

EVIDENCE FOR THE MANUFACTURE OF AMBER BEADS IN LONDON IN 14-15th CENTURY

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Evidence of jewellery making in 14-15th century London has been identified from the medieval rubbish dump levels excavated on the site of Baynard's Castle in 1972. The evidence comprises amber, jet and box wood beads and one fragment of coral. It is proposed to examine only the former in this note.

The amber fragments which consist of irregular lumps, partly completed, discarded and finished beads have been identified as Baltic amber and have a colour range of dark orange to pale yellow¹. A few beads are of opaque white amber known as bone amber. The amber was found in 14-15th century deposits, which due to their waterlogged condition has more or less preserved the original colour. Under normal circumstances when amber is exposed to the atmosphere, it tends to slowly darken in colour and the surface patination becomes cracked and crazed².

THE MATERIAL

1. (Layer 250) Find no. (4790) (2886) (2885)

Unfashioned fragments (Pl. 1)

13 pieces; irregularly shaped; size range 18mm-5mm diameter. One piece has an inclusion of a piece of tree bark or leaf. These pieces were perhaps discarded because they were too irregular, too small or faulted.

Partially worked or completed beads (Pls. 2, 3, 4, 5)

- (a) Faceted; 5 beads roughly shaped in the form of short cylinders with approximately 7 facets on each; size range from 6-4mm diameter 3-2mm length.
- (b) Faceted and drilled; 32 beads have their sides faceted and a central drill hole. 5 of these apparently split whilst being drilled; 12-4mm diameter.
- (c) Turned and partly polished; 48 beads of ranging shapes³ *i.e.* 2 oblate disc (22mm diameter), 8 ellipsoid long beads (15-4mm length), 7 standard circular (13-6mm length) 14 short barrel (10.5-4mm length), 18 undefined, represent part finished beads in the first stages of the turning process with facet marks still visible.
- (d) Completed; 7 beads of varying shapes, *i.e.* 3 oblate disc, circular, (8-5mm diameter, 3.5-2.5mm length). 1 ellipsoid (7.5mm length), 1 standard circular, (6mm length 6mm diameter) 2 short barrel, (3mm length).

2. Material from other deposits

(Layer 1)

(399) Complete bead; standard circular; (7.5mm length, 13mm diameter).

(449) Complete bead; standard circular; (6mm length, 6mm diameter).

(Layer 10)

(310) Half a bead; standard circular; (7mm length, 7.2mm diameter).

(Layer 23)

(1548) Complete bead; short barrel (5.5mm length, 7mm diameter).

(Layer 23B)

(2097) Complete bead; standard circular, possibly hand turned as the surface is very uneven but polished; (15mm length, 14mm diameter).

(Layer 55)

(1794) Complete bead, oblate disc; (3.8mm length, 8.2mm diameter).

(Layer 79)

(1836) (*Pl. 6*) An incomplete string of 8 ellipsoid amber beads threaded on two lengths of fine cotton string⁴, 120mm and 67mm in length. The beads range in size from 7mm-9mm length with an average diameter of 6mm and central holes of *c.* 1.5mm diameter. One of the beads contains a small inclusion of a piece of twig.

The material from Baynard's Castle clearly shows the stages required to turn a piece of raw amber into a finished bead. After the selection of a suitable lump the initial stage was to trim the piece by cutting or sawing thus producing a cuboid or polygonal shape with faceted sides. The central hole was then drilled and the bead turned and polished into the finished article.

As the number of split examples indicate the drilling part of the operation was clearly difficult to achieve without accident. The wide spaced spiral marks visible on the holes of some of the broken examples perhaps indicate the slowness of the drill used and several pieces clearly show (*e.g. Pl. 4* top central) that the hole was started from two opposing sides to meet in the centre. It is not possible from the evidence of the amber itself to speculate on the type of drill employed though one or two unfinished holes indicate that the bit had a sharp conical point. The regularity and smoothness of the polished surface of the finished beads must indicate that they were mechanically turned, presumably on a lathe, and not polished by hand.

A portrait of a paternoster at work from the 'Housebook' of the Zwölfbrüderstiftung' at Nuremberg⁵ and dated to the early 15th century (*Pl. 7*) is of interest in this connection though it provides no direct evidence of the method used in London. Though the artist must have omitted many details of the lathe-drill in the picture the basic *modus operandi* can be deduced. He appears to be operating a horizontal lathe drill powered by a hand bow. A trifurcated, hollow (?) bit bores into a block of, presumably, wood, producing a complete though rough bead. The beads were subsequently drilled and finished. This technique clearly cannot be taken to represent that employed for the production of amber beads in London, but the size and character of the machinery and the operation must reflect a similar situation.

Bead necklaces were not very common in the medieval period and beads were mainly used for rosaries worn around the neck or waist, as a badge of faith (*Fig. 1*). The many different sizes of beads in these deposits suggests that they could have been made or used for rosaries where different size beads represented different parts of the prayer. Usually a set of rosary beads had ten small and one large bead. The small ones represent 'Aves' for the 'Hail Mary', and the large ones 'Paternosters', the 'Our Father' and 'Glorias'. A 'Gaude' is one of the large beads placed between the decade of 'Aves' in a rosary⁶. From the 11th century, the joys and sorrows of the Blessed Virgin had been associated with 165 beads. The saying of one Paternoster, ten Aves and one Gloria for each of the five glorious mysteries of the Blessed Virgin became more common by the 14th century. The medieval paternoster, later called rosary, was much less formalized; there were two types, circlets ('chaplets') and single strings of beads with tassels on the end.

The presence of jet, coral and boxwood beads with the Baynard's Castle material also indicates the possibility of these being used as rosary beads.

The stratigraphical context of the beads suggests that their manufacture can be dated to the 14-15th centuries. It is not possible to say where in the city this took place as the pieces for the most part represent waste material recovered from a general rubbish deposit. However, it is likely that these deposits were accumulated and carried to the waterfronts, often for

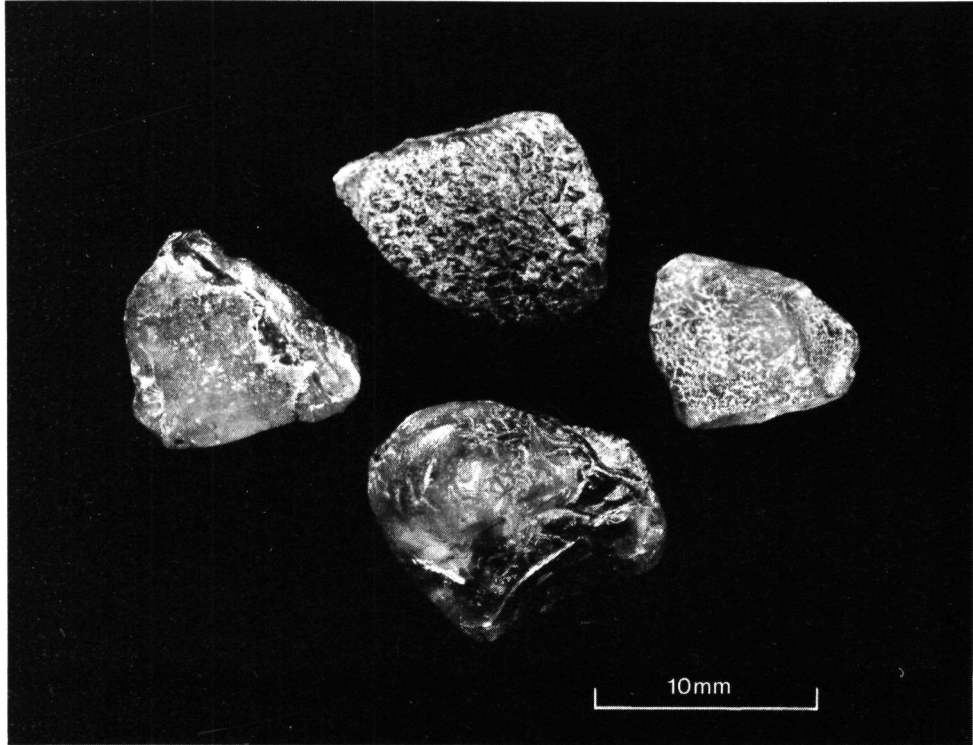


Plate 1 — Baynard's Castle: pieces of raw amber.

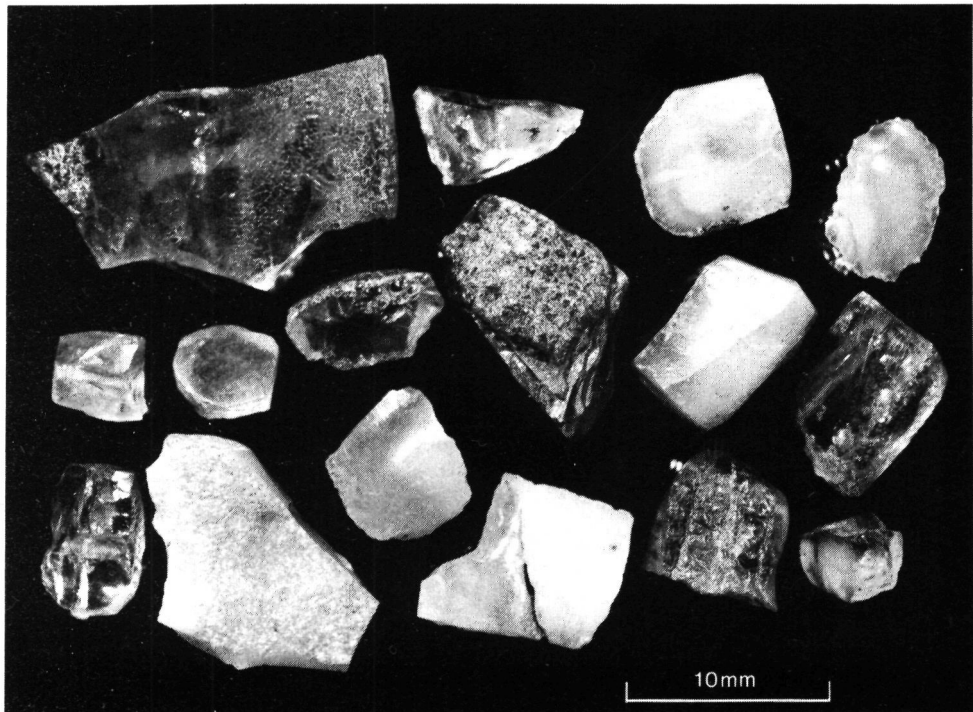


Plate 2 — Baynard's Castle: Amber with edges roughly trimmed to remove surface patination.

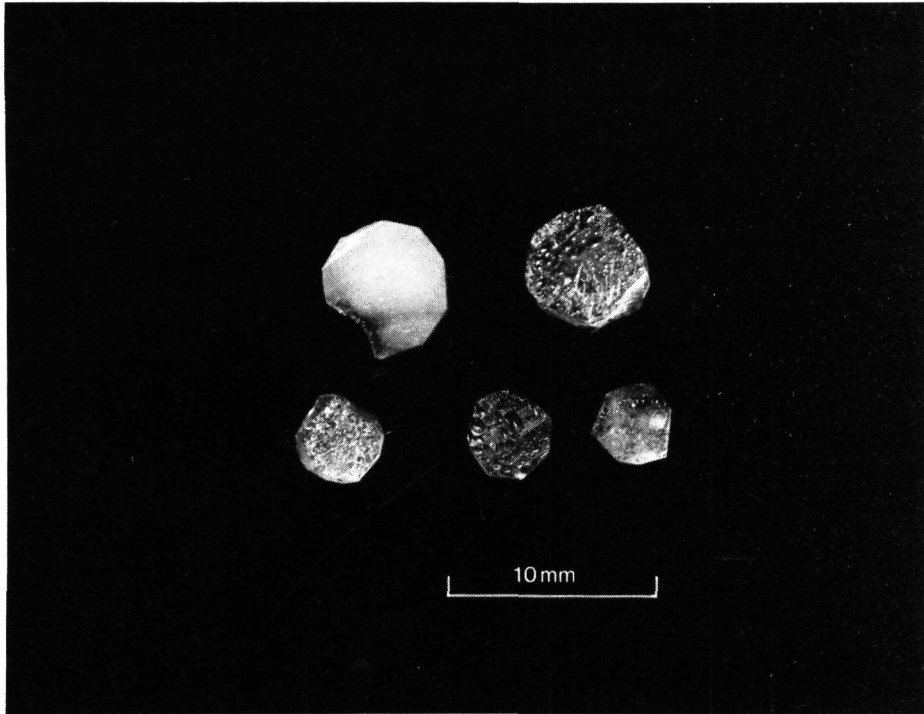


Plate 3 — Baynard's Castle: Roughly shaped beads with faceted sides discarded before drilling of centre hole.

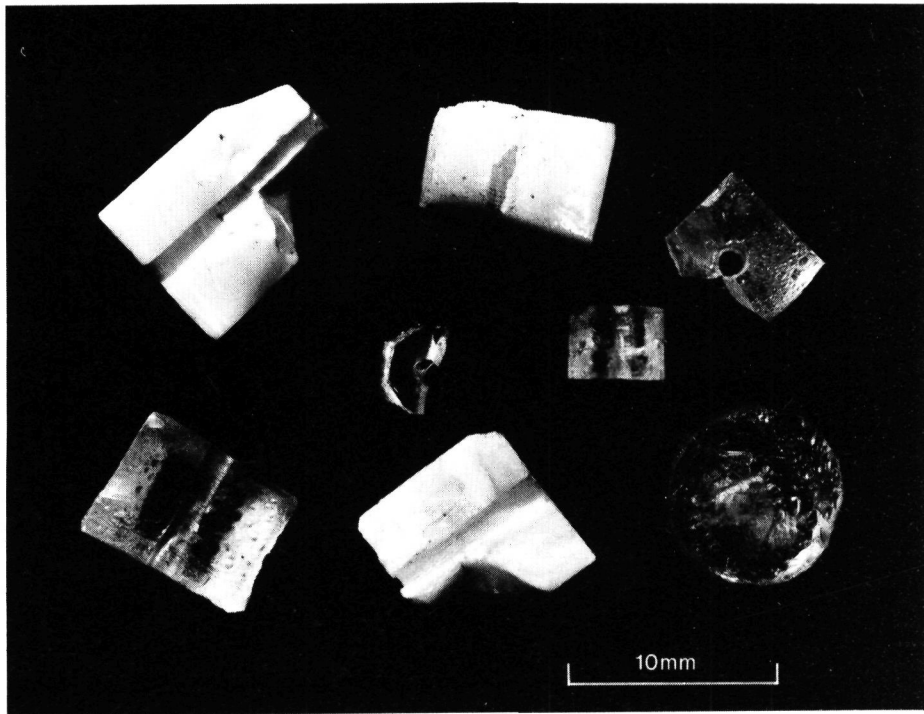


Plate 4 — Baynard's Castle: Discarded beads broken during drilling.

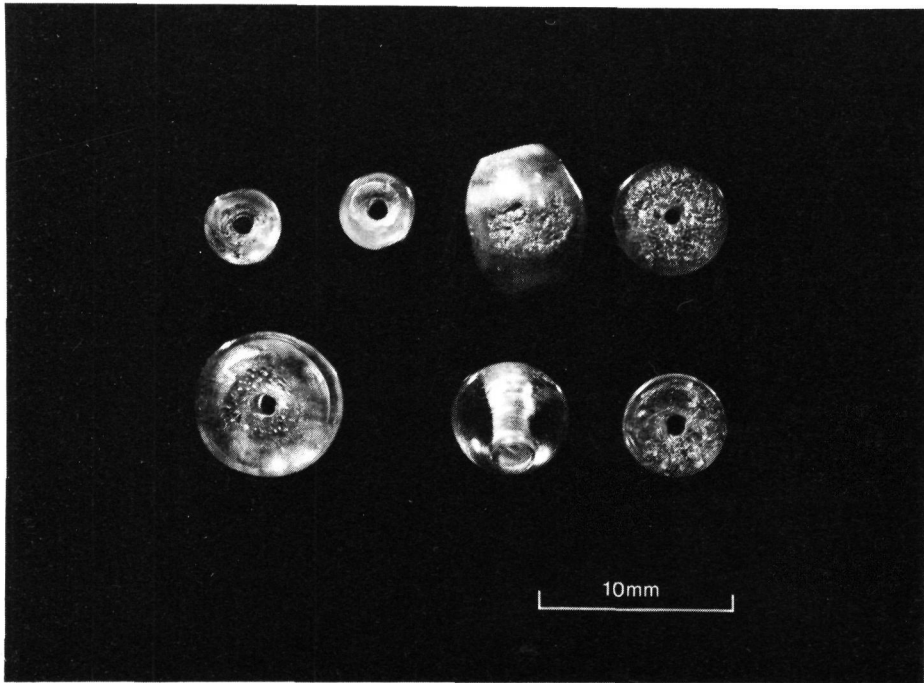


Plate 5 — Baynard's Castle: Finished beads.



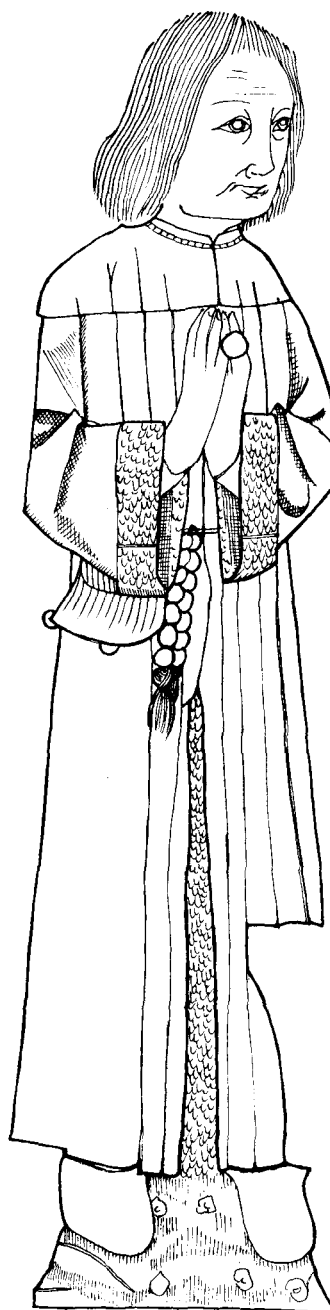
Plate 6 — Baynard's Castle: 15th century amber beads on string of cotton. (See text for measurements).



Plate 7 — Paternoster making beads, Nuremburg. 15th century.



Unknown Civilian c.1465



Thomas Williams 1495

Fig. 1 Funerary brasses from St Helen's, Bishopsgate, showing rosaries worn at the waist.

transportation down river by barge, by 'ward rakers' or street cleaners organised as their names suggests on a ward basis'. It is perhaps worth pointing out that both the site of Baynard's Castle and the streets of Paternoster Row and Ave Maria Lane, where the bead-makers had their workshops⁸, lie comparatively close to one another and within the same ward.

The main source for amber in the medieval period was the Baltic coast and it formed part of a very considerable trade based on timber and furs. However, despite the distance which it had to come its relative value compared with other materials used for beads and jewellery remained low. Three London inventories can serve to demonstrate this point.

1. *Annys Borde, Dec. 1544 inventory of goods*⁹ —
Pair of jet beads gauded with silver, six gaudees and a little silver cross 2s.
Certain bead stones with a pair of amber beads 8d.
2. *Thomas Cutler, 1389, inventory of goods*¹⁰ —
Pair of silver paternosters valued at 3s.4d.
Pair of gilt paternosters with crucifix at 4s.
Pair of amber paternosters at 20d.
3. *Paston letters. A late 15th century inventory.*
A box with beads, where of 2 pair of jet with paternosters of coral 40d.
A pair of jet 12d.
5 pairs of box 10d.
A pair of amber 18d.

NOTES

1. Dr. P. Whalley of the Department of Entomology at the Natural History Museum kindly identified the amber as 'good quality Baltic amber'.
2. D.E. Strong *Catalogue of the Carved Amber in the department of Greek and Roman Antiquities* (British Museum, 1966) 14-15.
3. H.C. Beck 'Classification and Nomenclature of beads and pendants'. *Archaeologia* 77 (1927) P1.II and III. P1.II long beads group 1.D.1.a. Plate II 1 x B 2.b. and 1.B.2.b. P1.II. Disc beads group 1.C.1.a. and short barrel beads group. P1.III standard beads group 1.C.4.d.b.
4. The identification was kindly made by Mr. George Willcox.
5. *Das Hausbuch der Mendleschen Zwölfbrüderstiftung* (Nuremberg 1965) P1.24. F. Bruckmann K.G.
6. *The Shorter Oxford Dictionary* (Oxford 1933). Rosary.
7. E.L. Sabine 'City Cleaning in Medieval London' *Speculum* 12 No. 1 (1937) 19-43.
8. A.F. Mason *An Illustrated Dictionary of Jewellery* (Reading 1973) 97.
9. *Ed. I. Darlington London consistory Wills 1942-1547* (London Record Society 1967)
10. *P.R.O. Chancery enrolments of extend on debt* 38/16.

ACKNOWLEDGEMENTS

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F. Bruckmann K.G. of Munchen have kindly given permission to reproduce the photograph of the Paternoster at work. The photographs of the amber beads were taken by Miss Lauren Dale and Mr. Trevor Hurst of the Museum of London.

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