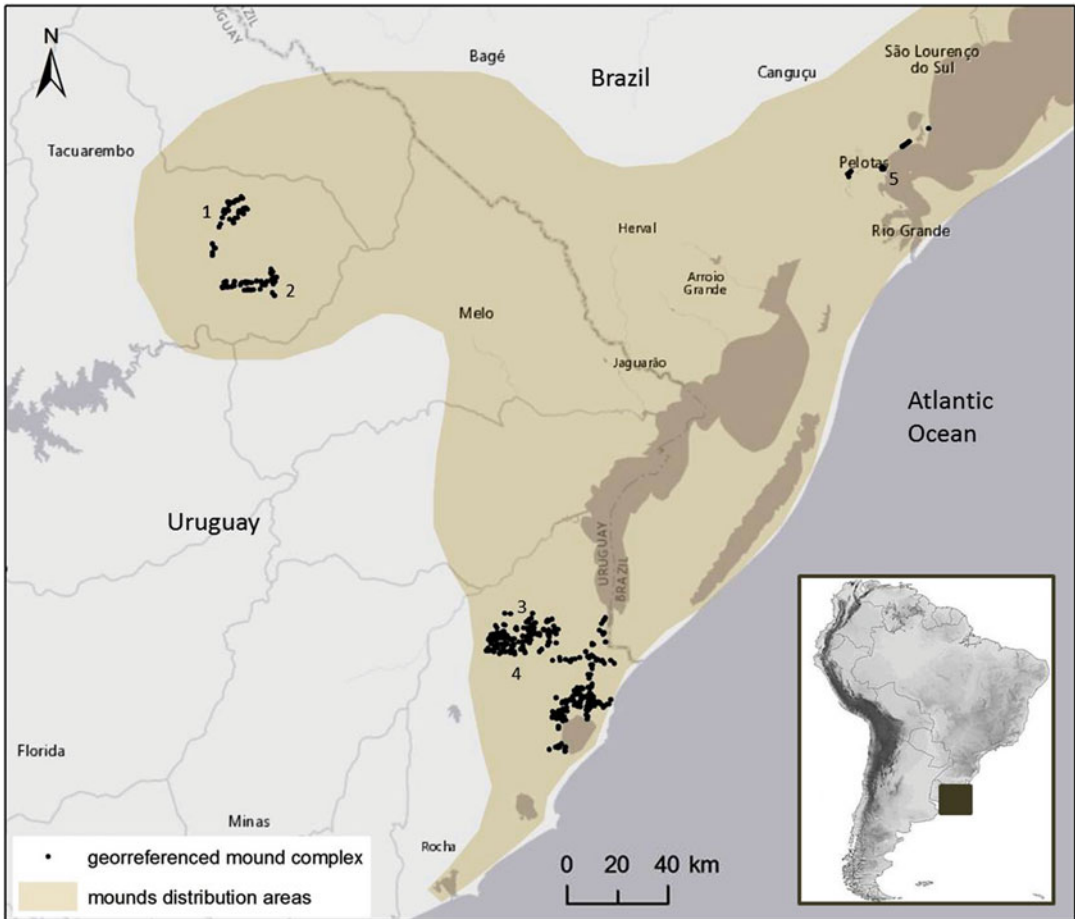
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### State of Knowledge and Current Debates

On the southernmost lowlands of South America, there are earthen mounds studied since the nineteenth century and known as “*aterros*” or “*tesos*” (in Portuguese) and “*cerritos de indios*” (in Spanish). These sites, comprised predominantly by earth, are articulated to other built structures as microreliefs (mounds with less than 30 cm in height), elongated platforms, borrow pits, tracks, pathways, and artificial lakes that compose archaeological complexes situated in flooded environments in the Pampa biome, among Uruguay, Argentina, and southern Brazil. The Pampa biome is located in the lowlands of South America among the Atlantic coast on the East, the Atlantic Forest biome on the North, the Grasslands of

Argentina on the West and South. This biome is part of the provinces of the Paraná-Paraguay basin with approximately 750,000 km<sup>2</sup>, within the South Temperate Zone, and has both subtropical and temperate climates with four well-characterized seasons. Grasslands, with sparse shrub and tree formations, are the dominant vegetation. The average temperature in the biome is 18° and the climate is warm and humid (Roesch et al. 2009). The archaeological studies have surveyed more than 1500 earthen mounds in a wide polygon encompassing the low Paraná and low Uruguay rivers, plus Jacuí, Vacacaí and Ibicuí river valleys, the middle Negro river, and the basin of Patos and Mirim lagoons (see Figs. 1 and 2) (Bracco et al. 2005; Bonomo et al. 2011; López Mazz 2001, 2010; Cabrera 2013).

The *cerritos* are earthen mounds comprised by anthropic soils with polished and knapped lithic instruments, faunal and botanical remains, ceramic shards, and sometimes human remains. These archaeological structures dated between 4700 and 200 years BP and are found both isolated or in clusters – up to a hundred in number – upon the landscape. Their spatial distribution, although it occurs in environments of different altitudes along flat and undulating terrain of the lowlands, is always linked to edaphic units as flooded and swampy environments regionally known as “*banhados*” and “*charcos*” (Bracco et al. 2000, 2008; Gianotti 2000; López Mazz and Bracco 2010; Bonomo et al. 2011) (see Figs. 3 and 4).



**The Earthen Mounds (*Cerritos*) of Southern Brazil and Uruguay, Fig. 1** Map of *cerritos* in southern lowlands of Brazil and Uruguay, pointing out the mentioned areas in the text: (1) Yaguari valley, (2) Caraguatá Valley,

(3) India Muerta wetlands, (4) Los Ajos site, and (5) Pavão 01 site in the basin of the Patos lagoon as well as the Pampa biome in South America

### Definition

The category of *cerritos* includes a wide variety of sizes and architectural structures that require more studies to be precisely defined. However, in general terms *cerritos* has been defined as archaeological structures built with mostly earth, but containing also other materials, located in wetland environments in the Pampa biome. They are comprised by anthropogenic organic sediments deposited in planes whose diameter oscillates between 30 and 60 m. Their height varies from just a few centimeters to more than 7 m and their chronology reaches as far as the mid-Holocene (Bracco et al. 2000, 2005; Iriarte 2006; López Mazz 2001).

In the northeast of Uruguay, at the valleys of *Yaguari* and *Caraguatá* streams, there are sites with elliptical or elongated dimensions that vary between 70–150 m along the major axis and 25–40 m in the minor axis (Gianotti 2004, 2005; Gianotti and Bonomo 2013). Inside regional clusters, architectural diversity appears in the same space forming a very heterogeneous complex of sites. There are even cases of earthen structures in a “ring” format, and even in a “boomerang” shape, suggesting the association between two different mounds after an earth moving, as in the case of *Los Ajos* and *Pago Lindo* (both in the lowland of Uruguay) (Fig. 5) and the Pavão 01 (in the basin

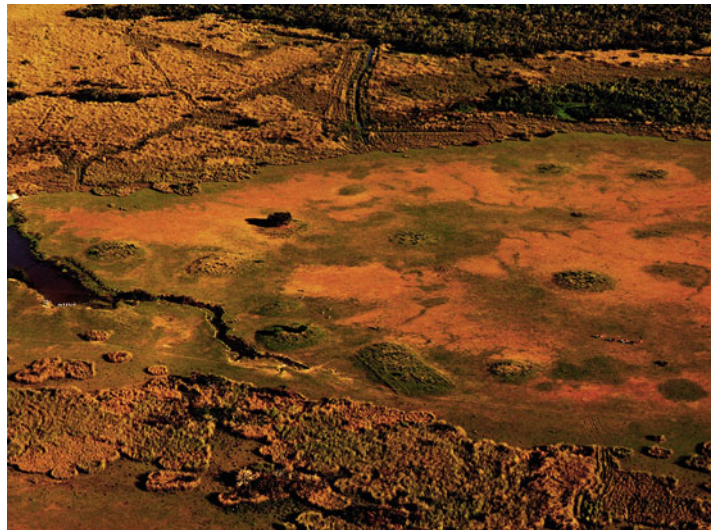
**The Earthen Mounds  
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**Fig. 2** Round mound  
(*cerrito*) in the India Muerta  
wetlands, Uruguay



**The Earthen Mounds  
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**Fig. 3** Aerial partial view  
of a Lussich mound  
complex located in Yaguari  
valley, Uruguay

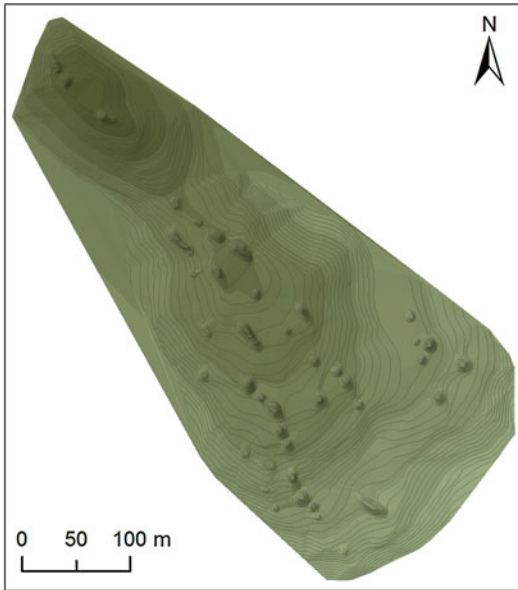


of Patos lagoon, Brazil) (Fig. 6) (Gianotti and Bonomo 2013; Iriarte 2006; Bracco et al. 2008; Milheira et al. 2017).

The mounds are distributed along clusters containing several of them around the streams and the wetlands, or occurring isolated on the top of the hills. Larger clusters can contain as many as a hundred *cerritos* within it, while the smaller ones have only two to three mounds *cerritos* (Bracco et al. 2000; Gianotti 2005; López Mazz and Pintos 2000).

The oldest *cerritos* are situated in the Uruguayan territory, at the wetland of *India Muerta* wetland and along the tributaries of the *San Luis* river, which led to the proposition that this cultural phenomenon would have started in this region and then expanded to other lagoon and coastal regions (Bracco et al. 2005; Gianotti 2015). That expansion would coincide with the stabilization of the sea level around 2500 years BP, which gave the actual shape to the lowlands, allowing the formation of new continental areas available for human settlement (del Puerto 2015; Bracco et al. 2000,

2005). Also, the highest *cerritos* can be found in the region of *India Muerta*, such as *La Viuda* and *Isla de Alberto*, measuring 7.20 and 6.40 m, respectively (Fig. 7).



**The Earthen Mounds (*Cerritos*) of Southern Brazil and Uruguay, Fig. 4** Digital Terrain Model (MDE) of Lemos mound complex in Yaguari valley, Uruguay

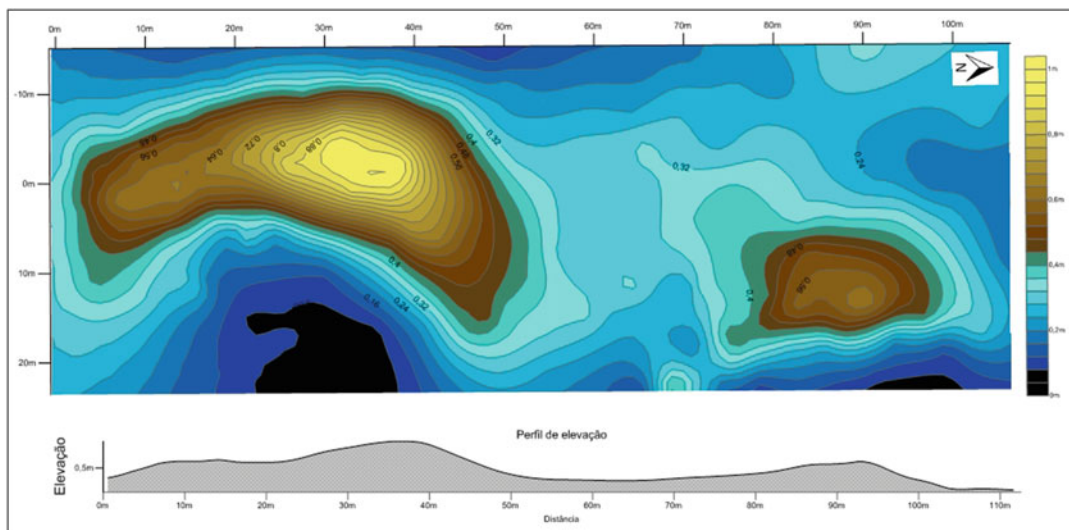
### Key Issues and Current Debates

Since the nineteenth century, the lowland pre-hispanic architecture of southern Atlantic has caught the attention of many researchers. The *Cerritos* was firstly interpreted as burial mounds in comparison with Mississippian mounds (Arechavaleta 1892; Figueira 1892). Years later, Ferrés (1927) argued that the *cerritos* were, indeed, domestic spaces resulted from adaptive ways of living in flooded environments. That theory would be reaffirmed in the 1970s with the first and widely spread theoretical model that consider the *cerritos* as settlement areas occupied systematically by indigenous people in a high mobility social system. According to Schmitz (1976), the *cerritos* of Patos lagoon were fishing campsites focused on lagoon exploitation occupied mainly in springer and summer.

The material culture of these mounds would corroborate such an interpretation. In the case of ceramic technology, the evidence shows preeminence of simple shape ceramic vessels inferred as “utilitarian ceramic” that served to prepare fish – the base of the diet of those indigenous people. The pottery would have been used in an speed up way without the necessity of technological and/or aesthetical improvements of the vessels, characterized through reduced firing, thin walls, high



**The Earthen Mounds (*Cerritos*) of Southern Brazil and Uruguay, Fig. 5** Ring-shaped mound in Paso de los Ladrones complex mound located in the Caraguatá valley, Uruguay



**The Earthen Mounds (*Cerritos*) of Southern Brazil and Uruguay, Fig. 6** Topography of site Pavão 01 with “boomerang” shape associated mound, located in the basin of Patos lagoon, Brazil



**The Earthen Mounds (*Cerritos*) of Southern Brazil and Uruguay, Fig. 7** *Cerritos* in Talitas mound complex located in the wetlands of India Muerta, Uruguay

frequency of sandy temper, and vessels of small and medium size of simple shape that would define the “Vieira tradition” (Schmitz 1976). The lithics were mainly made with bipolar techniques using local raw materials as different varieties of quartz. It was also interpreted by the same functionalist view, which the technological simplicity would corroborate the inference of a pattern of expedite use linked to the manipulation of

gathered plant resources, fishing, and hunting practices (Schmitz 1976).

The systematical reoccupation of the same places where were built the *tolderias* (huts made with a straw roof and wooden posts) should generate an accumulation of sediments as well as disposed materials. In this way, the height and volume of *cerritos* would be related to the number of reoccupation and, consequently, to its age. In short, *cerritos* were inferred as archaeological

remains raised passively by “hunter-gatherers bands,” resulted from “seasonal occupations.” Such groups would belong to “marginal tribes,” owners of a “simple technology,” very “dependent on the environmental resources” and with a “highly mobility system” (Schmitz 1976).

However, this functional paradigm started to change after the 1980s, when a new interpretive model based on an ecological-adaptive perspective allowed to see the mound builders societies as groups of complex hunter-gatherers of high efficiency. These groups usually lived in a high productive environment with an economic organization based on the seasonal optimization of different environments engaged in a cycle of year round mobility (López Mazz and Bracco 1994). In this context, the *cerritos* were mainly interpreted as burial sites, whereas the presence of *cerritos* in the sierra could not be explained by the same logic of those situated in the flooded plains. Just after years of research, evidencing archaeological remains as postholes, house floors, reassembly of ceramics, and so on became possible to recognize that the *cerritos* were, indeed, built for multiple functions as living spaces used continuously and, occasionally, also used as cemeteries (Gianotti 2005; Iriarte 2006; López Mazz and Bracco 2010).

In this way, the *cerritos* would not have been the result of seasonal and occasional occupations raised passively as consequence of a wide system of mobility. Actually, these mounds would have been built as planned earthen structures resulted from funerary activities (López Mazz 2001, López Mazz and Bracco 2010), domestic areas (Bracco et al. 2008; Gianotti 2005; Iriarte 2006), and multifunctional spaces, used systematically to live, to bury, and to crop (Villagran and Gianotti 2013).

According to López Mazz and Bracco (2010), during almost 5000 years of history, the mound builders have experimented profound changes in social and economic aspects that coincide with the wide range of domesticated and transformed spaces. Their population would have grown in demography; the settlements would have multiple in quantity and function (seasonal, circumstantial, semi-permanent) and would have display a larger

internal complexity (as domestic spaces, ceremonial platforms, and planting and disposal areas). In general, these changes and the consequential territorial adjustments can be observed on a large scale over 2500 years BP, as well as the creation of new settlements in different regions, what suggests a process of colonization of other areas (Bracco et al. 2000, 2005; López Mazz 2001).

The management and use of native and domesticated vegetal resources as maize (*Zea mays*), squash (*Cucurbita* sp.), beans (*Phaseolus* sp.), tubers (*Canna* sp. and *Calathea* sp.), and palm nuts (*Butia odorata* and *Siagrus romanzoffiana*) – especially after 2500 years BP, but more intensively after 1600 years BP – would have allowed new economic practices (Iriarte 2006; del Puerto 2015; del Puerto and Campos 1999; del Puerto and Inda 2008). It also allowed the occupation of new settlements, the emergence of new productive spaces in the territory (Gianotti et al. 2013), and the origin of new forms of social and political organization (the *chiefdoms*) (López Mazz and Bracco 2010). Also, between 1000 and 800 years BP, the evidence of built areas for farming in specific mounds dedicated to maize cultivation (Gianotti et al. 2013).

The first mound builders groups explored a wide range of animal and vegetable resources through hunting, fishing, and gathering. From 2500 years BP, there are traces of animal specialization in hunting – cervids and a small rodent as the *Cavia aperea* – coincident with some incipient experiences of domestication and farming (Moreno 2014). Changes in economic strategies and in the resources management, according to Moreno (2014), would have been connected with transformation in territorial property and general resources management. Pottery technology was another important improvement originated around 3000 years BP that reflected new ways of processing, cooking, consuming, and stocking the food. The lithic technological system reinforces the progressive loosing of regional mobility, characterizing an expedite technological production based on local raw material (Gascue et al. 2009; López Mazz 2001; Iriarte and Marozzi 2009).

Along the last period, there was a process of territorial contestation materialized in distinct forms of social appropriation of the territory, based in the ascendancy and ancestrally. Since 1600 years BP the *cerritos* become ceremonials. The funeral burial practices of different human individuals inside the same mound become generalized (Bracco et al. 2000, 2005), involving, eventually, the presence of domestic dog (*Cannis lupus familiaris*) (Moreno 2014) within the burials. These funeral practices coincide with a variation in the standards, including, at least, three patterns of inhumation: primarily burial, secondary burial (in packs), and burial of isolated skeletal parts, such as cranium, fingers, legs, and ribs (Pintos and Bracco 1999; Femenías et al. 1990; Gianotti and López Mazz 2009). These isolated human bones buried appear sporadically, associated and mixed to the sediments of constructive material that comprises the mound and are common that they have cut marks or even burning traces on them (Gianotti and López Mazz 2009; Figueiro 2004; Moreno 2006; Moreno et al. 2014; Pintos and Bracco 1999). These findings illustrates the discussion about ritual cannibalism, a question that needs more systematic information and case studies to be precisely understood and addressed (Gianotti and López Mazz 2009; Moreno 2006).

Concomitantly, the internal growing of mound clusters presents a regular pattern indicating communal spaces for public activities (*plazas*) as well as constructive events that increase height and resistance, transforming some *cerritos* in monuments. New smaller earthen structures seem to develop, articulated to domestic activities also used for crop, situated in the margin of sites (López Mazz and Gianotti 1998; López Mazz 2001; Iriarte 2006). That space formatting of the settlement, according to Iriarte (2006), is in line with the increase in political activity and the consolidation of the community as an organizational structure. The micro- and macroregional clusters of mounds clearly denote a process of constant landscape fragmentation as strategies for resources management as well as social and territorial control. “This process illustrates one of the first and clearest steps in the intentional building

of a ‘territory’ (...) with the geographical space economically managed, symbolically marked, politically delimited and socially defended” (López Mazz and Bracco 2010, p. 257).

With regard to historical continuity, the *cerritos* situated in Brazil and Uruguay were interpreted as mounds built by Charrua and Minuano native groups (Serrano 1946; Basile Becker 2002). On the other hand, in the Argentinian Delta of the Paraná river, the *cerritos* were probably built by the Chaná-timbú people (Bonomo et al. 2011). Charrúa, Minuanos, and Chaná-timbú are indigenous groups historically known by abundant reports of travelers and chroniclers from the sixteenth century. However, for Uruguayan and Brazilian lowland areas, this ethnographical correlation is not consensual for two reasons: (1) according to López Mazz and Bracco (2010), it would be coherent to assert that the region of the Patos and Mirim lagoons, as well as the northeast of Uruguay – the main dispersion area of the *cerritos* – would have been occupied only by Minuano groups, the traditional enemies of the Charrúas. (2) It is always dangerous, from a historiographical point of view, to extrapolate colonial historic and ethnic categories to the long-term prehispanic past, making simple analogies with a society with approximately 5000 years of history (Basile Becker 2002; López Mazz 2001).

In sum, in the last 25 years of archaeological research, interpretations were matured that allowed to think the *cerritos* not more like archaeological remains resulted from “simple hunter-gatherers societies,” but as “monumental structures” built by “complex fishers, hunter-gatherers, and agriculturalist societies” agents of a long-term history that encompass domestication, building, and control of the *Pampa* landscapes. Belonging to groups extremely articulated to flooded environments, practitioners of an economy involve fishing, hunting, gathering, production, and management of plant resources, as well as complex ways of managing both wild and domesticated resources, what characterizes as a “mixed economy” (Iriarte 2006; del Puerto 2015; Gianotti 2015; Moreno 2014). These earthen-engineered buildings, besides referring to other manners of

landscape contestation and as evidence to a community way of life, would contemplate the mythic memory and the millenary history of mound builders as structures that aggregated people, reflected social hierarchies, demarked landscapes, and materialized the territorial reclamation. In this way, the *cerritos* must be understood as political phenomenon that comprises ideological landscapes and can be thought as generational monuments (that refers to the past, to the present, and to the future of mound builders societies), orientational monuments (that mark territories and landscapes and helps the individual circulation through the lands), and ontological monuments (that congregates cosmologies and historical myths) (Bracco et al. 2000; Dillehay 2000; Gianotti 2000, 2005, 2015; López Mazz 2001, López Mazz and Bracco 2010; Cabrera 2013; Pintos 1999).

## Cross-References

- ▶ [Agricultural and Social Earthworks in the Guianas](#)
- ▶ [Anthropogenic Sediments and Soils: Geoarchaeology](#)
- ▶ [Earthworks of the Amazon](#)
- ▶ [Earthworks of the Llanos de Mojos](#)
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- ▶ [Geometric Earthworks of Western Amazonia](#)
- ▶ [Recent Advances in the Archaeology of the Southern Proto-Jê People](#)

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