

Unprecedented 3-D reconstruction of pre-Columbian crania from the Caribbean and South America

July 28 2020



Crania with oblique tabular deformation. Credit: G. Rangel de Lázaro et al

Alfonso Benito Calvo, head of the Digital Mapping and 3-D Analysis Laboratory at the Centro Nacional de Investigación sobre la Evolución

Humana (CENIEH) has participated in the 3-D reconstructions of a representative selection of 13 pre-Columbian human crania specifically from Cuba and Peru, which are part of the osteological collection of the The Montané Anthropological Museum in Cuba. The sample studied comprised crania with tabular oblique artificial deformation, annular deformation, and undeformed specimens. The 3-D models generated were used to produce prints and 3-D animated videos.

The deformed and undeformed crania were digitized with the Artec Space Spider structured blue light scanner, which created three-dimensional models based on the real samples. The resulting 3-D models were used to produce 3-D printed replicas and animated videos. "These 3-D models of the Cuban pre-Columbian skulls have been made with microns precision," says Alfonso Benito.

The 3-D reconstruction of the crania will allow its precise systematic investigation and dissemination in different audiovisual media and [online platforms](#), and they are also a perfect means to publicize the associated intangible resources, such as the experiences, rites and stories that surround these crania.

This study lead by Gizéh Rangel-de Lázaro (Natural History Museum in London and IPHES-URV) is published in the journal *Virtual Archeology Review*.

More information: Gizéh Rangel-de Lázaro et al., Shedding light on pre-Columbian crania collections through state of the art 3D scanning techniques. *Virtual Archeology Review* (2020). [DOI: 10.4995/var.2021.13742](https://doi.org/10.4995/var.2021.13742)

Provided by CENIEH

Citation: Unprecedented 3-D reconstruction of pre-Columbian crania from the Caribbean and South America (2020, July 28) retrieved 5 May 2024 from <https://phys.org/news/2020-07-unprecedented-d-reconstruction-pre-columbian-crania.html>

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.