

## 11. Translucent Glass Rings from Borneo

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The interest raised by Dr Inez de Beauclair's first note on these rings lead Dr Solheim to send me the manuscript of her further observations on these objects, from Yap and elsewhere.

The Sarawak Museum has a large collection of blue or green monochrome translucent glass rings, nearly always crescentic in section, mainly acquired by excavation since 1947. These include 15 whole pieces and hundreds of fragments. They have been found mostly in secondary burial grounds of northern Sarawak, including the Niah Caves, a little further north in the Bakong district and in rock-shelters round about Mount Mulu (8,000 ft.). A small hoard of them was exposed recently in clearing the new Bintulu airport, 50 miles south of Niah. They are also quite numerous still further north, at the pre-European capital of ancient Brunei, Kota Batu—among which a distinctly 'later' (? Ming) type with multi-coloured patterns, interlaced through the glass. Four hundred miles to the south-west, in the Sarawak river delta between Tanjon Datu (on the Kalimantan border) and Santubong, exist over a dozen sites representing a very large entrepôt trade with China and the mainland, as well as 'Chinese' burial grounds, from the 7th century to the very beginning of the Ming Dynasty (but not later). These produce crescentic monochrome glass bangle fragments, but none of the decorated types. Nowhere in West Borneo have we yet excavated glass bangles other than in association with imported Chinese-type stonewares and porcelains, and sporadically with Chinese coins, back into early T'ang.

It seems reasonably probable, in the Borneo context, that these bangles were taken to West Borneo from the mainland over a very long period. They clearly met a large trading demand among native peoples; they were kept as value objects until fairly recently. The same thing has happened with the less breakable Chinese stonewares of several types, produced—with only minor modifications—over centuries and still in use in Borneo's interior, today (e.g. for jar burials). But there is no record of old glass bangles in use in historical times, perhaps because of replacement later by ivory (Land Dayak, etc.), shell (Dusun, etc.)—both often crescentic in section; bronze and brass (largely made in Brunei until early in this century); and iron (made widely).

We are, however, very inclined to agree with Mrs de Beauclair that in some areas, including parts of Borneo, *fragments* of these bangles may have been used as value objects, a sort of token currency. We have similarly concluded that the same may have been applied to single potsherds of certain types (e.g. in the Lobang Tulang cave grottos at Niah).

The Sarawak Museum now has a large reference collection of beads and other glass objects from properly stratified excavation sites. We are interested to exchange

TABLE I. *Analysis of glass beads, from Santubong, Sarawak*

DESCRIPTION	Fe	K <sub>2</sub> O	Mg	Pb	CaO <sub>2</sub>	Cu	SiO <sub>2</sub>	Al <sub>2</sub> O <sub>3</sub>	Mn	Na <sub>2</sub> O
BEAD SAMPLES FROM BUKIT MARAS/SARAWAK (T. HARRISSON)										
Sample No. B.M.1 Standard red, long cylinder	0·32	1·3	0·12	0·28	3·6	0·14	72·0	12·2	0·02	9·8
Sample No. B.M.2 Standard red, oblate spheridal	0·25	1·3	0·07	0·23	3·2	0·11	71·5	12·8	0·02	10·4
Sample No. B.M.3 Green opaque, small	0·12	2·1	0·15	—	5·1	0·06	73·4	9·9	0·01	8·9
Sample No. B.M.4 Green opaque, very small	0·19	2·4	0·11	—	4·9	0·05	74·0	10·1	0·01	7·9
Sample No. B.M.5 Standard yellow, small	0·21	1·5	0·18	—	3·9	0·03	74·8	11·7	0·03	7·4
Sample No. B.M.6 Standard dark blue	0·21	1·9	0·17	0·19	4·2	0·17	73·6	10·9	0·10	8·5
Sample No. B.M.7 Standard black	0·23	1·9	0·19	0·17	4·3	0·19	72·5	11·4	0·12	8·7
Sample No. B.M.8 Orange with black, very light striae, long cylinder	0·05	1·5	0·14	0·75	3·8	0·03	75·7	9·8	0·03	7·8
Sample No. B.M.9 Orange with black, very light strai, small.	0·04	1·3	0·15	0·61	3·9	0·03	76·5	9·8	0·03	7·2

such materials with other countries; and with arranging for exact chemical, spectrographic and other analyses to make comparisons beyond the purely visual stage—which can be extremely misleading with glass. To illustrate this we give a report of an analysis just received (14 November 1962) of glass beads made through the courtesy of the Eastern Mining and Metals Company, Ltd, Dungun, Trengganu, Malaya. These are of nine standard common types found in sites all over the Sarawak river delta and at Niah (Table I). Progress has already been made; further correspondence or exchange would be welcome.

While in Kuching recently, our friend Professor Yih-yüan Li provisionally examined the Bintulu material. He thought it looked closely like the glass known to him from the Ami of Taiwan. I have noted visual parallels with Dr Robert Fox's finds in Calatagan, Philippines; one of our Niah specimens therefore is now at the National Museum in Manila for comparative analysis. Comparison with similar pieces from Malaya are also in hand. A piece of what may be 'western' (Near East?) glass from near Santubong is at the Cornell Glass Museum for further study. Our Malayan colleague, Dr Alastair Lamb, has found extensive 'western-type' glass in northwest Malaya and southwest Thailand. But his main material of this sort is notably *absent* from West Borneo—which is, after all, nearly 1,000 miles further eastward.

Clearly, crescentic glass bangles have an enormous Asian range. They fully merit the attention Mrs de Beauclair has now happily focused on them. As a whole, glass in general has been neglected in Asian prehistory and ethnology.