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THE CHRONOLOGY OF PREHISTORIC GLASS BEADS AND ASSOCIATED CERAMIC TYPES IN BRITAIN.

BY THE HON. JOHN ABERCROMBY.

[WITH PLATES XVIII-XXII.]

In a paper by P. Reinecke (*Die Altertümer unserer heid. Vorzeit*, Band V, p. 76) he places in the Early Bronze Age some of the glass beads, more especially the ribbed, notched (segmented) beads of opaque, blue vitreous paste, occasionally found in British barrows.

These ribbed or notched beads seem to be made from a short tube of thin opaque glass or vitreous paste of cobalt blue or light greenish colour, with a diameter of from 3 to 6 mm., by grooving it all round at intervals of about 3 mm. These grooves are at slightly different intervals on different beads and the grooving or ribbing varies in depth; sometimes it forms a very slight indentation. The resultant segments are therefore sometimes more globular, sometimes flatter, in which case the bead at its greatest diameter may be almost angular. In their present state the ribbed beads are composed of from 4 to 12 segments, and they are often greatly discoloured. The beads which seem to resemble them most and also exhibit the same individual differences are from Tell-el-Amarna, c. 1400 B.C. in the Ashmolean Museum. But some of the ribbed beads of the XXVI dynasty, c. 600 B.C., in the British Museum, also resemble the beads from Wilts and show the same irregular make.

Ribbed beads are not at all uncommon in post-Roman times in Allemannic, Merovingian and Anglo-Saxon graves, but they differ in several respects from the above and cannot be mistaken for them.

As the accurate placing in time of these beads, and of the pottery types that accompany them, is a matter of considerable archæological importance, I give below all the data of which I am aware that may tend toward this result.

1. In 1723 Stukeley opened a barrow near Stonehenge and found at a depth of fully 4 feet an urn full of cremated bones, apparently of a girl. Mixed with bones were "beads of all sorts and in great number, of glass, of diverse colours, most yellow, one black, many single, many in long pieces notched between, so as to resemble a string of beads and these were generally of blue colour. There were many of amber of all shapes and sizes, flat squares, long squares, round, oblong, little and great. Likewise many of earth of different shapes, magnitude and colour, some little and white, many large and flattish like a button, others like a pulley. But all had holes to run a string through. Many of the button sort seem to have been covered with metal; one was covered with a film of pure gold." (Stonehenge, p. 44, Pl. XXXII.)

This important find is no doubt lost, but among the objects figured are a bronze knife-dagger 6.3 cm. long with two rivets; a fragment of pottery with incised chevrons and zigzag; a bronze awl; three small amber beads; a ribbed or notched bead of blue glass; a small black glass bead; a white bead of earth and a circular bead of earth covered with gold with several circular lines incised, parallel to the circumference.

- 2. In a barrow at Kingston Deverill Sir R. Hoare found a burnt interment and, among the bones, over forty amber beads of various forms and sizes; some of jet; some ribbed ("pulley") beads of vitrified matter; and a bronze pin (awl). *Anc. Wilts*, i, 45, 46. This find seems to be lost.
- 3. In another barrow not far from the last was found a burnt interment and among the bones some beads of amber, jet and glass, and a pair of ivory tweezers. A.W. i, 46. This find is also lost.
- 4. In Upton Great Barrow at a depth of 11 feet was found a cinerary interment and with it sixteen ribbed beads of green and blue glass; five of jet and twenty-seven of red amber, the whole forming a necklace. A.W. i, 66, 67. These are now in the Devizes Museum.
- 5. In a barrow at Winterbourne Stoke was found an urn inverted over cremated bones. Among them were a small bronze pin (awl); five rings of Kimmeridge shale, a small conical button of the same material and perforated; several glass ribbed beads; one of jet; and one of amber. A.W. i, 114. The shale objects and the amber bead are now at Devizes; the rest of the find is lost.
- 6. In another barrow not far off was unearthed a large cinerary urn inverted over burnt bones and a smaller vessel. Among the remains were two shale discs, one large perforated amber bead, four ribbed beads and three of a black colour. A.W. i, 114, 115. Of this find only the small vessel exists in the Devizes Museum.

In a small barrow on Westbourne Stoke Down, Hoare found a burnt interment and a large flat glass bead of very opaque glass with spiral lines of blue and white. A.W. i, 119. This bead is in the Devizes Museum and is certainly post-Roman and Saxon.

- 7. In one of the barrows south of the Circus at Stonehenge was found a deposit of burnt bones and a great many beads. Some were ribbed glass beads; two of stone, one of transparent horn-like substance; but most were of amber and much decayed. A.W. i, 163. At the Devizes Museum are preserved three of the ribbed beads, the two of cherty stone and ten small round amber beads.
- 8. Another barrow of the same group had been partially opened before, thereby disturbing a skeleton accompanied by a drinking cup. On the floor was found another skeleton with a quantity of beads, among them some glass ribbed beads. A.W. i, 163. Three of the ribbed beads and nine of the small amber beads are in the Devizes Museum.
- 9. In another barrow of the same group were found two small flat rings of Kimmeridge shale and one ribbed bead of blue glass. A.W. i, 168. All these objects are in the Museum at Devizes.
- 10. In another barrow of the group was a burnt interment and a great variety of amber, jet and glass beads. A.W. i, 205. Of this find there are preserved at Devizes two ribbed beads of blue glass; eleven round amber beads and six fusiform lignite beads.
- 11. In one of the Wilsford group of barrows was a cremated interment and a considerable quantity of glass, jet and amber beads and a bronze pin (awl). A.W. i, 207. The whole of this find appears to be lost.

In one of the Lake group of barrows Hoare found a burnt interment and with it

a lance head of bronze; an ivory bead, a bronze pin and a large stone bead stained red. A.W. i, 210. The bronze awl and the bead are at the Devizes Museum. The bead is of very opaque glass with concentric layers of black and dark red, and seems to me to be certainly Saxon.

- 12. In another barrow of the Lake group was a cremated interment, four glass ribbed beads, one of stone, two of amber and a bronze pin or awl. A.W. i, 211. One of the greenish blue ribbed beads and the stone bead are preserved at Devizes; the other ribbed glass beads are in the British Museum.
- 13. In a barrow at Woodyates, Hoare found a very large urn, 47 cm. high, containing burnt bones and beads of amber and glass. A.W. i, 238. This find is apparently lost.
- 14. In an adjoining barrow with two tumps, surrounded by a circular vallum, Hoare discovered in one of the tumps a burnt interment accompanied by several beads of glass, amber and jet; a small bronze awl and a beautiful little cup. This "expanded" cup is at Devizes, the rest of the find being lost; one like it from Beckhampton, Wilts, is figured on Pl. XVIII, Fig. 1. In the other tump was another burnt interment, about 100 amber beads, some flat pieces of amber; a small bronze knife with three rivets and a bronze awl. A.W. i, 238. The knife and some of the amber beads are now at Devizes.
- 15. In a barrow at Aldbourne, Wilts, Canon Greenwell found at the centre a cinerary interment. Among the burnt bones were three ribbed beads of vitreous paste of whitish-green colour; two beads of amber; one of lignite; pieces of a small bronze knife and two bronze awls; and two "incense cups" of the expanded type, peculiar to Wilts and Somerset; one of these and its cover are figured on Pl. XVIII, Figs. 2, 3. Arch., vol. 52, pp. 50–53. These are now in the British Museum.
- 16. In a barrow on Tan Hill, Wilts, Dr. Thurnam found a burnt interment and with it a small ribbed bead of bluish glass and three larger ones of jet. Wilts Arch. Mag. vi, 324. These are now preserved in the British Museum.
- 17. In a barrow on the Wansdyke, Wilts, Dean Merewether found a ribbed glass bead, figured in *Proc. Arch. Inst.* 1849, *Salisbury*, Fig. N.
- 18. In a barrow at Syrencote Down, Wilts, five jet and eight pale blue ribbed glass beads were found with a burnt interment. They are now in the British Museum.
- 19. In a barrow on Bloxworth Down, Dorset, Warne records the finding of a large cinerary urn, Pl. XVIII, Fig. 4, inverted over cremated bones. Among these lay six ribbed glass beads, eight oval amber beads and a pair of bone tweezers. *Celtic Tumuli*, ii, 13. All these objects are in the British Museum.
- 20. Under a tumulus at Priddy, Somerset, was found a primary interment of burnt bones and among them four rich red amber beads, highly polished; a small blue bead of opaque glass; part of a bronze knife dagger and a bronze ring. *Arch. Journ.* xvi, 148-9.
- 21. The tumulus of Carn Creis, Boscreggan, Cornwall, was explored by Mr. Borlase. At the centre was a natural granite rock of squarish tabular form, 8 feet across and 4 feet high, surrounded by a ring of stones 18 feet in diameter, and the whole had probably been covered with a heap of small stones. Resting against the south side of the rock was the greater part of a barrel-shaped urn. The pottery was thin and earthy, much mixed with gravel and from 6 mm. to 1 cm. thick. It was 30½ cm. high and had two handles with a perforation just large enough to receive a cord. It contained, besides ashes, bones and a few rough chips of flint, a fragment of a globular glass vessel, 6 mm. thick, of olive green hue against the light, but the surface was covered with a bluish black coating of an iridescent appearance. Its diameter must have been about 7.6 cm. On analysis it was found to contain no lead, but much iron, as is the case with some (Late Celtic) beads from Yorkshire.

About 45 cm. east of this vessel were fragments of another. Close by lay fragments of a third urn and a complete urn 10 cm. high. 35 cm. east of this small urn and touching the inner side of the stone circle were three pieces of black, hardbaked, sand-glazed pottery 1 cm. thick. One of these is part of a plain bevelled rim and on another can be traced a rude pattern incised with a pointed instrument. Together with these were twelve peculiar beads of glazed earthenware. The colour of the glaze is a bright turquoise blue; ten are cylindrical and fluted; the two others are larger and barrel-shaped, though fluted like the rest. Arch., vol. 49, pp. 186–188, where the beads are figured. The beads are in the British Museum and the larger ones are unlike any that I know. The glass and the glazed pottery seem to have disappeared, but a fragment of the urn in which the glass was found is in the Truro Museum. The urns are figured on a very diminutive scale in the Journ. Instit. of Cornwall, vi, Pl. III, but seem to belong to types that are known in Cornwall and perhaps belong to the end of the Bronze Age.

- 22. At Ringwold, halfway between Dover and Deal, below the floor of a tumulus, four cylindrical holes had been cut into the underlying chalk rock and each contained a large cinerary urn. One of these, Pl. XVIII, Fig. 5, was inverted over two smaller vessels, Pl. XVIII, Fig. 1, and among the ashes lay three ribbed heads of light green vitreous paste and a single bead of the same material and colour with a diameter of about 7 mm. Two of the urns were crushed, but the third is figured on Pl. XIX, Fig. 2. Arch., vol. xlv, pp. 54–55.
- 23. In exploring Muttilow Hill, Cambridgeshire, near the southern end, and three feet from the surface, a cremated interment was discovered, and among the bones lay six ribbed beads, each of five segments, a bone pin and part of a bronze pin. The finder describes the beads as of pottery, but Dr. Thurnam in *Arch.*, vol. xliii, p. 495, mentions them under the heading "Glass." Close to the interment lay a small urn of no definite type, but in other parts of the barrow were four cinerary urns of overhanging rim type, Pl. XIX, Fig. 3. *Arch. Jour.*, ix, 227.
- 24. At Clayton Hill, Sussex, was found, probably with a cinerary interment, a small "slashed cup," Pl. XIX, Fig. 4, which contained an annular pendant of bright blue vitreous paste, of the same texture as Egyptian porcelain, with a loop for suspension. Trans. Arch. Inst., 1853, p. 61.
- 25. A similar pendant from Oxsettle Bottom, Sussex, of greenish porcelain, resembling Egyptian porcelain, is figured, *Hor. Fer.*, Pl. XXV, 9. Green porcelain ribbed beads were found with it. *Arch.*, vol. xliii, p. 495. The pendant is now in the British Museum.
- 26. In a Yorkshire barrow Mr. Mortimer found two cinerary urns of overhanging rim type, Pl. XIX, Fig. 5, and with them nine jet or shale beads, more or less globular and two small beads, seemingly of a kind of vitreous paste. In the preface they are spoken of as double beads of vitreous paste. Forty Years' Researches, etc., p. 169.
- 27. In a tumulus at Gilchorn, Arbroath, Forfarshire, was found a cinerary urn of overhanging rim type like Pl. XX, Fig. 1, an "incense cup," Pl. XX, Fig. 1A, a flint flake or knife, and a small, irregular oval whitish glass bead, partly opalescent. P.S.A. Scot., xxv, 447-456. All these objects are preserved in the National Museum, Edinburgh.
- 28. In removing gravel from a mound near the mill of Marcus, Brechin, Forfarshire, two urns were disclosed. One of these was much broken, the other, Pl. XX, Fig. 2, contained a small ribbed bead of glazed greenish paste. *Op. cit.*, xxiv, pp. 470-1. These are now in the museum at Edinburgh.

Although no glass was found with the following nine interments, these are evidently contemporary with the twenty-eight that precede them, as they were accompanied by urns of overhanging rim type, by "expanded" and "slashed" cups or by bone tweezers, all of which we have already seen may be concomitants of glass beads or porcelain pendants. They also serve to enlarge slightly our knowledge of the civilisation of that particular period.

- 29. Upton Lovell "Golden barrow," Wilts: burnt human bones, with cylinders and plate of gold, lignite, amber beads, and "nodulated" cup like one from Avebury, Pl. XX, Fig. 3; two urns, bronze awl and dagger. (Devizes Mus., Anc. Wilts, i, 98, 99.)
- 30. Normanton group: a large barrow contained objects plated with gold and some set with amber, and a "slashed cup," Pl. XX, Fig. 4A. (Anc. Wilts, i, 201.)
- 31. Another large barrow of this group contained a skeleton with amber disc and pendants, gold-plated shale beads, "nodulated" cup and urn, Pl. XXI, Fig. 1. (Devizes Mus., Anc. Wilts, i, 202.)
- 32. Winterbourne Stoke group, Wilts: a barrow contained a burnt body in a coffin, a bronze dagger, and two pieces of bone with bronze rivets (probably the hilt), a smaller bronze dagger, pointed, and a pair of bone tweezers. (Devizes Mus., Anc. Wilts, i, 122.)
- 33. Normanton group, Wilts.: a barrow contained a burnt body in a coffin on the natural surface; cist contained bone tweezers and a bronze dagger, the sheath lined with linen. (Devizes Mus., Anc Wilts, i, 207.)
- 34. Aldbourne, Wilts: in centre of barrow, burnt bones with bone tweezers, bracer and oval pendant, both of stone. (Arch., lii, 55, 56.)
- 35. Lord's Down, Dorset: central deposit of burnt bones, with bronze dagger, bone pin and tweezers (Dorchester Mus., Celtic Tumuli, i, 50).
- 36. Handley Hill, Dorset: cinerary urn, Pl. XXI, Fig. 2, inverted as secondary interment with bone tweezers. (Pitt Rivers, iv, 169.)
- 37. Camerton, Somerset: with cremated interment, an "expanded" cup, bronze dagger and pin with ornamented head (*Arch.*, xliii, Figs. 45, 157, 170; Evans, op. cit. Figs. 304, 456).

The principal facts that emerge from the above concise summary of thirty-seven interments are: (1) that though ribbed or notched beads were the commonest sort, yet the ordinary round beads were also known; (2) that these beads belong to a time when cremation was in vogue; (3) that the cinerary urns were frequently of the overhanging rim type; (4) that amber was fairly abundant; (5) that in twenty-one instances out of twenty-eight, the finds of glass were made in the southwest of England.

In a less direct manner it also appears that glass beads were contemporary (6) with stout bronze daggers up to 22 cm. in length, like Evans' (op. cit., Figs. 302, 303); (7) with ornaments of gold of an unusual kind.

With regard to amber it is a notorious fact that this substance is not commonly encountered in the graves of Northern and Central Europe, nor in the terremare and pile-dwellings of Italy. It is not till the civilisation of Hallstatt and Villanova have emerged and iron has come into use that amber is found in an abundance which goes on increasing in the subsequent La Tène period. The same is true of glass beads. A few small pale blue beads of the Bronze Age have been found in

Denmark and Mecklenburg. A very few instances are known where glass beads have occurred in Germany with interments of the later Bronze Age. In several of the Swiss pile-dwellings of the same period beads of various colours have been discovered, but in no great quantity, and none in the pile-dwellings of Italy, though this country lies so much nearer to the sources of glass beads than Northern and Central Europe.

In Britain during the earlier Bronze Age amber is equally rare. With the forty-one beakers or drinking cups, contemporary with flint daggers, flat celts of bronze, and thin triangular bronze daggers, exhumed by Sir R. Hoare in Wilts, no amber was found; nor, with two exceptions—one in Yorkshire and one in Aberdeenshire—has it ever been observed with any vessels of this type. In the record of the numerous barrows of the Bronze Age explored by Bateman in Derbyshire and Staffordshire no mention is made of amber. Although Canon Greenwell and Mr. Mortimer have examined in Yorkshire hundreds of interments which cover the whole of the Bronze Age the former never found any amber at all and the latter explorer only on one occasion. But a small lump of amber is recorded to have been exhumed from a barrow at Huggate, in Yorkshire. An amber necklace was found round the neck of a contracted skeleton at Little Cressingham in Norfolk; a very few finds of amber with interments are known from Dorset; and two amber cups, both of which seem to have been turned on a lathe, were taken from barrows at Hove in Sussex and Clandown in Dorset. With the first of these interments was a stone axe and a bronze dagger; with the second a bronze dagger and an urn of overhanging rim type. There may be also a few other instances of amber occurring in Bronze Age interments, of which I have not heard.

On the mainland of Scotland, with the above exception, there is no record of amber being noticed with any Bronze Age interment. But at Huntiscarth in Orkney, some angular pieces of amber and four gold discs were found in a cist under a tumulus. (*P.S.A.S.*, iii, 195.)

Amber beads have several times been found with hoards of bronze implements, both in England and Scotland, all or most of which belong to the later Bronze Age.

It appears that Wilts held at one period quite a peculiar position. It attracted to itself, as a magnet attracts steel filings, nearly all the glass and amber that came to Britain. For the absence of unworked pieces of amber in Wilts, and the scarcity of amber finds with interments in other parts of Britain during the whole Bronze Age, makes it probable that most of the amber found in this county was imported at the same time as the glass beads and in some quantity. For in one grave, Hoare found upwards of 1,000 beads, in another 100, in a third 40; an abundance which has no parallel in other parts of Britain. And here it may be remarked that the Wilts beads are nearly all sub-globular and small, about the size of a hazel nut and some no larger than a pea, presenting a great contrast to the large globular beads, with a diameter of from 3 to 4 cm., such as were found at Magdalenberg, Adamsberg, and other places in Carinthia.

But with regard to sepulchral articles of bronze Wilts was nearly as poor as the rest of Britain. All that remains for determining the time of the importation of glass beads—for I think their introduction from abroad will be granted—consists of the stout bronze daggers and a bronze pin with a hollow head (interment 37). There is also the presumption that, judging from the analogy of what took place on the Continent, the trade of beads in Britain cannot well be dated earlier than the Hallstatt period.

The bronze daggers and the pin have all the appearance of belonging to the pure Bronze Age of Central Europe, though to the later part of it. Pins of the same type as the above are very common in the later Bronze Age stations of Auvernier, Cortaillod, and Corcellettes on Lake Neuchatel. But an isolated example like the above must have been imported or copied from an imported one, and that would imply considerable retardation before its arrival in Britain.

It has to be taken into account that Britain lay entirely off the main currents of civilization that traversed the Continent from south to north and vice So much so that iron, which was known in Italy and Central Europe c. 1200-1100 B.C., did not reach our island till about 400 B.C., and only a very few of the bronze fibulæ of the earlier Iron period, and these not the oldest, penetrated This retardation of 800 to 700 years gives a measure of the remoteness and inaccessibility of the British coast. It is evident there could have been no regular trade between Central Europe and Britain; no direct consignments of goods were made to it from the centres of manufacture on the Continent. Whatever reached its sequestered shores from distant places must have been the result of accident and driftage. The only direct trade it had would be with the adjacent people on the other side of the Channel. They, too, from their remote position, were unable to furnish much in the way of bronze, but they were able to do a little trade in small amber beads, and perhaps in ribbed or notched beads of vitreous paste, far less attractive than most of the glass beads that circulated on the Continent. Hence it came about that stone perforated axes and stout bronze daggers were used in Britain long after they had been discarded in Central Europe, for the few bronze swords, spear-heads, etc., of the Bronze Age and Hallstatt Period, that first filtered in driblets into the country, and were then reproduced with variations by native smiths, were too precious to be laid by for ever in a grave, even at the end of the Bronze Age in Britain. And in some large cemeteries of the Early Iron Age, such as Sta. Lucia near Tolmino, hardly any weapons were found.

Although bronze swords and weapons, other than daggers, are not found in graves that are certainly contemporary with notched and other glass beads; and although it is perfectly logical to argue that their absence from graves of this period supposes, if it does not actually prove, their non-existence at that period, there is good reason to believe that bronze weapons and instruments, other than daggers, were contemporary with the glass beads. There is a find in the county of Clackmannan which helps to surmount this difficulty by bringing a cinerary urn

of overhanging rim type indirectly into touch with socketed celts, gouges, spear-heads, swords and other objects.

In making a road at Alloa a small cemetery, of twenty-two cinerary urns, was exposed, of which only one of the overhanging rim type is preserved, Pl. XXI, Fig. 3. There was one unburnt burial among the group close to this urn, and on the stone cover of the cist which contained the skeleton were two penannular armlets of gold with slightly expanded ends, Pl. XXII, Fig. 1. Anderson, Bronze and Stone Ages, pp. 62, 63.

Two bronze bracelets, Pl. XXII, Fig. 2, of the same type as the above, are known from Achtertyre, Morayshire. They were found with two socketed spearheads (Evans, op. cit. Fig. 383) and a socketed celt: also portions of metal rings of soft solder of tin and lead, nearly in the proportion of 4:1. (Anderson, op. cit., p. 146.)

Other bracelets of the same type come from the hoard of Balmashanner, Forfar. Among the objects were eleven penannular bracelets of bronze, Pl. XXII, Fig. 3, three circular rings of bronze, two broken rings, one of bronze, the other apparently of *iron*, over 3.2 cm. in diameter, one celt with an oval socket and loop at the side; four penannular gold rings of triangular section formed of six pieces soldered together, the same as in Evans, *op. cit.*, Fig. 489; and, it should be remarked, twenty-eight amber beads. *P.S.A. Scot.*, xxvi, 182–5.

These hollow rings of triangular section connect this hoard with the Heathery Burn hoard in Yorkshire and with another from the West Highlands. In this last was a penannular gold armlet, Pl. XXII, Fig. 4, with expanded ends quite like those on a gold bracelet of La Gorge Meillet of the La Tène period. (*Matériaux*, vol. 15, p. 198, Fig. 43.)

Another bronze bracelet with expanded ends, Pl. XXII, Fig. 5, is part of a hoard from Monadhmor, Perthshire, consisting of a socketed spear-head, socketed celts, a socketed gouge, nine plain rings of different diameters and a circular hollow ring 7 cm. in diameter (*P.S.A.S.*, xvi, 27–31). Two exactly similar rings (Evans, op. cit., Fig. 500) were found in Edinburgh with a disc-headed pin (op. cit., Fig. 464) and a bronze sword of earlier Hallstatt type (op. cit., Fig. 353).

Perhaps it will be objected that it is not quite certain that the skeleton burial and the burnt interments at Alloa are contemporary and that the cinerary urn may be earlier than the gold armlets. In reply to this, may be adduced a bronzed blade or razor, like one figured by Evans (op. cit., Fig. 268), found at Shanwell, Kinross-shire, with the cinerary urn, Pl. XXI, Fig. 4, of nearly the same type as the Alloa example, but rather later as it shows transition to the cordoned type (P.S.A.S., xix, 115–117). Another blade of exactly the same type was found with an urn, Pl. XXI, Fig. 5, of the overhanging rim type. They came from a small cemetery near Musselburgh, Edinburgh (P.S.A.S., xvi, 419–429). Several blades of this type, all of them enriched with engraved geometrical designs, are known in Scotland, and two are figured in Evans (op. cit., Figs. 262, 267), who compares them with a very similar, but plain blade, found with a hoard of bronze objects at Taunton.

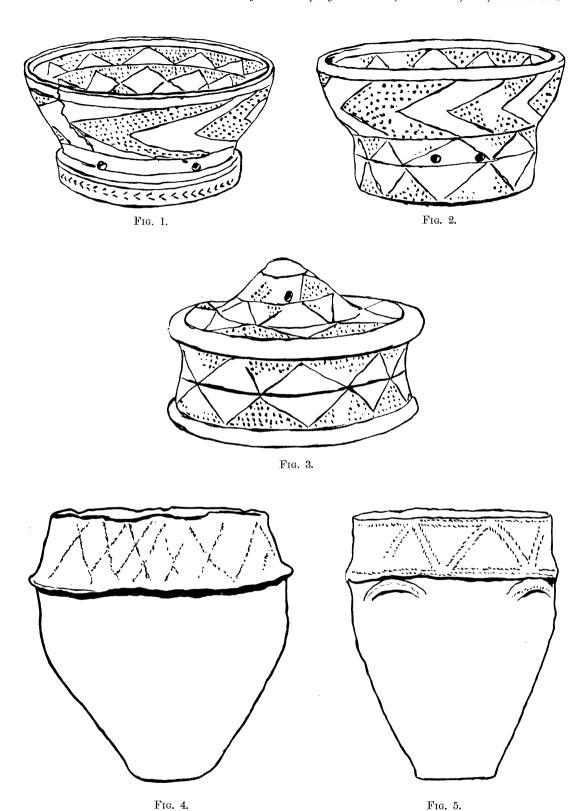
Among these objects is a torque with hook-ends like one from West Buckland (op. cit., Fig. 468). Torques with similar hook-ends, and most of those in Great Britain terminate in that way, may belong in France to the Hallstatt period (Mater., 14, p. 114, Pl. (14); and p. 485, Fig. 171). It may therefore be inferred that the difference of time between the skeleton and the cremated interments in the Alloa cemetery is unimportant and that both belong to the same period.

It has been amply proved that the vitreous beads, both the long ribbed and the globular, were imported into Britain at a time when cinerary urns of Thurnam's "overhanging rim" type were in use both in North and South Britain. As the type is diffused very abundantly over England, Scotland, and the eastern half of Ireland, it must have lasted a long time, for no other type of pottery covers so extensive an area. But at this particular period the type was no longer at its prime. The earlier examples present a very well-marked, nearly angular shoulder with a neck that sometimes exhibits an inward curve. In the example here figured, the angular shoulder is beginning to disappear or to develop a raised moulding below the shoulder, as in Pl. XXI, Fig. 4, which leads up to a new type. The very slight shoulder on the Muttilow urn, Pl. XIX, Fig. 3, and the absence of any on those from Ringwold, Pl. XVIII, Fig. 5, Pl. XIX, Fig. 2, show that both these interments from the east of England are later than those from Wilts in the west.

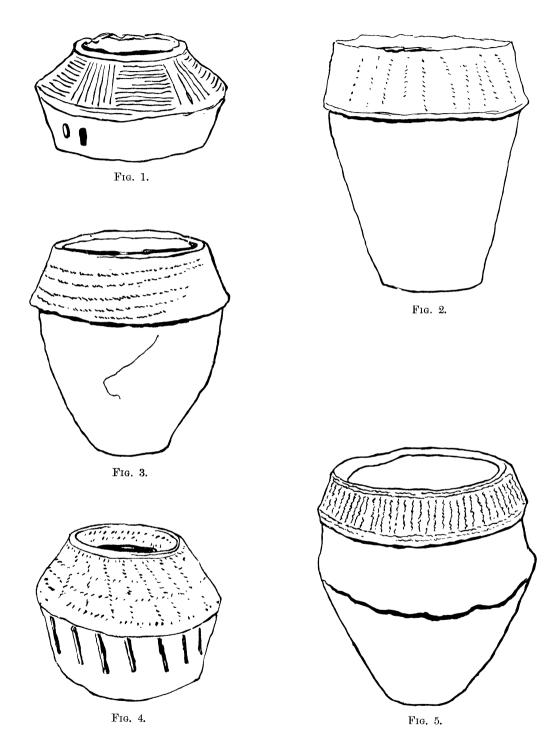
During the above period three new types of ceramic came into existence, termed by Thurnam the "expanded," the "nodulated," and the "slashed" cup. They are confined to the south west of England and almost to the limited area of Wilts. The "slashed cup," Pl. XIX, Fig. 4, found with one of the two porcelain pendants from Sussex, is sufficiently similar to Plate XX, Fig. 4A, known as the "Stonehenge cup," to allow us to attribute these ornaments to the same period as the vitreous beads.

Lastly, the overhanging rim type of pottery, at a time when it is no longer at its prime, has been found to be contemporary with gold and bronze armlets with slightly expanded ends. These ornaments appear to correspond in time with the Hallstatt period of the Continent, as more advanced and perfected examples like the armlet from the West Highlands, Pl. XXII, Fig. 4, approach the level of the La Tène period. Through these armlets it may be inferred that this type of pottery is also contemporary with certain socketed celts, gouges, bifid razors, and certain bronze pins, swords and spear-heads of the latest types.

Taking everything above into consideration, I conclude that the importation of these long and globular beads of vitreous material into Britain coincides with part of the Hallstatt period of Central Europe and may be placed approximately between 900 or 800–600 B.C. How the beads reached this country and by what stages can at present be only a matter of conjecture.



THE CHRONOLOGY OF PREHISTORIC GLASS BEADS.



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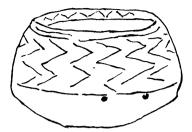
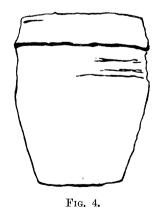


Fig. 1a.



Fig. 2.



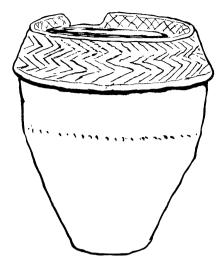


Fig. 1.

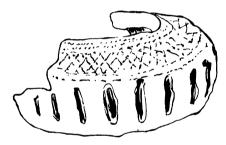
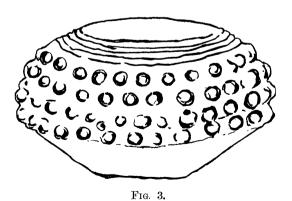
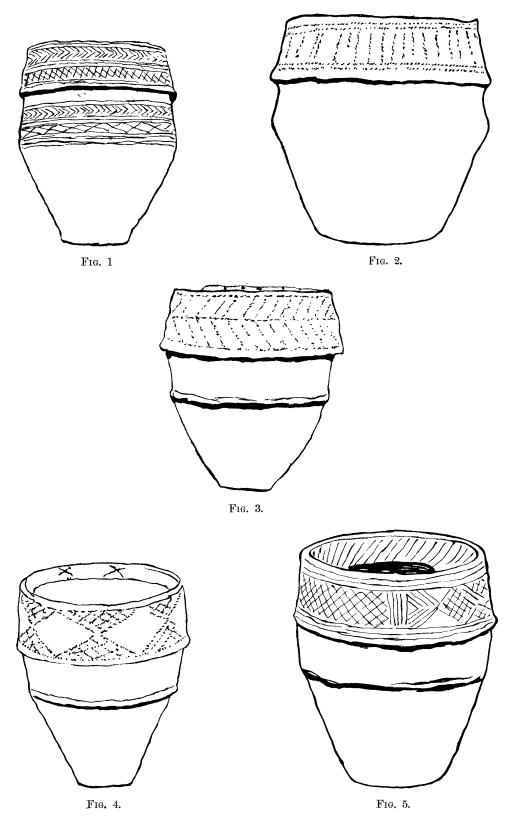


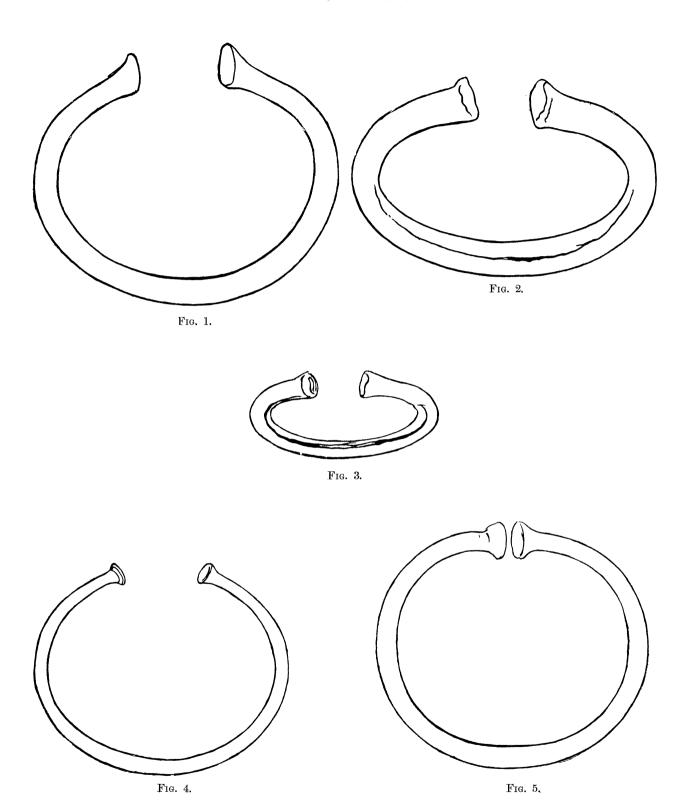
Fig. 4A.



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Explanation of Plates.

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Beckhampton. Scale \frac{2}{3}. Arch., v, 43, p. 64.
Plate XVIII, Fig.
                        1, Interm. 14.
                                            Aldbourne. Scale \frac{2}{3}. Arch., v, 52, p. 51.
                        2,
                               ,,
                                      15.
                   ,,
                        3,
                                      15.
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                   "
                                            Bloxworth Down, Dorset. Height, 49½ cm.
                        4,
                                     19.
                               ,,
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           "
                                     22.
                                            Ringwold. Height, 40\frac{1}{2} cm. Arch. Cant., ix, 23.
                        5,
  ,,
           "
                   ,,
        XIX,
                                      22.
                                                                      5.7 cm.
                        1,
  ,,
                   ,,
                                      22.
                                                                      45\frac{1}{2} cm.
                        2,
           ,,
                                                 ,,
                                                                                        "
  "
                                      23.
                                            Muttilow.
                                                                      23\frac{1}{2} cm.
                                                                                  Arch. Journ., ix, opp. p. 229.
                        3,
                                      24.
                                            Clayton Hill.
                                                                                  Arch., v, 43, p. 367.
                        4,
           ,,
                               ,,
                                      26.
                                            Calais Wold.
                                                                      46.2 cm.
                                                                                  40 years, etc., Pl. LIV.
                        5,
                               "
           ,,
         XX,
                                      27.
                                            Gilchorn.
                                                                      37\frac{1}{2} cm.
                                                                                  P.S.A.Scot., xxv, p. 449.
                         1,
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   "
                                      27.
                                                                      5.7 cm.
                         1A,
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                                            Mill of Marcus ,,
                                                                      16 cm.
                                                                                  P.S.A.Scot., xxiv, p. 471.
                        2,
                                      28.
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                   ,,
   "
                        3,
                                      29.
                                            Avebury. Scale \frac{2}{3}. Arch., vol. 43, p. 364.
          ,,,
   ,,
                                      29.
                                            Upton Lovel. Height, 15.2 cm.
                        4,
           ,,
                                      30.
                                            Normanton.
                                                                         3\frac{1}{2} cm.
                         4A,
                                ,,
                                                                         21\frac{1}{2} cm.
                                      31.
         XXI,
                         1,
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                   "
                                      36.
                                            Handly Hill.
                                                                         36\frac{1}{2} cm.
                         2,
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   ,,
                        3,
                                            Alloa. Height, 31.7 cm.
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           ,,
                         4,
                                             Shanwell. Height, 35\frac{1}{2} cm.
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           ,,
                                             Magdalen Bridge. Height, 30\frac{1}{2} cm.
                         5,
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        XXII,
                                             Alloa. Scale \frac{1}{1}.
                         1,
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                         2,
                                             Achtertyre. Scale 1.
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                   "
                                             Balmashanner. Scale 1.
                         3,
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                                             West Highlands. Scale 1.
                         4,
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                                             Monadhmor. Scale 1.
                         5,
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