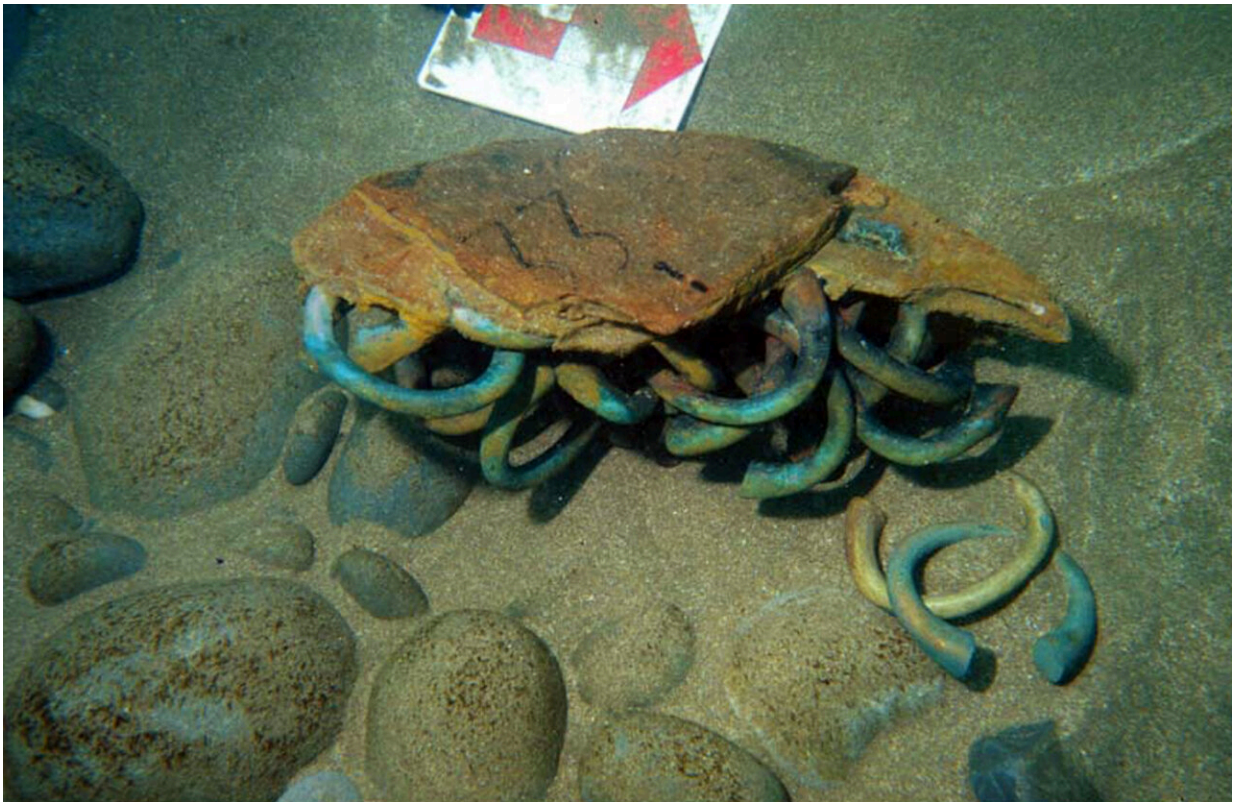


Benin Bronzes found to be made of German brass

April 5 2023



Some of the 313 manillas excavated by the Sociedad de Ciencias Aranzadi from a Flemish trader lost in 1524 off Getaria in Basque Country, northern Spain. The ship was chartered by Portuguese merchants from Lisbon. Credit: Ana Maria Benito-Dominguez, CC-BY 4.0 (creativecommons.org/licenses/by/4.0/)

The renowned Benin Bronzes are composed of metal sourced from

Germany, according to a study published April 5, 2023, in the open-access journal *PLOS ONE* by Tobias Skowronek of the Technische Hochschule Georg Agricola, Germany, and colleagues.

The Benin Bronzes collectively refers to thousands of African artworks in the form of heads, plaques, figurines, and other objects produced by the Edo people of Nigeria between the 16th and 19th century AD. It is commonly thought that the metal in these sculptures was sourced from small brass rings called "manillas" which were used as currency in European trade in West Africa, but this has been difficult to confirm. The [artifacts](#) have also been the subject of controversy in light of the ongoing repatriation discussions between Nigerian officials and many museums holding the Benin Bronzes.

In this study, researchers performed [chemical analysis](#) on 67 manillas recovered from five Atlantic shipwrecks and three land sites in Europe and Africa dating between the 16th and 19th centuries, specifically identifying lead isotope signatures and trace element compositions of the metal. They found a strong similarity between the metal composition of the Benin Bronzes and that of the manillas used in Portuguese trade prior to the 18th century, suggesting these manillas were a major source of metal for the sculptures.

Furthermore, the composition of those manillas is similar to ores from the German Rhineland, suggesting that Germany was the principle source of metal for production of pre-18th century manillas and, ultimately, the Benin Bronzes. The consistency in metal composition of the Bronzes suggests that African metalsmiths were very selective about what metal they would use.

The authors note that analysis of other German-produced metal wares from this time might shed further light on the details of early Atlantic trade. They also note that Portuguese manillas were likely not the only

source of [metal](#) for the Benin Bronzes, thus there are more questions to be answered about the production of the famous sculptures.



Detail of a manilla bracelet concreted to part of a pot from a Flemish trader excavated by the Sociedad de Ciencias Aranzadi off Getaria, Basque Country, northern Spain. The ship, lost in 1524, had been chartered by Portuguese merchants from Lisbon. Credit: Ana Maria Benito-Dominguez, CC-BY 4.0 (creativecommons.org/licenses/by/4.0/)

Tobias Skowronek adds, "The Benin Bronzes are the most famous ancient works of art in all West Africa. Where their brass came from has long been a mystery. Finally, we can prove the totally unexpected: the brass used for the Benin masterpieces, long thought to come from Britain or Flanders, was mined in western Germany. The Rhineland manillas were then shipped more than 6,300 kilometers to Benin. This is the first time a scientific link has been made."

More information: German brass for Benin Bronzes: Geochemical analysis insights into the early Atlantic trade, *PLOS ONE* (2023). [DOI: 10.1371/journal.pone.0283415](https://doi.org/10.1371/journal.pone.0283415)

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