Revisiting Baranda: a multi-analytical approach in the classification of sixteenth-/seventeenth-century glass beads from northern Zimbabwe

Farahnaz Koleini[1], Innocent Pikirayi[1,*] & Philippe Colomban[2]

[1] *Department of Anthropology and Archaeology, University of Pretoria, Lynnwood Road, Hatfield, Pretoria 0083, South Africa*

[2] *Sorbonne Universités, UPMC Université Paris 06, UMR 8233, MONARIS, F-75005, Paris, France*

[*] *Author for correspondence (Email: innocent.pikirayi@up.ac.za)*

The glass bead trade in southern Africa provides important evidence of interregional contact during the early modern period. Compositional analysis of a large assemblage of imported glass beads from the sixteenth- to seventeenth-century AD trading site of Baranda in northern Zimbabwe reveals a south Asian origin of the majority of the beads. Combining stratigraphic data and morphological analysis with innovative compositional XRF and Raman spectroscopy approaches, the research was able to assign the Baranda beads accurately to their correct chronological range. This coincides with the period of Portuguese dominance of Indian Ocean trade.

Keywords: northern Zimbabwe, southern Africa, Indo-Pacific trade, sixteenth–seventeenth centuries AD, glass beads, glass composition, Raman, pXRF

Table S1. Wood's morphological classification for southern African bead series (Wood 2000, 2005, 2012).

Bead series	**Period traded in southern Africa**	**Method of manufacture**	**Size**	**Colour**	**Shape**
Chibuene	*c*. AD 600–950	drawn	small–medium 2.5–4.5mm diameter	greyish blue, blue-green, green, yellow	**varies—most are tube and cylinder**
Zbizo	AD 700–950	drawn	small–medium 2.5–4.5mm diameter 0.7–25mm long	dark blue, blue-green, yellow, green	**tubes**
K2-IP	*c*. AD 980–1200	drawn	minute–small 2–3.5mm diameter 1.2–4mm long	transparent to translucent blue-green to light green	**tubes**
EC-IP	*c*. AD 1000–1250	drawn	minute–large 2–5mm diameter	opaque black and brownish-red; yellow, soft orange, green and blue-green are translucent	**varies—most are cylindrical**
Map Oblate	*c*. AD 1240–1300	drawn, heat rounded	minute–small 2–3.5mm diameter	translucent blue-green, dark blue, yellow, orange and plum. Opaque black is the most common	**uniform oblates**
Zimbabwe	*c* AD 1300–1430	drawn	minute–small 2–3.5mm diameter	translucent blue-green, blue, yellow; transparent dark green, opaque black	**cylinders and oblates**
K-IP	*c*. AD 1430–1650	drawn	medium–large 3.5–5.5mm diameter	opaque black, brownish red; translucent blue-green, green, yellow, orange, blue and white	**varies—most are irregular cylinders**

Table S2. EDS measurement results of the principal glass matrix elements (normalised; wt%) in Khami-IP bead series.

Samples	Na_2O	MgO	Al_2O_3	SiO_2	K_2O	CaO	FeO
W1	11.8	1.1	8.0	70.7	3.5	2.3	2.6
W3	10.1	1.0	5.6	76.2	2.8	2.6	1.7
R8	11.6	1.0	9.5	64.8	3.6	3.6	6.0[a]
R12	11.8	1.1	10.5	66.0	3.4	2.7	4.5[a]
Db8	10.4	1.1	7.2	73.5	3.0	3.0	1.8
Db9	7.2	0.9	6.9	75.4	3.2	3.6	2.7
Y1	7.3	0.9	6.8	73.7	2.8	4.3	4.3[a]
Y5	9.6	0.8	5.8	72.4	3.3	5.4	2.7

Note: [a] element was used as colourant

References

WOOD, M. 2000. Making connections: relationships between international trade and glass beads from the Shashe-Limpopo Area. South African Archaeological Society. *Goodwin Series* 8: 78–90.

– 2005. Glass beads and pre-European trade in the Shashe-Limpopo region. Unpublished MA dissertation, University of the Witwatersrand.

– 2012. *Interconnections: glass beads and trade in southern and eastern Africa and the Indian Ocean—7th to 16th centuries AD* (Studies in Global Archaeology 17). Uppsala: Department of Archaeology and Ancient History, Uppsala University. https://dx.doi.org/10.1080/0067270X.2012.680307