



## **Elucidating human-megafauna interactions in South America: The archaeological and paleontological potential of the archaeological site of Santa Elina, Brazil**

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Evidences for the interaction between humans and megafauna during the Pleistocene are abundant in several places worldwide (e.g. North America, Eurasia). In striking contrast to this, only few and very controversial claims exist for the entire South American continent. In this context, the Santa Elina archaeological site (Mato Grosso State, Brazil) stands out as a key site for shedding new light on this topic. Previous works demonstrated the presence of skeletal remains of the giant sloth *Glossotherium* sp. occurring together with vestiges of human occupations (e.g. lithic materials). Some of these osteoderms found in a layer dated from 27,000 years B.P were highly modified. Here we show new data obtained through Stereomicroscopy and Scanning Electron Microscopy. The results revealed regular micro-morphologies attributable to human intervention on these materials. It is possible to observe a superficial surface covered by striations, a set of parallel marks with equally sizes, following the same direction, and central tiny holes. These results enable now more detailed investigations, in order to determine if these modifications were made in fresh or fossilized bones, so more analyzes are being performed. This may help to elucidate the possibility that South American human populations have interacted with megafauna, the chronology of peopling of the South America, and also elucidate the debate about South American megafauna extinction.