Torn, Crumpled, Crushed: Centuries of Alteration among Metals from the Cenote Sagrado, Chichén Itzá

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In the 20th century, bells, rings, anthropomorphic figurines, and other metal objects were recovered from the Cenote Sagrado, a water-filled sinkhole at the site of Chichén Itzá in Yucatán, Mexico. These objects, along with jades, ceramics, textiles, and other materials, were deposited in the Cenote from the 8th century A.D. into the Spanish Colonial period. With no metallurgical activity evident at Chichén and a lack of metal deposits in Yucatán, the metal objects must have been imported. Analysis of iconography, fabrication technique, and elemental composition can ‘provenance’ the objects to different metallurgical traditions of Mesoamerica and Lower Central America. Optical microscopy with visible, UV, and IR light and portable X-Ray Fluorescence spectrometry were conducted on Cenote metals (n=139) in three museums: the Peabody Museum of Archaeology and Ethnology (Cambridge, MA), the Museo Palacio Cantón (Mérida, MX), and the Museo Nacional de Antropología (Mexico City, MX). The objects studied are roughly evenly split between hammered and cast, gilding of copper-based substrates is common on sheet objects, and Cu-As and tumbaga (Au-Cu) alloys are prevalent. They show superficial modification—fracture, indentation, tearing at edges, wrinkling—produced in fabrication and/or in ritualized performances before deposition. Further alterations developed in burial, post-excavation cleaning, and conservation. People traveling from West and Central Mexico as well as Lower Central America and Colombia may have brought metals to Chichén on pilgrimages and consecrated the objects at the Cenote.