

# Arbeia Society Notes

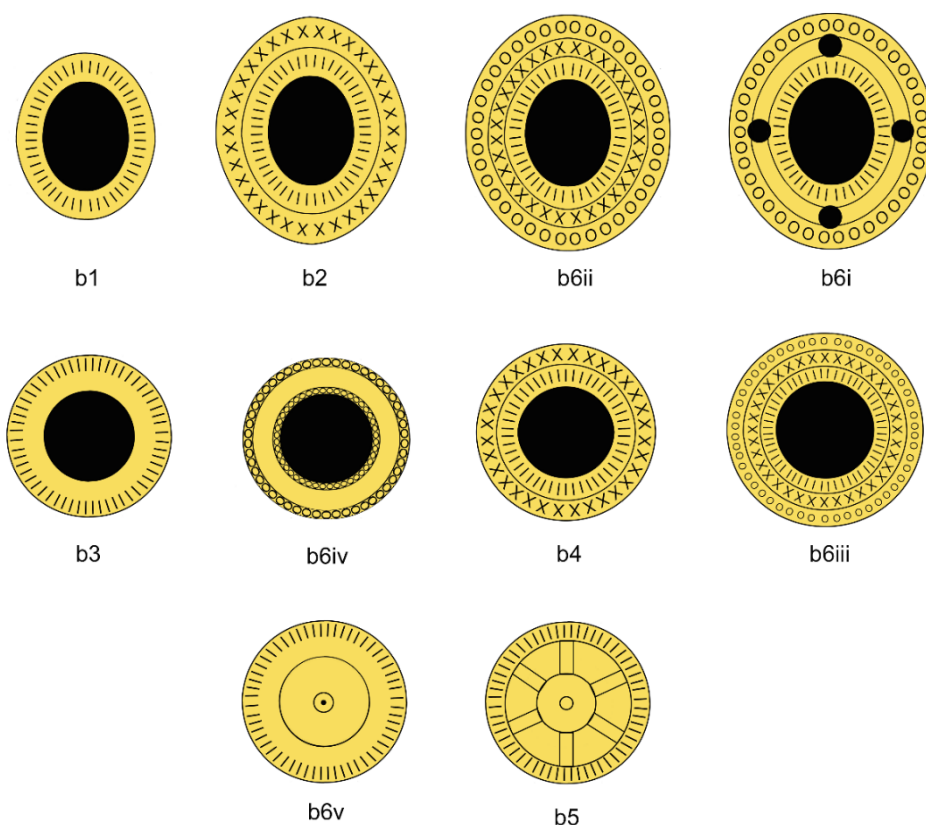
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## No. 4: Gilded disc brooches in Roman Britain

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There are over 630 gilded disc brooches known from Roman Britain (Mackreth type BRIT PL 3.b1 to 3.b6; Hull types T270, T271).<sup>1</sup> They have a central inset or attachment of glass or metal and a varying number of outer zones, usually with stamped decoration. The front is gilded (although the central setting is often left plain) and the back is tinned. On brooches with glass settings the wall for the central setting is taller than the ribs that define the stamped zones. The pin is attached by a single pierced lug, and there is often a slight ridge between the lug and catch-plate.



*Figure 1: The gilded disc brooch types, using Mackreth's 2011 typology (BRIT PL 3.b).*

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<sup>1</sup> Taken mainly from the Portable Antiquities Scheme (369 examples) and Mackreth 2011, with some from more recent publications and museum online collections, although a comprehensive search for all examples has not been carried out. These types of brooches are also called glass centre-boss, gilt-and-glass, wheel on rivet and composite spoked wheel brooches.

Other than four examples, all the information about the brooches has been taken from published sources, so there are some gaps and unresolved queries (for example, where colours have not been mentioned, or whether a setting was domed or conical), which could in some cases have been involved by a visual inspection.

There are three main forms (Fig. 1):

### 1. Oval

- i) With one zone (type 3.b1), two zones (3.b2), three zones (3.b6ii) and three zones with five settings (3.b6ii)
- ii) When visible, the base of the central setting is flat and the glass inset was held in place by a slightly crimped top to the setting wall and/or glue (Fig. 2)

### 2. Round

- i) With one zone (3.b3), one zone with beaded mouldings (3.b6iv), two zones (3.b4) and three zones (3.b6iii)
- ii) When visible, the base of the central setting has a slight circular projection in the middle with a depression on the top to help key the inset in place (Fig. 2)

### 3. Round with metal fittings

- i) Usually with one zone, although occasionally with two, with an integral central copper alloy cone (3.b6), or a separate fitting with five, six, or very occasionally eight, spokes under a small cone fitting (3.b5)
- ii) The wall round the central setting is as low as the ridge round the outer edge
- iii) The base of the central setting on the spoked version is pierced for a copper alloy shank to hold the metal fittings in place.



*Figure 2: Oval brooch with flat base in the central setting and round brooch with central projection within the central setting (both from South Shields Roman Fort, SF nos AJ&M 1.136 and BR4). It is common for the central setting to be left ungilded.  
© Arbeia, South Shields Roman Fort*

**Table 1: The different brooch types, shown as percentages**

<i>Type</i>	<i>number (as %)</i>	
Oval, 1 zone	26.5	
Oval, 2 zones	23.0	
Oval, 3 zones	1.8	
Oval, five settings	0.8	
<i>All oval forms</i>		<i>52%</i>
Round, 1 zone	17.2	
Round, beaded, 1 zone	0.3	
Round, 2 zones	16.9	
Round, 3 zones	0.6	
<i>All round forms with glass insets</i>		<i>35%</i>
Round, spoked	10.2	
Round, with cone	2.7	
<i>All round forms with metal fittings</i>		<i>13%</i>
<b>Totals</b>	<b>627<sup>2</sup></b>	

Although the oval and round examples with glass insets appear very similar, analysis of a sample of 30 showed that half the oval ones were made of bronze while almost all the round ones were made of brass.<sup>3</sup> The preference for different metals and the fact that the two shapes also use different forms of attachment for the inset<sup>4</sup> makes it likely that the majority of oval and round brooches were made by different workshops.

### The insets (Fig. 3)

**Table 2: The type of insets used in the brooches, shown as a percentage**

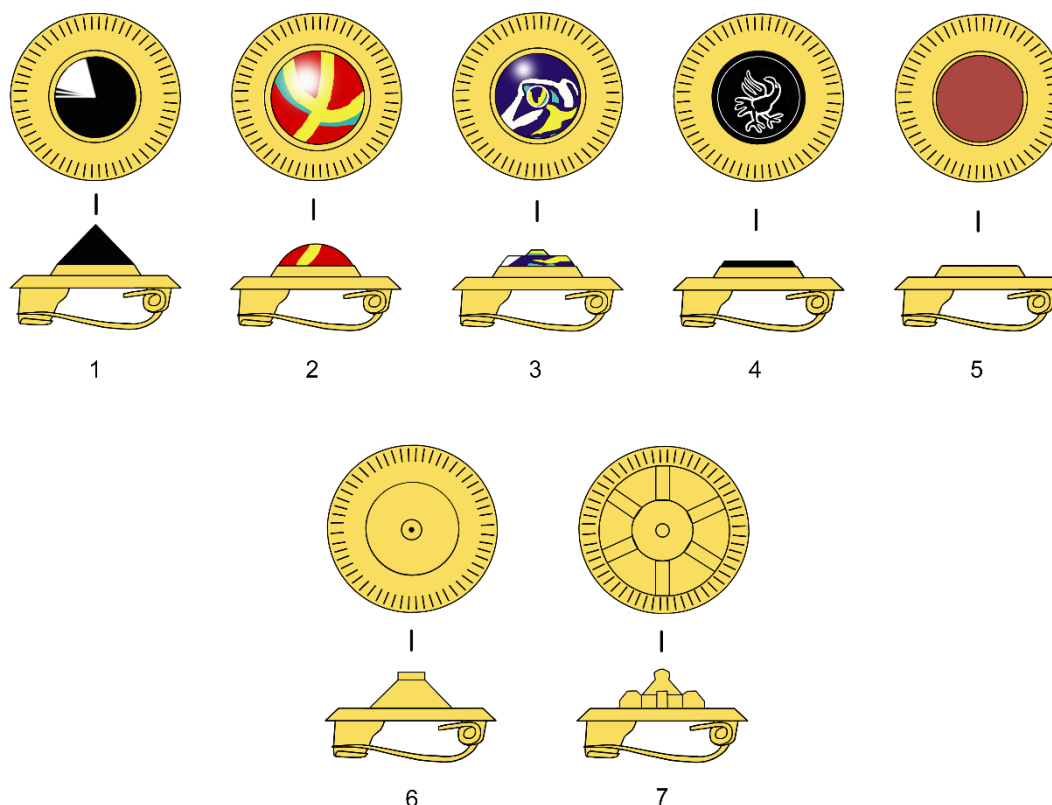
<i>Inset shape</i>	<i>oval</i>	<i>round</i>	<i>combined</i>
	%	%	%
Conical glass	87 <sup>5</sup>	43	71
Domed glass	-	21	8
Doughnut glass	-	17	6
Glass intaglio	12	12	12
Flat glass	1	2	1
Flat enamel	-	5	2
<b>Totals</b>	<b>115</b>	<b>65</b>	<b>180</b>

<sup>2</sup> Not all brooches could be assigned to a type.

<sup>3</sup> Bayley and Butcher 2004, 179.

<sup>4</sup> The method used by the oval brooches was perhaps more effective; 50% of them were empty compared to 61% of the round brooches.

<sup>5</sup> This could be slightly higher (89%). A number of damaged insets have been excluded that were probably conical but which in theory could have been domed (although no certain domed fittings are known in oval brooches).



*Figure 3: The insets used on gilded disc brooches. 1. Conical glass. 2. Domed glass. 3. Doughnut-shaped glass. 4. Intaglio. 5. Flat glass. 6. Metal cone. 7. Spoked fitting.*

The type of insets also varied between the different shapes (Table 2). Although a conical inset of black-appearing glass was by far the most common type overall, only 43% of the round brooches with surviving insets used it, compared to 87% for the oval brooches. The round brooches made use of a much wider and more brightly coloured range of insets (Table 2).

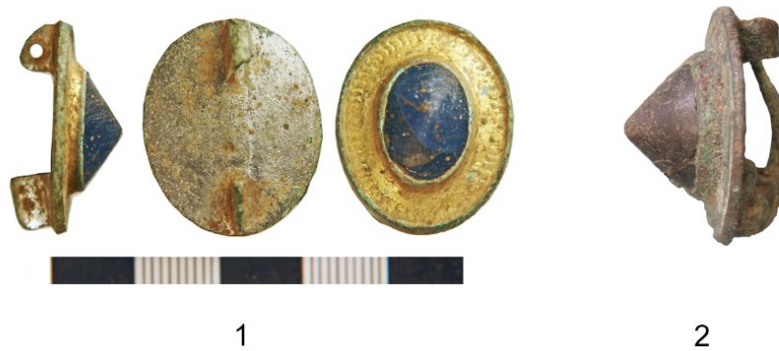
### *Conical glass*

At least 75% of those with an identifiable colour are made of black-appearing glass.<sup>6</sup> Occasionally lighter colours, sometimes translucent, were used, such as mid-blue, green, turquoise and orange-red.<sup>7</sup> Just as rare are examples with two or more colours in stripes or swirls.<sup>8</sup> Broken insets sometimes show a thin outer layer of coloured glass over a core of natural blue-green glass.

<sup>6</sup> 'Black' glass is made of extremely dark glass including blue, green, brown, red and purple and so is really only 'black-appearing'. The 75% figure might be higher, if stones described as 'very dark red', for example, would be considered to be 'black-appearing' when seen.

<sup>7</sup> Eg. PAS NARC-6C46CC; CAM-408664; NLM-1BFF01.

<sup>8</sup> Eg. PAS WILT-BAA560; LEICS-008335.



*Figure 4: Conical glass insets. 1. Oval brooch (Nettleton, Lincs., PAS NLM-5942E5). Portable Antiquities Scheme CC BY-SA 4.0. 2. Round brooch (Wallsend Fort, see Croom 2020, fig. 6.1, no. 6) © Segedunum Roman Fort*

### *Domed*

These range from a definite hemispherical shape to an uneven, slightly flattened top similar to the doughnut insets, and there is no doubt overlap between the two; an example from Lincolnshire is hemispherical, but has a 'nipple' more commonly seen on the flatter doughnut insets.<sup>9</sup> Black-appearing examples are known, but are not common (making up only about a third of the total), while other colours are even rarer; the majority are multi-coloured, with a mix of anything from two to four colours.<sup>10</sup> There is only a single certain example of an oval brooch with a domed inset; however, as the inset is smaller than the setting and is a light green stone this is clearly a later replacement inset.<sup>11</sup>



*Figure 5: Domed insets. 1. Hemispherical inset (Malton, North Yorks, PAS DUR-873B16). 2. Flattened inset (similar to doughnut insets but with no visible plug). The tinning and slight ridge typical of gilded brooches are visible on the back of the brooch (Chieveley, Berks, PAS BERK-155624). Portable Antiquities Scheme CC BY-SA 4.0.*

### *Doughnut*

<sup>9</sup> Hattatt 1985, fig. 73, no. 644.

<sup>10</sup> Eg. PAS BERK-155624; SF-CE17C0; NLM-5CF6F2; SWYOR-B653B2; Hattatt 1985, fig. 73, no. 644; Hattatt 1987, fig. 124, no. 1411.

<sup>11</sup> PAS LVPL-6719D3. The insets are usually as large as possible, which was particularly necessary when they were held in place by crimping the top of the setting wall.



These are flattish, circular insets with a central hole that was probably usually covered by a plug of glass, forming a small nipple. There is a single example in black-appearing glass (Fig. 11), but the rest are all multi-coloured, usually involving three or four colours (sometimes over a blue-green core). Eleven examples are currently known.<sup>12</sup>

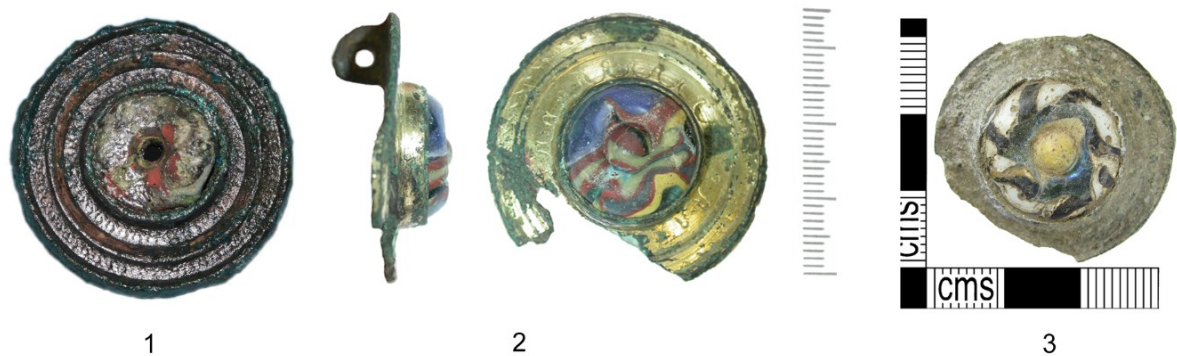


Figure 6: Doughnut insets. 1. Without central plug (South Shields, SF no. BR358) © Arbeia, South Shields Roman Fort. 2-3. With central plug (Clipstone, Notts, DENO-C14931; Grafton Regis, Northants, BUC-DE8E3D). Portable Antiquities Scheme CC BY-SA 4.0.

### Intaglio

Almost all are of moulded glass. The round intaglios only have two designs: an eagle looking over its shoulder (six examples in black-appearing and turquoise) and Victory walking right holding a wreath over a trophy (two examples, in dark blue and black-appearing).<sup>13</sup> The oval examples are more varied:

a) Hare hunter, with a tall tree (four examples, all black-appearing)<sup>14</sup> and three others possibly from the same mould with a shorter tree (two or three examples, black-appearing and mottled red)<sup>15</sup>

b) Walking figure with a long, thin, S-shaped arm, possibly from same mould (two examples, black appearing)<sup>16</sup>

c) A female bust and a Mercury, both blue-on-black nicolo imitations, which may be earlier intaglios from finger-rings that have been re-used<sup>17</sup>

d) Three other one-offs: a male possibly making an offering at an altar (black-appearing); a standing figure (mid blue); and a pattern, including a row of dots round the outer edge (both an unusual design and made of an unusual material for insets (jet), on a brooch of unknown provenance, so possibly not a Roman inset).<sup>18</sup>

<sup>12</sup> Worrel 2010, 418-9; PAS BUC-DE8E3D; HAMP-03A615; LIN-2EECC6 (black); SWYOR-938D54; WILT-69BF66; Mackreth 2011, nos 10898, 10915; South Shields, SF no. BR358.

<sup>13</sup> Eagle: PAS FASW-9426A5; Butcher and Bailey 2004, fig. 101, no. 389 and reference to one from Barrington, p135; Mackreth 2011, pl. 107, no. 11619; also cat. nos 10894 and 10942. Victory: PAS DOR-B85C13; Mackreth 2011, cat. no. 10931.

<sup>14</sup> PAS SF-3044C5; OXON-2B4EA1; HAMP-359E52, NMGW-6A45F4.

<sup>15</sup> PAS NMS-6DFE4E; Hattatt 1987, fig. 80, no. 1220; pl. 2; Mackreth 2011, pl. 107, no. 11620 (upside down).

<sup>16</sup> Hattatt 1987, pl. 2; fig. 80, nos 1217-8.

<sup>17</sup> Bust: Mackreth 2011, pl. 107, no. 14749. Mercury: PAS HAMP-1870.

<sup>18</sup> Hattatt 1987, pl. 2; fig. 80, nos 1219, 1221; PAS NARC-1A5213.



Figure 7: The most common intaglio types (not to scale). 1. Eagle (PAS FASW-9426A5). 2. Victory (DOR-B85C13). 3. Hare hunter with tall tree (SF-3044C5). 4. Hare hunter with shorter tree (NMS-6DFE4E). 5. Man with S-shaped arm (after Hattatt 1987, pl. 2, no. 1217). Portable Antiquities Scheme CC BY-SA 4.0.

#### *Flat glass or enamel*

There are only two glass examples (projecting above the wall of their setting), and four examples of possible enamel (no higher than the walls).<sup>19</sup> There is only a single oval example, with black-appearing glass.<sup>20</sup> The round examples have dark blue glass, dark blue enamel and orange/red enamel.<sup>21</sup> As this form of setting is rare it is possible many were replacement insets.

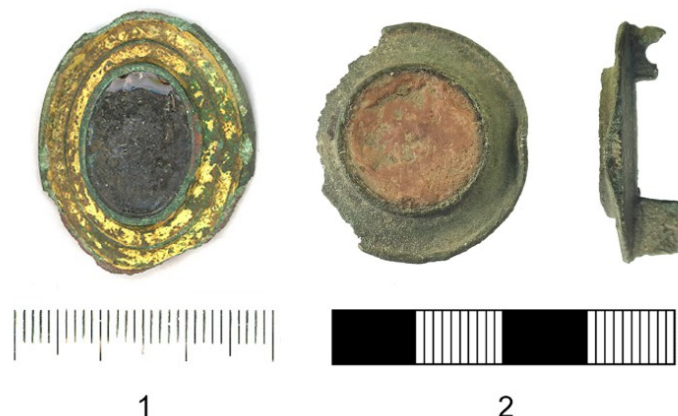


Figure 8: Flat insets. 1. Ilam, Staffs (PAS WMID-8DF858). 2. Buttermere, Wilts (SUR-D19E54). Portable Antiquities Scheme CC BY-SA 4.0.

#### *Cone*

This was made in one piece without an inset, and was presumably cheaper to buy than the composite brooches with glass or enamel settings.

<sup>19</sup> Although there are at least three others that could be either flat settings or intaglios but are too fragmentary for certain identification.

<sup>20</sup> PAS WMID-8DF858. There is a further oval example with an opaque red inset, but as this is too small for the setting this is another later replacement (WMID-7AC096).

<sup>21</sup> Glass: British Museum, acc. no. 1063.70; enamel: Ashmolean Museum, acc. no. AN1928.509; SUR-D19E54; HAMP-FDCFA3.



*Figure 9: Metal cone, with two zones of stamped decoration. Broade Chalk, Wilts PAS WILT-9620C. Portable Antiquities Scheme CC BY-SA 4.0.*

### *Spoked fitting*

The spokes can be either petal-shaped or with parallel sides. Five and six spokes are equally common (48% and 47% of examples), with four (3%) and eight (2%) much less common. The central setting can have a flat base, or a wide, shallow rib, and is often comparatively larger than those with a glass setting, with only a narrow zone for the stamped decoration (Fig. 10).



*Figure 10: Spoked fitting. A brooch from Trysull, Staffs, with petal-shaped spokes, a wide rib within the central setting, pierced back-plate and a slight ridge between catch-plate and pin lug. PAS WMID-1209A3. CC BY 2.0.*

### *Replacement insets*

The large number of brooches with empty settings shows insets were often lost. A few brooches have insets that are too small for their settings and may be later replacements. The black-appearing inset on a brooch from Branston is the only doughnut inset in a single colour and could possibly be a modified bead used as a replacement (Fig. 11).





*Figure 11: Brooch from Branston, Lincs (PAS LIN-2EECC6) with a possible replacement inset (cf the insets that fill the whole setting in Fig. 6). Portable Antiquities Scheme CC BY-SA 4.0.*

### **Distribution**

The gilded brooches appear to be of solely British manufacture, as very few examples are known from the Continent.<sup>22</sup> Within Britain the type was in wide-spread use. The large number recovered through metal-detecting means that most come from a large number of different rural sites, but they have also been found on at least 15 military sites, 10 large towns or cities, and four religious sites, as well as smaller towns and other settlements.

The more popular designs might have been copied and produced in a number of different workshops around the country, but some of the less popular types that presumably come from a single workshop show that the brooches could end up with a very wide distribution, such as the oval brooch with five settings (Fig. 12). Unfortunately it is impossible to tell if this is because the brooches themselves were traded widely, or if this reflects the later movement of the brooch owners. Some of the brooches with distinctive intaglios shows a more restricted distribution, but none have a purely local distribution (Fig. 13).<sup>23</sup>

<sup>22</sup> Bayley and Butcher 2004, 178-9.

<sup>23</sup> There are other, less common types of intaglios, one of which comes from somewhere in Northumberland (Hattatt 1987, fig. 79, no. 1219; pl. 2), so the use of intaglios was not entirely southern.

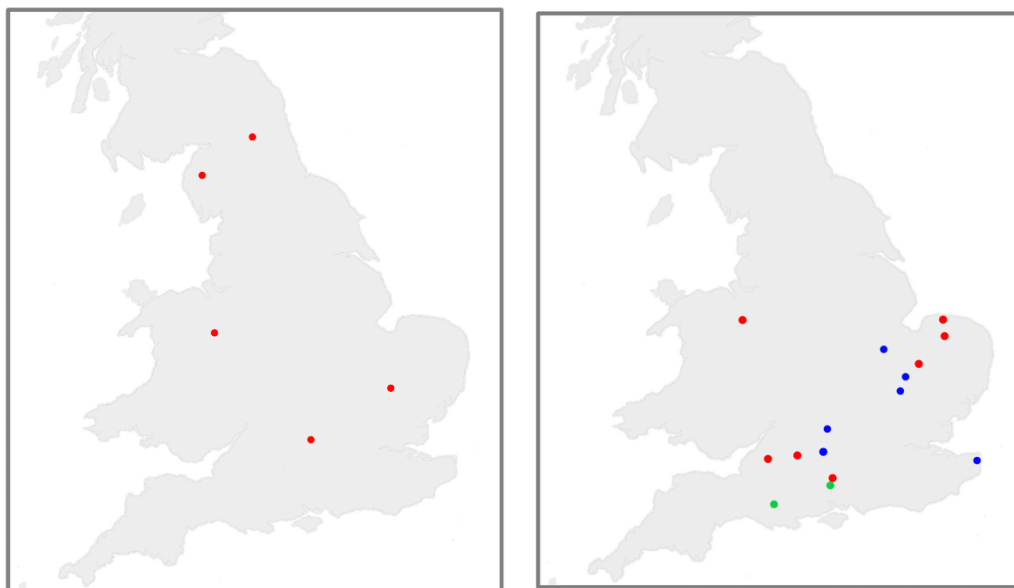


Figure 12 (left): Map showing distribution of oval brooch with five settings.

Figure 13 (right): Map showing distribution of brooches with intaglios: blue = eagle; green = Victory; red = hare hunter

## Dating

Despite the large number of examples, most have either been found by metal-detecting or come from old excavations, and there are only 26 brooches from stratified and dated contexts. Mackreth and Mountain<sup>24</sup> set out the dating evidence. Mackreth dates their main period of use to the very late second to the middle of the third century. There are in fact very few brooches that need be earlier than the middle of the third century. The brooch said to have the earliest dating comes from Manchester, from a phase dated *c.*160 – *c.*200,<sup>25</sup> but as the context (F514) the brooch was found in is not described in the text, it is unclear how well sealed it was, especially as the brooch is simply described as coming from 'outside building F727' in the *vicus* (site C).<sup>26</sup> This is the only brooch said to be second-century in date. A few others could in theory be early third century in date, but they come from phases of long duration (for example 'third century' or '200 – 310/317'), and the evidence of the other brooches suggests a start date round the middle of the third century is more likely.

Other examples of the brooches with an 'early' date come from the Continent; two from Esch, North Brabant came from a context dated 200/225 – 250 and three from Saalburg and Zugmantel, mainly abandoned *c.*260.<sup>27</sup> A round brooch from Wallsend (Fig. 4, no. 2) came from the baths that went out of use in the late third century (although there was stone-robbing during the fourth century), and there were three from the late third or early fourth century: two oval examples from Fishbourne, Essex and Maxey, Cambridgeshire and a round one from South Shields.<sup>28</sup> At least 21 came from contexts dating to the late third and/or fourth century (Table 3), and the use of

<sup>24</sup> Mackreth 2011, 161-3; Mountain 2019, tables I.5 – I.6.

<sup>25</sup> Tanner *et al.* 1986, 67; fig. 5.5, no. 3101; Ryan and Rendell 1986, 63; Bryant *et al.* 1986, 142.

<sup>26</sup> Tanner *et al.* 1986, 67.

<sup>27</sup> Mackreth 2011, 162.

<sup>28</sup> Oval: Mackreth 2011, cat. nos 10855, 10872. Round: South Shields (see Fig. 6, no. 1).

gilding and SSS stamps indicate production continued into the fourth century.<sup>29</sup> Functional brooches could have been used for many decades after production ended, but of those brooches from contexts purely fourth-century in date, over half (seven) come from the middle of the century or later, so it seems likely widespread use of the type continued until at least then, and possibly later.

**Table 3: Dating of the brooch type**

<i>Context date</i>	<i>no of examples</i>
Late second century (?)	1
Third century	3
Late third or early fourth century	3
Third or fourth century	6
Fourth century	5
Mid fourth to early fifth century	7
<b>Total</b>	<b>25</b>

The number of brooches from dated contexts is too small to show any differences in the date of introduction of the different brooch designs or the type or colour of their insets, but as the brooches were being made over two or more generations it is likely some of the variations originally had a chronological significance. The gilded brooches set with intaglios may have been a development of the brooches with an outer zone of coloured enamels and a central intaglio inset that date from the late second to the first half of the third century,<sup>30</sup> and those with a metal cone have similarities with the disc brooches with a dished cone and projections round the outer edge that were probably mainly second century in date but continued into the third.<sup>31</sup> The black-appearing glass insets may possibly have been most popular in the fourth century, as part of the fashion for black jewellery that had increased from the late third century but was most common during the fourth century.

## Conclusions

These were British-made brooch types, widely used and found on military, urban, religious and rural sites. The oval and round brooches were probably made by different workshops, and variations in the insets probably also reflect different workshop traditions over a long period. Their main period of use was probably mid-third to at least the mid-fourth century.

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<sup>29</sup> Bayley and Butcher 2004, 179.

<sup>30</sup> Mackreth 2011, 160; type BRIT PL 3.a.

<sup>31</sup> Mackreth 2011, 164; type BRIT PL 5.

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