

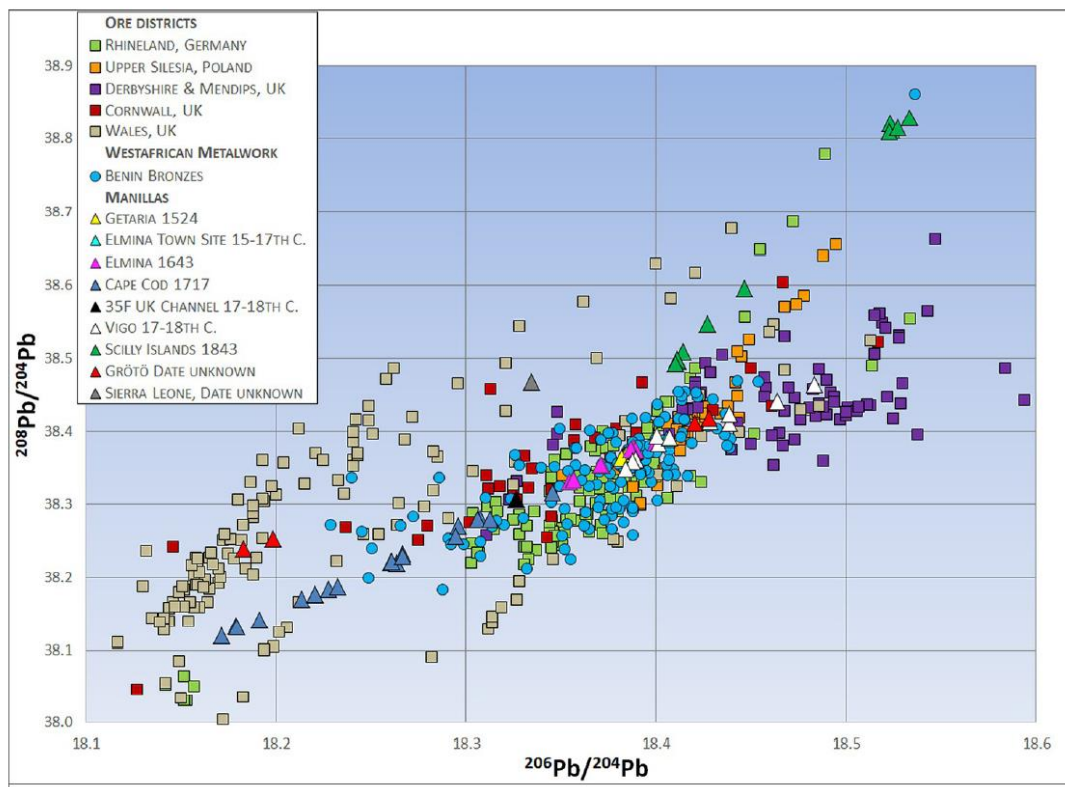
Frances Klein

Benin Bronzes and European-African trade

Brass not Bronze

(Africa Forum 19th January 2024)

1. Benin Bronzes date from the 15th to 19th centuries. The Kingdom of Benin flourished from the 12th to 19th centuries. The art of metal casting was acquired from Ife to the west but had its own distinctive style. Most Benin bronzes in European and US Museums date from the infamous British expedition in 1897 but there are many other examples. The bronze Leopard water vessel, shown in my talk, stood on an altar to 15th century King of Benin. The leopard is a royal symbol.
2. The origin of the metal used was unknown for many years. It was called Bronze but is in fact predominantly Brass. Bronze is an alloy of copper and tin, whereas brass is an alloy of copper, zinc and with variable amounts of lead making it is easier to work or cast than bronze.
3. Geochemical analysis of the brass has shown its primary source was from the Rhineland between Cologne and Aachen which was taken to West Africa in the form of Manillas. The figure shows lead isotope ratios $^{206}\text{Pb}/^{204}\text{Pb}$ and $^{208}\text{Pb}/^{204}\text{Pb}$ – only those manillas from the Rhenish lead-zinc ores also match the majority of Benin bronzes.



4. Manillas are horseshoe shaped brass rings used as currency in early trading from the 15th century onwards.



Analysis of the chemical content of found manillas indicate three different compositions: a) tacoais (Portuguese) b) popo c) “Birmingham”).

Table 1. Manillas typology.

Manilla type	<i>tacoais</i>	<i>popo</i>	<i>“Birmingham”</i>
shape	Open ring with smooth transition to bulbous thickened ends. No casting seams. No shape variations.	Open ring with short set off slightly thickened ends. Nearly always casting seams. No shape variations.	Open ring. At the ends angular protruding round to heart-shaped plates. Always casting seams. Many shape variations
material	Leaded brass (up to 14%), Zn up to 25%	Leaded brass or copper alloy. Zn-content variable	“hardmetal” Cu mostly below 65%, Pb over 25%, Zn less 2%
weight	ca. 200g - 305g	ca. 100g - 150g	ca. 80g - 150g
used by	Portuguese traders	French-, Dutch-, English traders	English traders and local people in Southeast Nigeria
countries of use	Elmina (Ghana), Kingdom of Benin (Nigeria)	Ivory Coast	Southeast Nigeria (Popo, Bonny, New Calabar)
used as	trade currency, commodity money	currency of the traders and the local people	currency of the local people
used from > to	ca. 1450—not known	1600–1914	ca. 1625–1949
production places	Germany (Rhine-Meuse region)	Nantes? Wales (Swansea)	Swansea (Wales), Bristol, Exeter and Birmingham (England)

Summarised from [15].

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The second picture shown in my talk is that of a Benin Bronze figure of a 16th century Portuguese soldier armed with a matchlock (musket).

- Portuguese navigators reached Benin in 1470s. Portuguese traders also visited other European ports such as Antwerp, not very far from Aachen. Analysis of the lead content shows a striking similarity in the lead isotope ratios between the Rhenish lead-zinc-ores and the great majority of Benin bronzes - compare the green-filled squares (ore) with the blue-filled circles (Benin bronzes). Later manufactures from England used different copper alloys high in lead which are not found in the crucibles of the Edo (Benin) casters of Benin bronzes.

Bibliography:

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