



Project Gallery

New sites and challenges in prehistoric archaeology of Uruguay: recurrent occupations in caves, rockshelters and earthen mounds

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Systematic investigation of caves and rockshelters in Uruguay is revealing the archaeological importance of these sites and their association with earthen mounds. Multiple periods of human occupation at Tamandú rockshelter are revealed through stratigraphic analysis, and radiocarbon dates suggest recurrent occupation from the Early Holocene up to the historic period.

Keywords: South America, Holocene, mound builders, cultural landscapes, Guaraní, Guenoa-Minuan Indians

Introduction

Humans have strategically utilised space, with rockshelters and caves serving as recurrent occupation sites, throughout prehistory. The use of such locations has been the subject of several studies in the Pampas, Patagonia and southern Brazil (see Schmidt 2004; Miotti *et al.* 2014, among others) but has received relatively limited attention in Uruguay (Cabrera 1995; Suárez *et al.* 2011; Aguirrezábal 2021). In this article, we present results from a recent research project in two archaeologically unexplored regions of Uruguay.

Study area and methodology

The studied areas encompassed two sectors, one in the west (Uruguay River Basin, Paysandú department) and another in the east of Uruguay (Merín Lagoon Basin, Cerro Largo department) (Figure 1).

Research in these sectors included systematic pedestrian surveys, recording of archaeological sites, conducting surface collections and performing stratigraphic tests and excavations. Aerial, satellite and drone surveys additionally provided a landscape overview.

Methodologically, the research is carried out through an interdisciplinary approach with the participation of archaeologists, geologists, speleologists, palaeontologists and palaeoecologists. To the west, research focused on the region known as the Queguay limestones (Figures 1 & 2). This region provides optimal conditions for the formation of rock concavities and is itself a significant outcrop of silcrete. Excavation focused on María Piquet, Cuervos and Tigre

Received: 12 December 2023; Revised: 3 April 2024; Accepted: 3 May 2024

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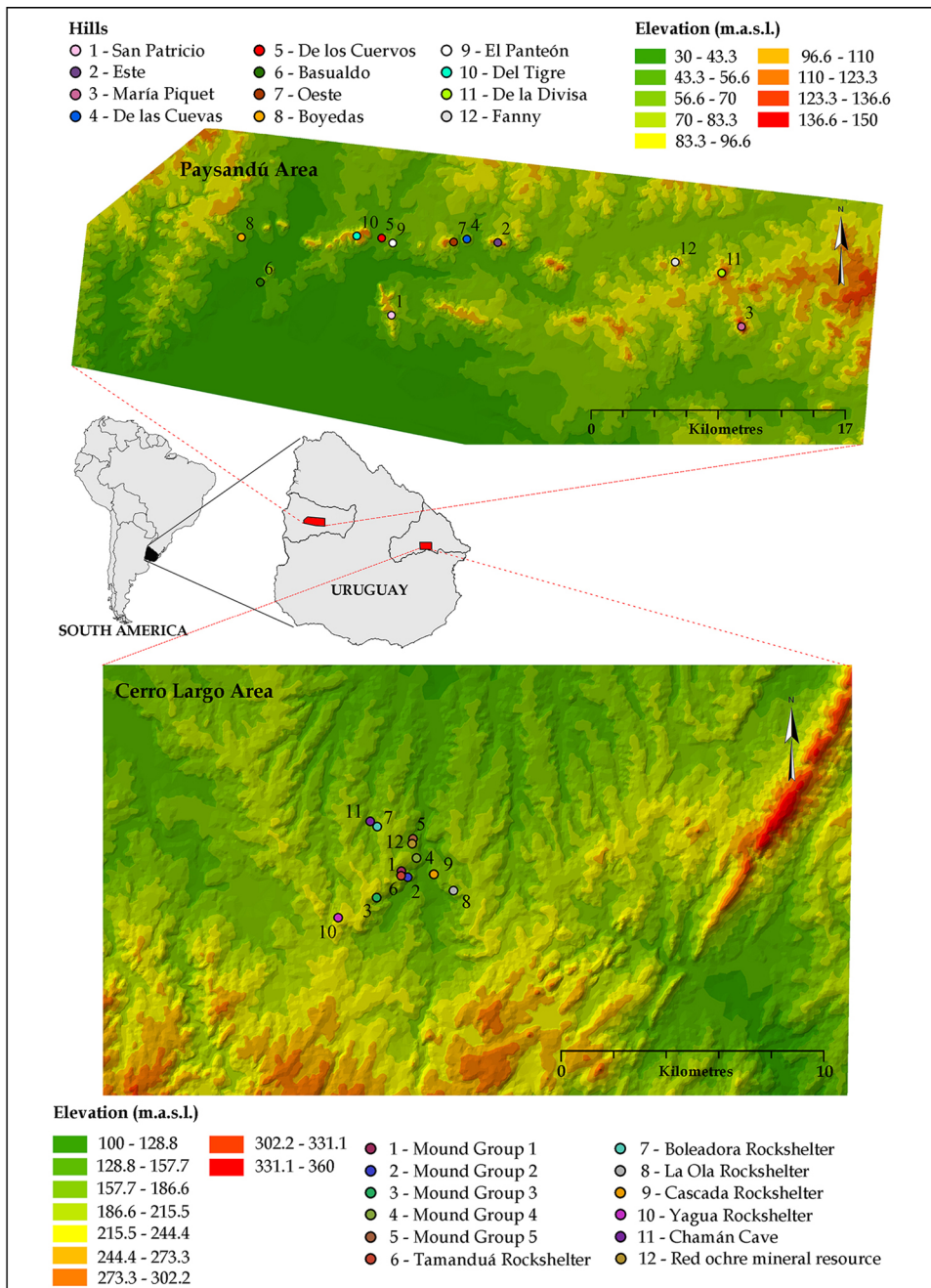


Figure 1. Maps of the two study areas (figure by Flavia Barceló).

hills (Figure 3). Archaeological excavations in the east focused on the upper Tacuarí river, where we discovered a series of caves and rockshelters spatially and chronologically associated with anthropic earthen mounds. A total of 42.7m² has so far been excavated in both regions: 8m² in caves, 20.5m² in rockshelters and 14.2m² on earthen mounds.

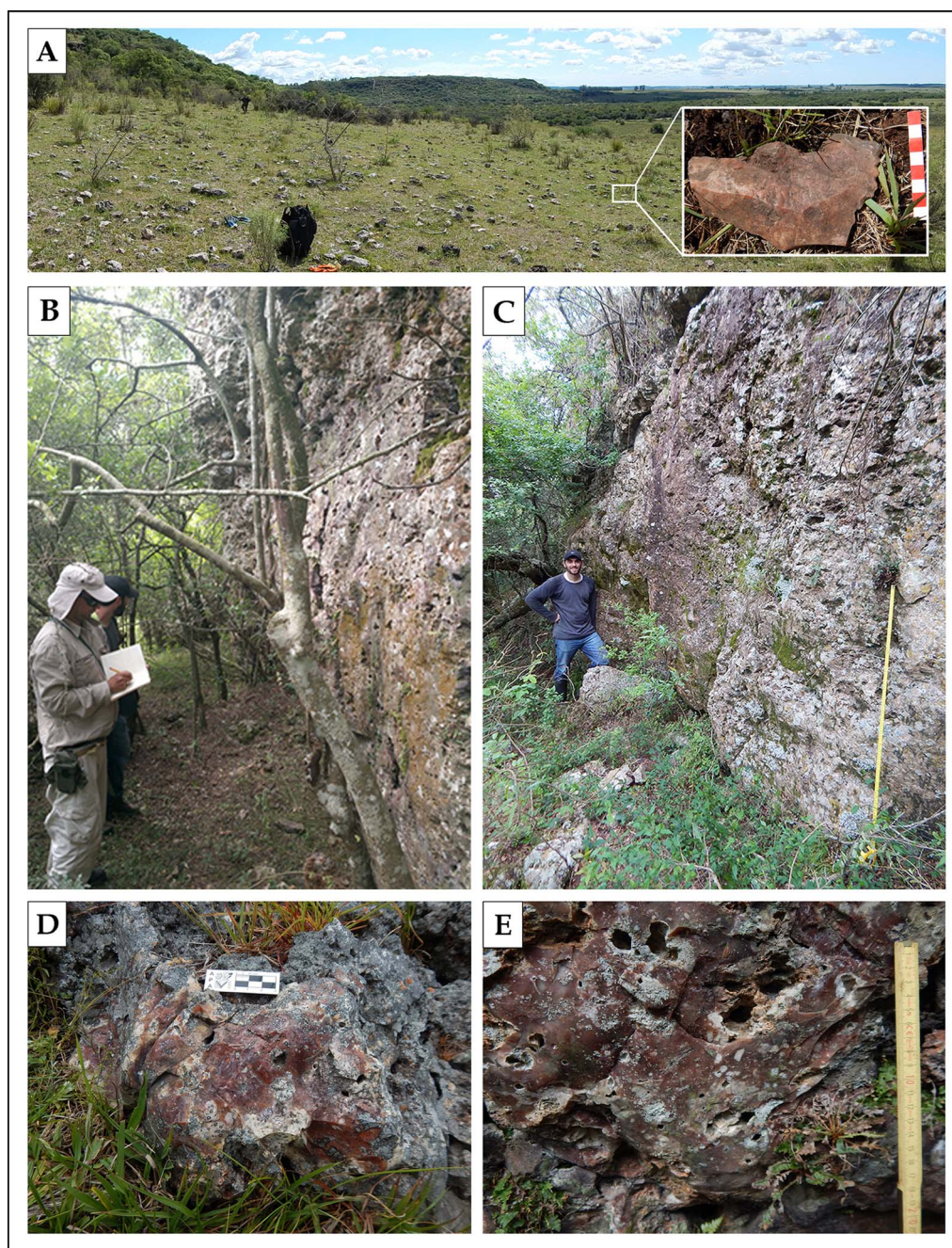


Figure 2. Archaeological sites identified in Western Uruguay (Paysandú): A) surface workshop on Cuervos Hill; B–E) large silcrete outcrops on María Piquet Hill (figure by Rafael Suárez & Flavia Barceló).

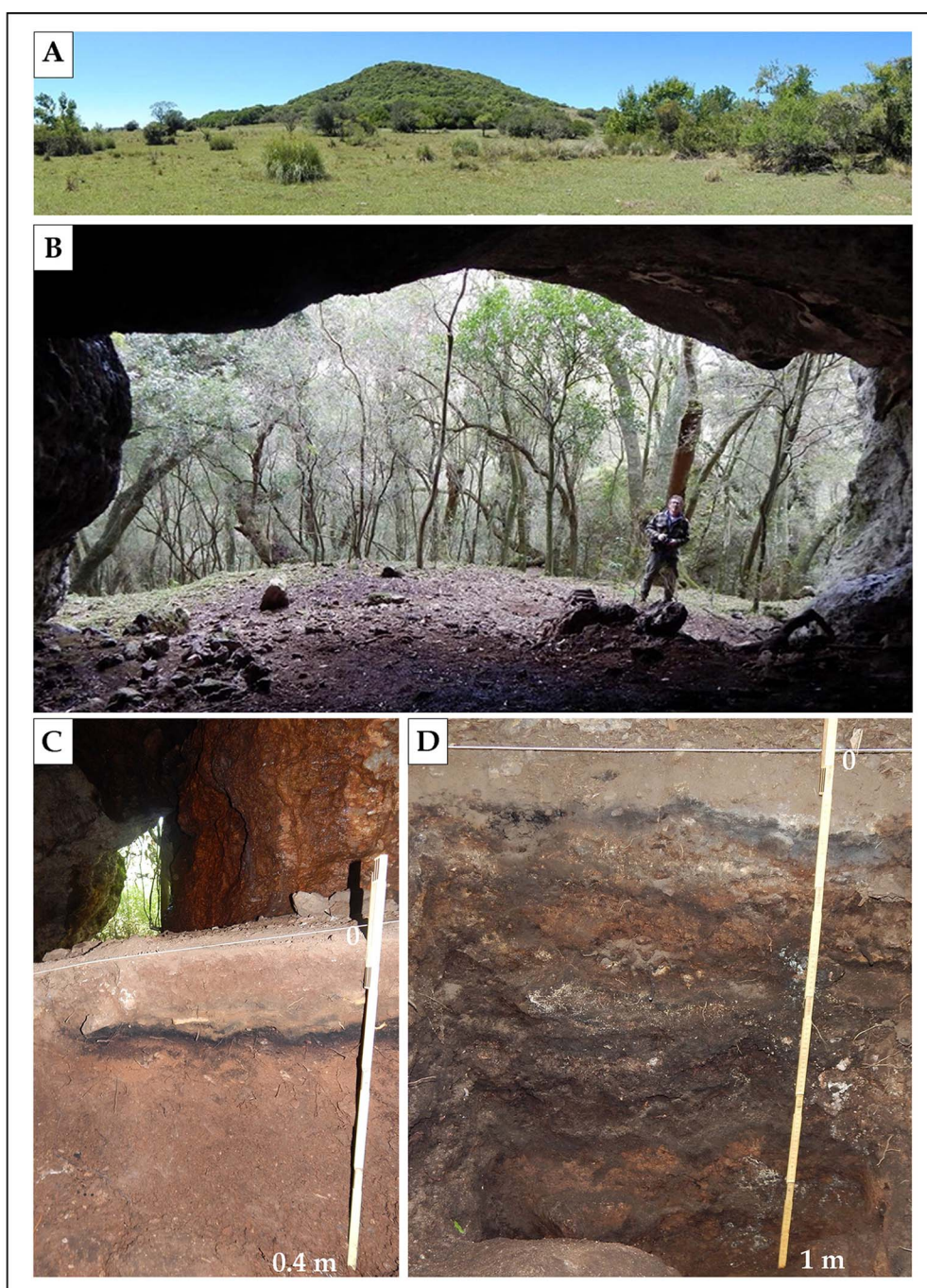


Figure 3. A) panoramic view of Cuervos Hill; B) La Deseada Cave; C) stratigraphic sequence of Queguay Cave, note black sediment lens; D) stratigraphic sequence of La Deseada Cave (figure by Rafael Suárez & Flavia Barceló).

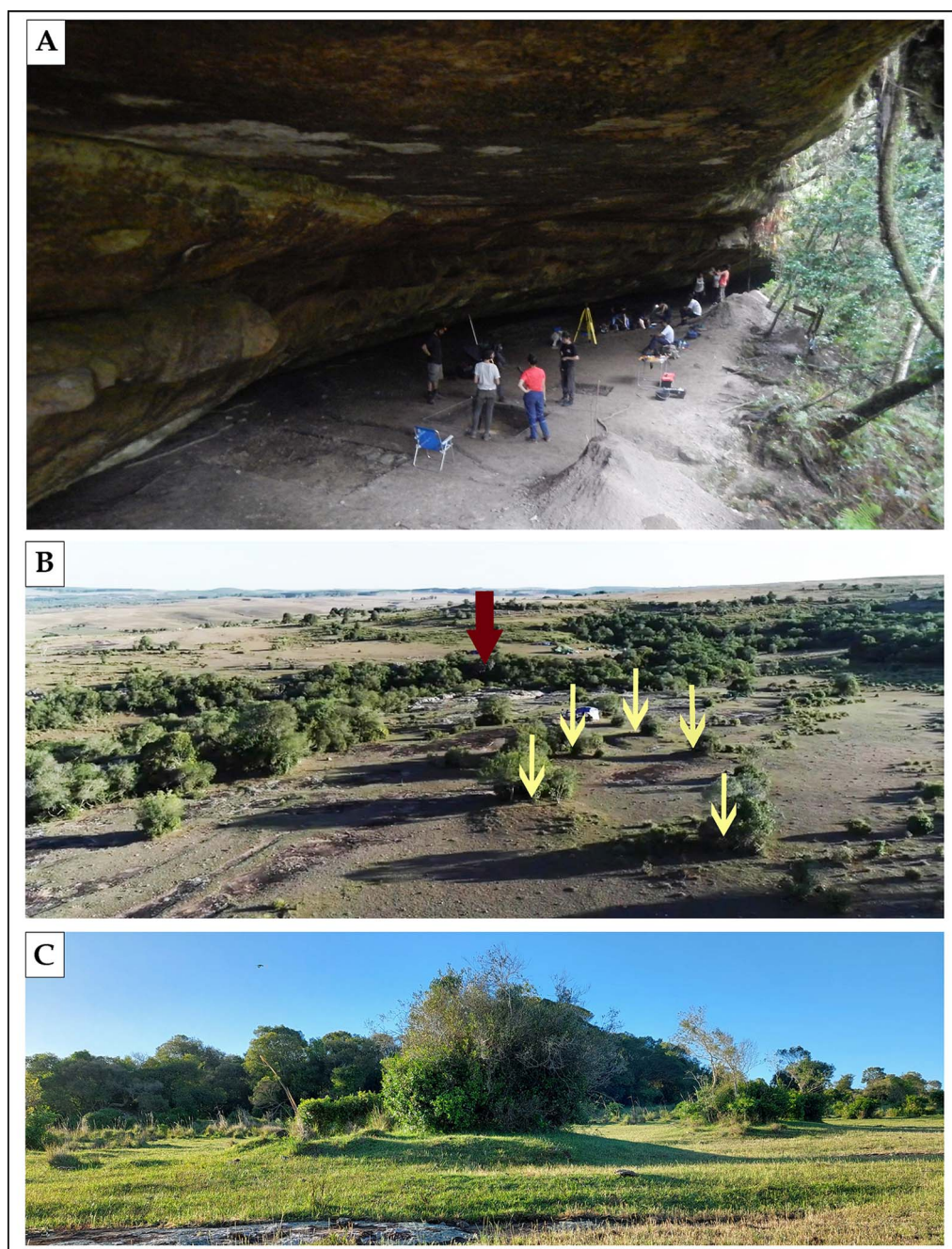


Figure 4. Archaeological sites in Eastern Uruguay (Cerro Largo): A) Tamandua rockshelter; B) group of mounds in the foreground (yellow arrows) and Tamandua rockshelter in the background (red arrow); C) detail of earthen mound (pictured in B) (figure by Rafael Suárez & Flavia Barceló).

Results

Intensive surveys have helped identify cultural landscapes in both areas. We have discovered two systems of caves and rockshelters, one in the Queguay Formation (limestone) with extensive workshops and silcrete resources and the other in the Tres Islas Formation (sandstone) (Figures 2, 3 & 4A). To date, 11 caves, 35 rockshelters, 24 outcrops (silcrete and silicified sandstone), three ochre outcrops, six cairns and 315 earthen mounds have been identified in both study areas. We expect these numbers to increase in the next years of research.

Excavation was undertaken in the Tamanduá rockshelter due to its high stratigraphic resolution; 17.5m² have been excavated so far and six AMS radiocarbon dates obtained (Table 1). The most recent ages, obtained from layers containing ceramic, bone and lithic material at 0.075 and 0.12m below the surface, indicate activity from the historical period *c.* 315 ± 15 BP (UCIAMS 263944). In addition, there is a fragment of Guaraní corrugated ceramic dated to 845 ± 15 BP (UCIAMS 273240), an occupation dated to 990 ± 15 BP (UCIAMS 263943), and another one between 0.30 and 0.33m deep, dated to 2865 ± 15 BP (UCIAMS 263942). Finally, below these, there are other archaeological contexts, one at 0.60m dated at 5060 ± 15 BP (UCIAMS 273231), and another one at 0.87m with a date of 10 085 ± 35 BP (UCIAMS 273241) (Table 1, Figure 5).

Lithic materials encompass quartz artefacts and silcrete (silicified limestone) lithic flakes. Many ceramic fragments are plain (Figure 6A) but some show nail-prints, stick-prints and corrugated decorations (Figure 6E & F). The macrobotanical remains include burnt endocarps from *Butia odorata* (Butiá) and *Syagrus romanzoffiana* (Pindó) palms, burnt branches and charcoal from hearths. These burnt endocarps, dated at *c.* 3000 and 1100 cal BP, indicate the use of palm drupes (the fruit of the palm) during two Middle Holocene human occupations at the Tamanduá rockshelter.

Discussion: cultural transformations

Evidence from Tamanduá rockshelter suggests that there has been a sequence of human occupations spanning at least the past 11 500 years, extending up to the historic period.

Table 1. AMS dates obtained in the Tamanduá rockshelter.

Laboratory number	Radiocarbon determination (BP)	95.4% calibrated age	Calibrated median probability	Dated material	Stratigraphic unit
UCIAMS 263944	315 ± 15	1510–1653 AD	1626 AD	Charcoal	SU10
UCIAMS 273240	845 ± 15	1216–1273 AD	1247 AD	Guaraní ceramic	surface
UCIAMS 263943	990 ± 15	1030–1152 AD	1098 AD	Burnt palm endocarp	SU09
UCIAMS 263942	2865 ± 15	2853–3055 BP	2931 BP	Burnt palm endocarp	SU08
UCIAMS 273231	5060 ± 15	5659–5894 BP	5796 BP	Charcoal	SU05
UCIAMS 273241	10 085 ± 35	11 319–11 758 BP	11 536 BP	Charcoal	SU02

Calibration performed with Calib 8.2 SHcal20.14c (95.4% confidence) (Hogg *et al.* 2020). All dates were obtained by AMS ¹⁴C method.

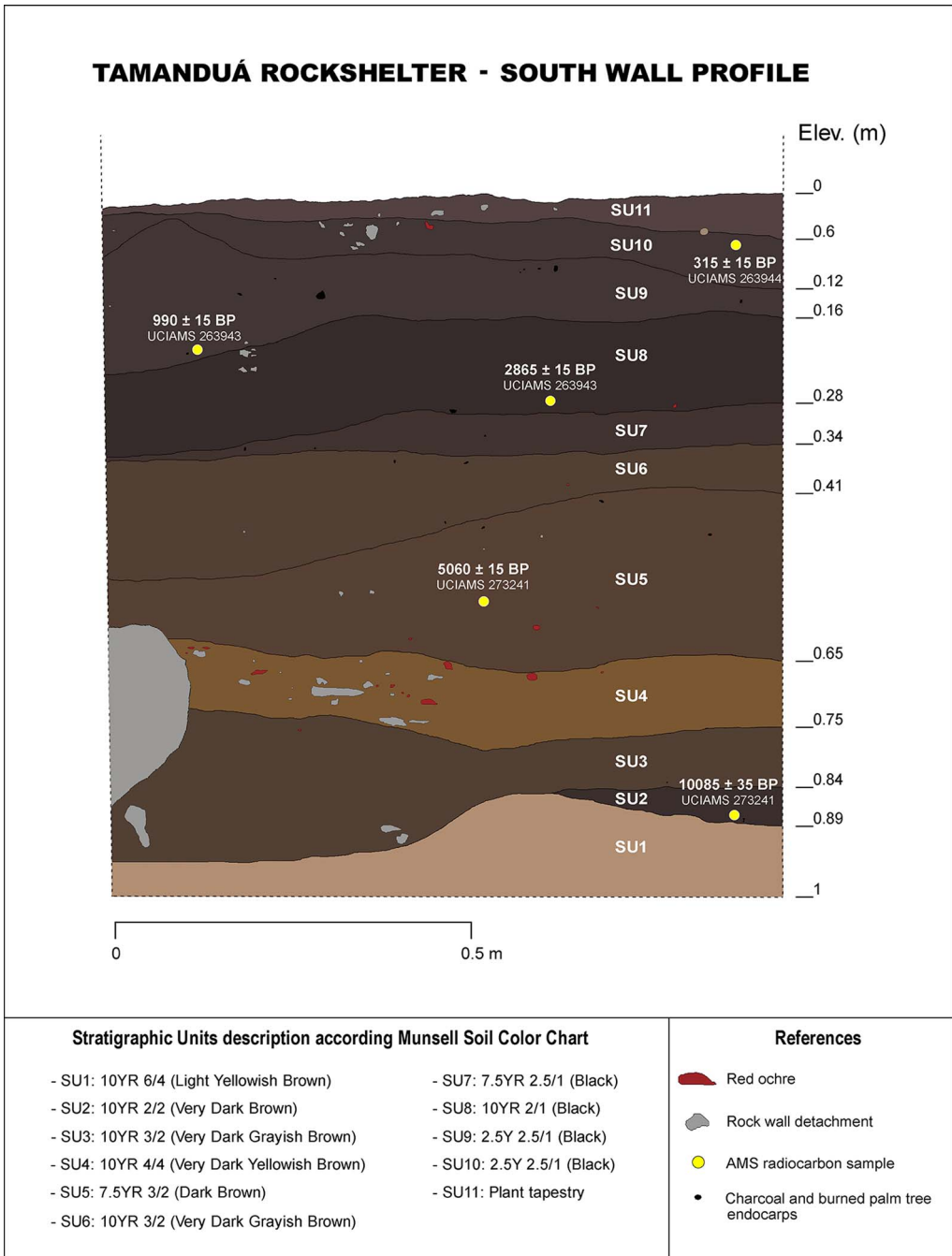


Figure 5. Southern profile of Tamanduá rockshelter with stratigraphic units and radiocarbon dates (figure by Flavia Barceló).

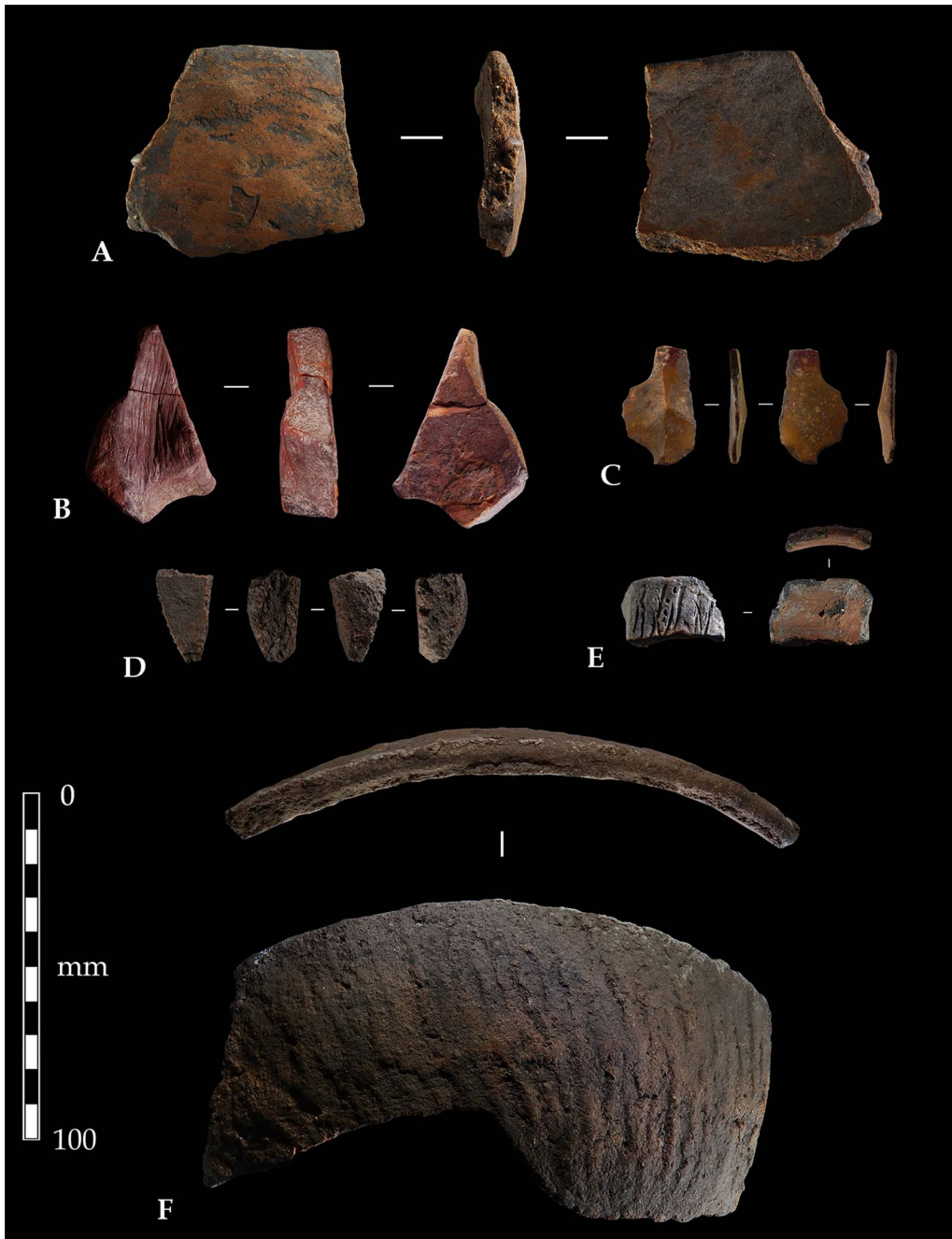


Figure 6. Examples of archaeological material from Tamanduá rockshelter: A) plain ceramic rim; B) red ochre with concavity and marks produced by lithic artefacts (note parallel vertical lines in the concavity); C) silcrete flake; D) ceramic fragment; E) ceramic rim decorated with nail-prints and stick-prints; F) large fragment of Guarani corrugated ceramic dated at 845 ± 15 BP (1247 cal AD) (figure by authors).

Presence of allochthonous raw material, such as silcrete (Figure 6C), indicates that it was transported from outcrops located 312–479 km from the Tamandúá rockshelter.

The most recent dated archaeological context corresponds to historic ethnic groups from the late sixteenth and mid-seventeenth centuries (1510–1653 cal AD). According to some ethnographic data, the region where Tamandúá rockshelter is located was occupied by Guenoa-Minuan Indians in the late seventeenth century (Bracco 2004). Similar dates have been obtained at some sites of mound builders (Bracco 2006), which may indicate an occupation associated with these societies. The presence at Tamandúá rockshelter of plain ceramic fragments (Figure 6A), which are characteristic of mound builders, further supports such an interpretation. The *c.* 3000 cal BP occupation is also probably associated with mound builders groups from south-east Uruguay and south Brazil (see Milheira & Gianotti 2018, among others). Supporting this interpretation, a total of 173 mounds have been identified at distances between 120 and 1102 m from the Tamandúá rockshelter (Figure 4B). Together this evidence suggests that Tamandúá rockshelter may represent a new type of site for the mound-builders cultural tradition.

A probable Guaraní occupation is identified during the Late Holocene period, *c.* 1250 cal AD. The presence of Guaraní ceramics may indicate either an occupation by that cultural group or their influence in the area through different types of contact and/or exchange networks with other groups. It should be noted that Guaraní ceramics have not previously been reported in cave or rockshelter contexts.

Finally, there is a Middle Holocene occupation (*c.* 5800 cal BP) with ochre fragments. Below this, there is another probable Early Holocene occupation associated with a lens of organic matter from which a charcoal sample was dated to *c.* 11 500 cal BP.

Conclusions and future perspectives

The identification of numerous archaeological sites and the evidence recovered from Tamandúá rockshelter demonstrate the archaeological potential of caves and rockshelters in this region of the world, and their significance for understanding cultural transformations during Uruguayan prehistory.

Although the research is in its early stages, the findings thus far are promising, revealing an unexplored archaeological landscape. The ongoing investigations contribute to expanding our knowledge of the prehistoric societies that inhabited south-eastern South America.

Acknowledgements

We would like to thank the Intendencia Departamental Cerro Largo, Regimiento Caballería Blindado 8, the Olivera family and archaeology students involved in the excavations and surveys.

Funding statement

The investigations are part of the projects funded by the Wenner Gren Foundation (grants # 9978 and #10581), Universidad de la República (CSIC I+D 2020) and Fondo Clemente Estable-ANII (FCE-1-2021-166543). This project has been carried out in areas authorised by the Comisión de Patrimonio Cultural de la Nación (CPCN).

References

- AGUIRREZÁBAL, D. 2021. Ocupación prehistórica en aleros y cuevas Este del Uruguay: una propuesta metodológica. Unpublished Master dissertation, Universidad de la República.
- BRACCO, D. 2004. Los errores Charrúa y Guenoa-Minuán. *Jahrbuch für Geschichte Lateinamerikas – Anuario de Historia de América Latina* 41: 117–36.
- BRACCO, R. 2006. Montículos de la cuenca de la Laguna Merín: tiempo, espacio y sociedad. *Latin American Antiquity* 17: 511–40.
<https://doi.org/10.2307/25063070>
- CABRERA, L. 1995. La cueva ‘Casa del Diablo’ sierra de San Miguel (Rocha, Uruguay), in M. Consens, J.M. López-Mazz & M. Curbelo (ed.) *Arqueología en el Uruguay: 120 años después*: 40–47. Montevideo: Asociación Uruguaya de Arqueología.
- HOGG, A.G. 2020. SHCal20 Southern Hemisphere calibration, 0–55,000 years cal BP. *Radiocarbon* 62: 759–78.
<https://doi.org/10.1017/RDC.2020.59>
- MILHEIRA, R. & C. GIANOTTI. 2018. The earthen mounds (Cerritos) of southern Brazil and Uruguay, in *Encyclopedia of Global Archaeology*: 1–9. Cham: Springer.
https://doi.org/10.1007/978-3-319-51726-1_3025-1
- MIOTTI, L., L. MARCHIONNI, B. MOSQUERA, D. HERMO & A. CERASO. 2014. Fechados radiocarbónicos y delimitación temporal de los conjuntos arqueológicos de Cueva Maripe, Santa Cruz (Argentina). *Relaciones Sociedad Argentina Antropología* 39: 509–37.
- SCHMIDT, A. 2004. Diversificar para poblar: el contexto arqueológico brasileño en la transición Pleistoceno-Holoceno. *Complutum* 15: 249–63.
- SUÁREZ, R., D. LEIGH & M. TRINDADE. 2011. First early human occupations in caves and rockshelters in Uruguay and different landscapes utilized by early South Americans. *Current Research in the Pleistocene* 28: 170–72.