

# Rings from the Forbidden Forest

## The Function and Meaning of Roman Trinket Rings

Philip Kiernan<sup>1</sup> and Klaus-Peter Henz<sup>2</sup>

<sup>1</sup>Kennesaw State University <pkierna1@kennesaw.edu>

<sup>2</sup>Terrex gGmbH <kp.henz@terrex.online>

### Appendix

#### The typology of Roman rings

The 24 finger-rings found in Wareswald can be divided into five very distinct and self-contained types (Fig. 6 in the main text). It is not possible to quickly date the rings using a single typology, simply because no comprehensive, up-to-date, and reliable typology of Roman rings is currently available.<sup>1</sup> This is surprising, as the forms of Roman rings are fairly consistent over a wide area, and they are often found in securely datable contexts, such as graves. For the most part, ring typologies have been proposed as side notes in works on engraved gems, and a dedicated study of Roman rings remains a scholarly desideratum.

At present, there are three major typologies available for finger-rings in the Roman west. Though published in 1913, Henkel's comprehensive and fully illustrated catalogue of rings in the Rhineland remains an incredibly useful work and is the only monograph we are aware of that focuses on rings rather than gems. Henkel's main groups and dates were largely confirmed in Guiraud's 1989 typology of rings from Gaul, which is also an excellent resource, but is very brief and based on unpublished data.<sup>2</sup> Finally, Martin Henig's 1974 corpus of intaglios in Roman Britain (reprinted 1978 and 2007) includes a typology of ring forms. While Henig's dates are based on archaeological contexts, his individual types are poorly defined, and both his plates and his typological table lack the necessary detail to be used effectively.<sup>3</sup> Recent site-specific ring typologies exist for Augst by Emilie Riha and for Vindolanda by Elizabeth Greene, but are, naturally enough, focused on finds from these two sites.<sup>4</sup>

In the catalogue that follows, the rings from Wareswald have been grouped into five types and then individually numbered. Their inventory numbers in the depot of the State Archaeological Service of the Saarland are given in parentheses, the final digits of which correspond to the order in which each ring was removed from the bracelet on which they were threaded, or in which they were removed from the excavated block of earth. The rings do not seem to have been grouped by type or according to any particular pattern on the bracelet. Each of the five ring types is introduced with a description followed by an attempt to place them within the above-mentioned typologies of Roman rings, notes on comparanda, and possible date ranges (Fig. 6 in the main text).

In the catalogue, the main body of a ring is described as a "hoop," while the upper sides of the ring, which sit next to the wearer's knuckles, as its "shoulders." When the uppermost part of the ring is thickened, it is described as a "bezel," or, if flat, as a "plate." A "chaton" is the metal casing surrounding a gem that usually extends above a plate. The diameter (Diam.) values are measurements of the internal diameter but include a maximum height and width in the case of oval-shaped rings.

---

<sup>1</sup> We may disregard entirely the very generic typologies of Marshall (1908) and Zahlhaas (1985) which only distinguish between broad groups such as "Roman," "Greek," and "Byzantine" types, and are based on rings without find contexts.

<sup>2</sup> Guiraud's typology for gem-bearing rings only appears in her book on Roman gems (1988, 77–81), but her article (Guiraud 1989) covers rings of all types. The dataset for the latter work is stored in the library of the University of Toulouse (*non vidi*).

<sup>3</sup> Henig 2007. The latest edition is identical to the earlier two, with the addition of a new preface, and reformatting (including new pagination). Problems with this system of classifying rings can readily be seen in the database of the Portable Antiquities Scheme, where the same ring forms are often given different Henig numbers.

<sup>4</sup> Riha 1990, 26–48; Birley and Greene 2006, 117–33.

# Catalogue

## *Type 1. Rings set with glass gems imitating nicolos*



Suppl. Fig. 1. *The Type 1 Rings from Wareswald. Scale 1:1. (Sabine Brygadin, Courtesy Landesdenkmalamt Saarland.)*

The first group of seven rings have hoops that are roughly D-shaped in cross-section and are narrowest (W. ca. 2 mm) and thinnest (Th. < 1 mm) at the base of the ring, where the hoop is rectangular in cross-section. The roughly oval shape of the ring is interrupted by a sharp carination at the shoulder, where the

hoop widens and thickens, forming a flat bezel into which a glass gem has been set in an oval depression. The oval bezel ranges in width from 8–9.2 mm across the middle of the gem, which extends between 1 and 3 mm above the bezel's surface. The internal diameter is wider than it is tall, being either 17 or 18 mm between the two shoulders, and 14 mm from the bezel to the base. The outer surfaces of the rings are all fairly rough and slightly porous, while the surface inside of the hoop is covered in rough file marks.

These rings correspond to Henig's type 12 and Guiraud's type 2f, a form that is extremely common in the western provinces, and that was ultimately a later derivation of very early Roman rings made of iron.<sup>5</sup> Later variant forms are known in silver and gold (Fig. 8.A–B), rarely in iron, and in very large numbers in bronze. Guiraud proposed a maximum date range between 50 and 310 CE, but noted that most rings of the type came from mid-3rd c. contexts.<sup>6</sup> Henig and Henkel also saw the type as 3rd-c. CE products, while Riha suggested a late-2nd to mid-3rd c. range.<sup>7</sup> Most recently, Platz-Horster has dated bronze rings of this type from Dambach (Bavaria) to the first half of the 3rd c. CE.<sup>8</sup> The type must have had universal appeal and has been found at sites across the western provinces and beyond.<sup>9</sup>

The glass gems found in these rings (Suppl. Fig. 2) are standard for the type. They are imitations of the nicolo – a gem consisting of a naturally banded stone, usually an onyx, in which the intaglio is carved through a thin layer of one color to expose the color of another mineral band below it. With the Wareswald glass nicolos, as with most real onyx nicolos, the lower level of glass is a very dark blue, while the top layer is a much lighter, whiteish or greyish blue. The top of each gem is flat and oval, measuring ca. 6.7 x 4.9 mm, but their sides bevel outwards roughly 1.5 mm towards their bases, which are hidden inside the ring.<sup>10</sup>

As with other glass gems, imitation nicolos like these were mass produced in molds, which had themselves been created using impressions made from real engraved gemstones or other glass gems.<sup>11</sup> Glass nicolos from Gaul and Germany fall into one of two categories. The first incorporates gems with a relatively smooth surface that may have been imported from workshops in Aquileia. The second category, to which the Wareswald gems belong, is characterized by a porous surface, a very thin upper layer that sometimes fails to cover the entire surface, and weakly or even incompletely impressed intaglio designs. These inferior glass gems are thought to have been produced either in Trier or in Cologne, both important centers of glass production, between 150 and 250.<sup>12</sup>

The date of the Type 1 rings, and the gems in them, may well need to be revised upwards. Similar gems are present in the late 3rd-c. Rennes Hoard, and in the late-4th-c. Bonn find. It is probably safe to assume that the glass gems were being produced as late as 280, when, according to Platz-Horster, the tradition of using seal-stones came to an end.<sup>13</sup> Guiraud's date of 310 CE for the ring form seems late, though not impossible, but it is unclear what it is based on. Thus, a maximal range for the Wareswald Type 1 rings of 200–280 CE seems reasonable.

Many cast glass gems have a spatula mark on the back, as if the molten glass was pushed downwards into an open-faced mold, forcing the fluid glass into the details of the design at the bottom of the mold. Only the underside of the glass gem in **ring 7** is partially visible through a break in the bronze. It does not have a spatula mark, but a series of small intentional chips can be seen on its edges. Presumably the lower edge of this gem was trimmed to fit it into the socket of the ring. On **rings 4** and **6** there is a gap between the edge of the gem and the ring, and small flanges of glass are visible at the bases of the gems. This flange may well be a leftover where the molten glass spilled over the top of the mold, and what was chipped away on the base of **ring 7**.

The gems were fixed into the rings partly by tooling up the flat surfaces of the bezels around them and clinching the gem in place. The process has left a tiny, raised ridge in the bronze around the gems in the surface of the bezel. On **rings 1, 5, and 7**, however, a greyish substance can also be seen between the gem

---

<sup>5</sup> Henig 2007, 14; Guiraud, 1989, 184. Guiraud's type 2e, from which 2f is derived, has less of a carination in the hoop, and lacks the flattened area around the gem in the bezel. See also Riha 1990, 31–32, type 2.1.5. The basic form of these rings, in which there is no chaton or raised support for the gem, is often described as being "sling-shaped" (*"sphendoniform"*) after the Greek σφενδόνη, or sling, see Krug 1975, 116.

<sup>6</sup> Guiraud 1989, 181, and 203, fig. 53.

<sup>7</sup> Henig 2007, 14; Henkel 1913, 112–14, nos. 1210–28 (type 3.C.IV.a); Riha 1990, 30 type 2.1.5.

<sup>8</sup> Platz-Horster 2018, nos. 26–28.

<sup>9</sup> Two silver examples in the Getty are said to be from Asia Minor: Spier 1992, 143 nos. 396–7.

<sup>10</sup> The gem shape corresponds to Henig's flat type 3 (Henig 2007, 9, fig. 1.3).

<sup>11</sup> Dembski 2005, 30–31.

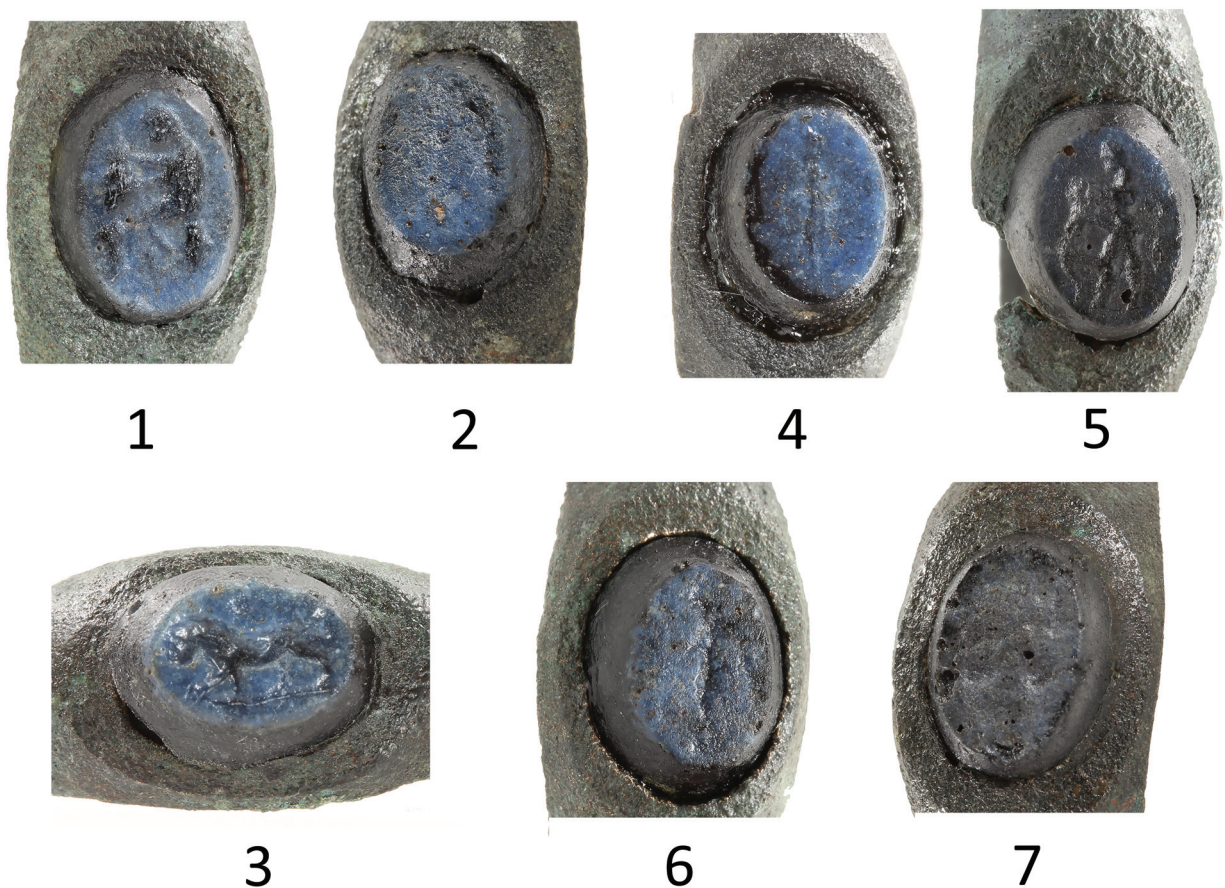
<sup>12</sup> Platz-Horster 1987, xxi; Platz-Horster 2018, 14.

<sup>13</sup> On the Rennes Hoard, the Bonn find, and the end of sealing, see the article text.

and the bronze of the ring. It might be the remains of a resin or adhesive used to further cement the gem in place but could equally be an oxidation product of the glass. As **ring 13** (Type 2) is missing its gem and has a similar greyish substance in the chaton, this phenomenon is discussed below.

The glass gems and their intaglios have not fared well in the ground and were probably not high quality products when new. Each gem and, where possible, comparanda for it, is described in the catalogue. The production method resulted in numerous gems being created from exactly the same model (matrix), and so absolutely identical intaglio designs can sometimes still be found at different sites. Such exact replicas could be found for the gems in **rings 1** and **5**.<sup>14</sup>

It was also not uncommon with these glass gems for details to be added, sharpened, or enhanced, by re-incising details after casting, and this seems to have occurred with the gem in **ring 3**. It would also have been possible for craftsmen to adjust the impression in the clay molds in which the gems were to be cast.<sup>15</sup> Finally, as with engraved gems, popular motifs were often copied and repeated. The result is that many glass gems have designs that are extremely similar to one another but are not quite identical. These very close comparanda are also listed where possible below.



Suppl. Fig. 2. Details of the gems. Magnification approximately 4:1. (Sabine Brygadin, Courtesy Landesdenkmalamt Saarland.)

<sup>14</sup> Krug 1978, 487; Platz-Horster 1984, 13–15.

<sup>15</sup> Dembski 2005, 31–32.

**Ring 1** (2018.17703.7). Found on the bracelet. A small section of the lower part of the hoop is missing. The interior of the ring is roughly filed on the inside, and there is a small break below the gem, through which a greyish material can be seen. W. of hoop across gem: 9 mm, at bottom: 2 mm, at shoulder: 6 mm. Th. (hoop and gem) 3.5 mm, at shoulder: 3 mm, at bottom: 1 mm, Diam.: W. 17 mm, H. 14 mm. Wt. 2.17 g.

The glass nicolo in this ring is one of the best preserved in the group. Its surface is porous, and only the deepest parts of the design penetrate the darker lower layer of glass. The gem depicts a man seated on a stool holding an indiscernible oblong object in his outstretched arms just above an altar, stand, or table. A groundline is faintly visible below. A deceptive curved line above the seated figure's knee and hands is not part of the original design but is most likely the result of a crack in the clay mold, or perhaps in the matrix used to impress it.

This gem is an exact replica of at least three other glass nicolos – a loose gem from the 1902 Bonn hospital find (see article text), an example in the collection of the Musée de Mâlain (Côte d'Or), and another from Cirencester. The Mâlain and Cirencester gems were both set in the very same type of bronze ring as the Wareswald example.<sup>16</sup> Henkel recorded three very similar glass nicolos at Augst, Wiesbaden, and Darmstadt.<sup>17</sup> A bronze ring with a glass nicolo from Niederbieber is remarkably close and was set in a near variant ring type.<sup>18</sup> Four more glass nicolos with very similar versions of this motif come from Britain. Three of these were set into the same ring type as the Wareswald rings and were dated by Henig to the 3rd c. CE.<sup>19</sup> The fifth is a loose gem found in a 3rd-c. CE context in the vicus at Vindolanda.<sup>20</sup>

The popular motif can be found on gems as far back as the Republican period, but interpreting it is difficult, because the object held by the seated figure is so indistinct. This is true of both carved stones and cast glass gems. A true nicolo with the same motif from Aquileia, dating to the very late Republican or early Imperial period, was interpreted by Sena Chiesa as a craftsman working on a shield, a variant of the popular theme of seated and standing craftsmen on Late Republican gems.<sup>21</sup> Alternatively, Krug suggested a philosopher looking at a sundial, or a potter working his wheel for the Niederbieber example.<sup>22</sup>

There are also two plausible mythical interpretations. Henig suggested that the seated artisan might be Daedalus constructing a wing.<sup>23</sup> This identification has been adopted for another glass nicolo set in a silver ring from Carnuntum with the motif.<sup>24</sup> Support for the Daedalus interpretation can be found in a 2nd-c. CE carnelian in Bonn, in which the object is clearly recognizable as one of the wings used by the mythical inventor to escape Crete.<sup>25</sup> The second mythological interpretation, applied by Platz-Horster to the glass nicolo in Bonn, is that the seated figure is Vulcan working on the shield of Achilles. Support for this identification can be found on a green chalcedony in Berlin, in which a female figure, presumably Thetis, stands behind the shield.<sup>26</sup>

---

<sup>16</sup> Bonn: Platz-Horster 1984, no. 22 pl. 6 = Henkel 1913, pl. 78,353 (mentioned in discussion of no. 1215) = Lehner 1910, 180 III, 10. Cirencester: Henig 2007, 160, no. 529, pls. 17 and 41, now in the Corinium Museum, Inv. No. C 308. Platz-Horster describes it as "Replik (?)", but this interpretation seems certain to me. Musée de Mâlain: Guiraud 1995, fig. 6.2a Musée de Mâlain, Inv. No. 211.

<sup>17</sup> Henkel 1913, 111, no. 1215 and 1265, pl. 78,351–52. Both the Augst and Wiesbaden examples were set in bronze rings, the Augst ring being similar in form to the Wareswald type 1 rings. The Darmstadt gem was then in the collection of one Major-General Freiherr Heyl zu Herrnsheim.

<sup>18</sup> Krug 1980, 126, no. 2, pl. 1.2 now in the Neuweid Kreismuseum, Inv. No. 4121a.

<sup>19</sup> Henig 2007, pl. 17, nos. 528: Castle Hill, near Whitton, Ipswich, Suffolk (set in Henig's ring type 13); no. 530: Rockbourne Villa, Fordingbridge, Hampshire (in Henig's ring type 12); no. 531: from the Romano-Celtic temple at Harlow, Essex (set in a silver-plated bronze example of Henig's ring type 12).

<sup>20</sup> Birley and Greene 2006, 91–92, no. 29.

<sup>21</sup> Sena Chiesa 1966, 335, no. 975 pl. 49.

<sup>22</sup> Krug 1980, 126. A red glass gem from Karanòg, Egypt (Woolley and Randall-Maciviar 1910, 63, no. 8047, pl. 33) which has rather oddly interpreted as a representation of Leda and the Swan.

<sup>23</sup> Henig 2007, 160.

<sup>24</sup> Dembski 2005, 110, no. 579N, pl. 132.

<sup>25</sup> Platz-Horster 1984, 107, no. 112, pl. 29.

<sup>26</sup> Fürtwangler 1896, 117 no. 2482, pl. 23. On the same gem see also Platz-Horster 2010.

It is hard to know what the designers or purchasers of these gems saw in them. Greene has suggested that a simple metalworker would have been a more relatable figure to the inhabitants of Vindolanda, where mythological themes may have been viewed differently by soldiers.<sup>27</sup> It is possible that the ambiguity of the critical attribute, and the many possible interpretations that it enabled, were one of the attractions of the design.

**Ring 2** (2018.17703.8). Found on the bracelet. The ring is broken just below the shoulders, and the lower part of the hoop is missing. Th. of hoop of and gem: 4 mm, W. of hoop across gem: 9 mm, Diam.: internal W. between shoulders: 17 mm, H. 14 mm, Wt. 1.78 gm.

The glass nicolo is in very poor condition, badly pitted and corroded, and its upper light blue layer does not fully cover the darker lower layer. No trace of the design has survived.

**Ring 3** (2018.17703.11). Found threaded on bracelet. Th. (hoop + gem): 4.2 mm, W. of hoop across gem: 9 mm, at shoulder: 6 mm, at the bottom: 2 mm, Diam.: internal, W. between shoulders: 16.7 mm, H. 13.8 mm. Wt. 2.21 gm.

The gem is set at an odd angle, such that its groundline is not quite parallel to the edge of the ring, but whether the gem was originally set like this, or was moved by the oxidation and decay of the binding agent below it, is unclear.

The subject of the gem is a lion advancing to the left. Its tail is erect and its right forepaw is resting on an indiscernible object, probably the head of a donkey or a similar animal. A number of thin lines are probably incisions made after the gem was cast, most notably around the lower portion of the lion's body and the groundline. The groundline curves up to meet the object below the front-paw and may be intended to represent the stretched-out carcass of a slain animal. Small chips above the lion's body appear to be natural damage, and not the star or moon that often appears on gems with lion motifs.

Representations of a lion striding to the left can be found on countless gems, from the 1<sup>st</sup> c. BCE to the 3<sup>rd</sup> c. CE. It is a particularly common motif in glass nicolos.<sup>28</sup> The possible doubling of the groundline as the body of a slain animal is somewhat unusual, but not unique. On a yellow jasper from Aquileia of the late 2<sup>nd</sup> or early 3<sup>rd</sup> c. CE, an equally thin ground line forms the body of a donkey, with the lion grasping a raised leg in its forepaw.<sup>29</sup> The erect tail of the Wareswald lion is also unusual, but several parallels exist.<sup>30</sup>

The popularity of the lion motif may also have been due to the fact that it could work on many levels. Many gems with lions include a star or moon above the animal, suggesting an astrological significance as the zodiac sign Leo. The presence of the head or body of an animal recalls gladiatorial art, and a lion with the head of a donkey below its paws appears on one of the emblemata of the famous gladiatorial mosaic at Nennig, a palatial Roman villa on the Mosel, some 50 km to the east of Wareswald.<sup>31</sup>

**Ring 4** (2018.17703.18). Found in soil next to bracelet in excavated block, **ring 19** found inside it. W. inside hoop: 17 mm, H. 14 mm, Th. Of gem and hoop: 3.2 mm, W. of hoop across gem: 9 mm, at the shoulder: 5 mm, at bottom of hoop: 2 mm. Wt. 1.6 gm.

There is a fairly wide gap between the edge of the socket on the bezel and the glass gem. In this gap a flange of glass can be seen around the base of the gem inside the ring. The upper layer of the nicolo is mostly worn off, and was perhaps never fully there, or fully impressed with the design to begin with. A figure standing facing right can be made out, perhaps wearing a piece of pointed headgear (a petasos? helmet?) and holding an attribute (a caduceus? spear?) over its left shoulder. A deity such as Mercury or Mars is entirely plausible, as are other personifications.

---

<sup>27</sup> Birley and Greene 2006, 92. Cp. Greene 2015.

<sup>28</sup> On the motif on gems from Aquileia see Sena Chiesa 1966, nos. 1142–57, pls. 58–59, and Buora and Prenc 1996, nos. 122–25. In Britain: Henig 2007, nos. 627–35. At various sites in Gaul: Guiraud 1988, nos. 636–51. In Cologne: Krug 1981, nos. 205–11 and 393–98. In Xanten: Platz-Horster 1987, nos. 82–84, 230–33, Platz-Horster 1994, nos. 152–54, and 313–14. In Bonn: Platz-Horster 1984, nos. 28 and 56. In Trier: Krug 1995, no. 10,10. In the Saalburg Museum: Krug 1978, 495, no. 22, pl. 53,22, set in a 3rd-c. silver ring and found in the *horreum* of the Feldberg fort on the limes. From Carnuntum: Dembski 2005, nos. 809–23 (the glass nicolo 817a is set in a ring very similar those in Wareswald).

<sup>29</sup> Museo Aquileia Inv. 25335. Buora and Prenc 1996, 83, no. 124 = Sena Chiesa 1966, 364, no. 1154

<sup>30</sup> Sena Chiesa 1966, nos. 1146 and 1156; Maaskant-Kleibrink 1986, 65, no. 128.

<sup>31</sup> Glaser et al. 2007, 12–13.

**Ring 5** (2018.17703.20). Found in the soil next to the bracelet. W. of hoop across gem: 8 mm, at shoulders: 5 mm, at base: 2 mm. Internal diam.: H. 14 mm, W. 18 mm. Wt. 2.18 gm.

Apart from a crack in the bezel, the ring is intact. A greyish-brownish material covers the visible underside of the gem. The upper surface of the gem is very porous, with three large circular pits. Very little of the upper layer of light-blue glass remains, and perhaps it was never present at all, as the design of the gem is deeply impressed into the darker lower level.

The subject of the intaglio is Hercules strangling the Nemean Lion. The hero stands on the right side of the glass gem facing left, with the lion's hind legs locked onto his knees, and forelegs around his torso; its tail hangs down parallel to Hercules's legs. The overall appearance is somewhat schematic, with the diminutive lion locked onto Hercules, its body parallel to his chest. A rough depression to the right might be the hero's club.

The gem is an exact replica of a glass nicolo found in 1964 in a Frankish burial in a graveyard at Niedernberg "Am Stadtweg" in Aschaffenburg. The ring in which the Aschaffenburg gem is set is similar, but not identical, to the Wareswald Type 1 rings. Both were dated to the 2nd c. CE by Krug in 1980, but a 3rd-c. date now seems more plausible.<sup>32</sup> The Aschaffenburg ring is Giraud's type 2D, which is most common in the 3rd c. CE, or Henig's type 13, another 3rd-c. type.<sup>33</sup>

Hercules strangling the Nemean lion was a very popular motif amongst Roman gem engravers as early as the 1st c. BCE and seems to have been particularly common in the 3rd c. CE. The motif appears on numerous gems found in Gaul, Germany, and Britain in varying quality and style.<sup>34</sup> Several glass nicolos share the same schematic style of Wareswald and Aschaffenburg gems but are not exact replicas. These include a true nicolo from a grave in Cologne, and glass nicolos from Mainz, Springhead (Kent), Bourges (Cher), and two from Carnuntum.<sup>35</sup> Finally, a silver ring found in Cologne contains a real nicolo with Hercules and the lion that is fairly close to the glass examples, and is dated by Krug to the 2nd c. CE.<sup>36</sup> Since the replica gem from Aschaffenburg is from a much later context, and the stylistically similar pieces have varied dates, mostly in the 2nd or 3rd c. CE, they do not help to date the Wareswald gems independently.

**Ring 6** (2018.17703.21). Found in the earth next to the bracelet in the excavated block. Diam.: H. internal 14 mm, W. 18 mm, H. of gem plus hoop: 4 mm, W. of hoop across gem: 9.2 mm, at shoulder: 5 mm, at bottom of hoop: 2 mm, Wt. 2.2 gm.

A thin flange of glass is visible on the base of the gem inside the ring. The surface of the gem is very porous, and the design scarcely legible.

It is possible that the intaglio depicts Victoria standing on a globus facing left, with a raised wreath and palm branch. If so, close parallels include glass nicolos from Xanten, set in a very similar bronze ring, the

---

<sup>32</sup> Henkel 1913, nos. 1191–97, "second-century forms." On the Aschaffenburg gem: Krug 1980, 134, no. 18, pl. 4.18. Aschaffenburg Stifftmuseum, Inv. 9245.

<sup>33</sup> Guiraud 1989, 203, fig. 53; Henig 2007, 14.

<sup>34</sup> Early examples include a damaged carnelian dated by Krug to the 1st c. BCE or 1st c. CE but found in a later grave in Cologne (Krug 1981, no. 84. Jakobstr. Grave 111. Römisch-Germanisches Museum Acc. Nr. 29,1616). From Britain, on a "deep blue gem" in a golden ring found at Caerleon (Monmouthshire) in the 18th c. (Henig 2007, no. 431), and a 1st-c. CE nicolo from the Wyndam Cook collection (ex Robinson collection), Smith and Hutton 1908, 37, no. 157, and another in Berlin (Fürtwangler 1896, no. 8234). 3rd-c. CE comparanda include a glass nicolo from Verulamium (Hertfordshire), set in another bronze Henig type 13 ring (Henig 2007, no. 432); a glass nicolo set in an iron ring that was probably found in Sion, Switzerland (Henkel 1913, no. 1570); and, finally, a red jasper dated to the 3rd c. CE from Aquileia (Buora and Prenc 1996, no. 57, Museo Udine, Inv. Nr. 961/250).

<sup>35</sup> Mainz: Landesmuseum Mainz, Inv.Nr. 6025 = Henkel 1913, no. 1196 (pl. 78,343) in a bronze ring like the Aschaffenburg example. Springhead: Henig 2007, no. 433, pl. 14. Museum of the Gravesend Historical Society, set in a Henig type 13 bronze ring, i.e., 3rd-c. CE (Henig 2007, 14). Bourges: Guiraud 1988, 134, no. 418, pl. 2, found between Grious and Luçay-le-Libre (Indre). Carnuntum: Dembski 2005, 501, nos. 493 and 494, pl. 48. The two glass nicoli are replicas, but Dembski dates them to the 3rd (no. 493) and 2nd (no. 494) c. This is perhaps a typographical error, as the two are identical, and one is set in a Henig type 12 bronze ring, a 3rd-c. CE type.

<sup>36</sup> Krug 1981, no. 76 (= Henkel 1913, no. 422). Römisch-Germanische Museum Köln, Acc. Nr. 5296, ex-Niessen collection, found "vor dem Weyertor" in Cologne,

Saalburg, and Wiggensbach (Kempten).<sup>37</sup> Less similar examples of Victoria on glass nicolos are known from Heddernheim, Saarbrücken, and Trier.<sup>38</sup>

**Ring 7** (2018.17703.22). Found in soil next to the bracelet in excavated block. The lower part of the hoop is lost, and there is a large hole in the hoop directly below the gem. W. of hoop across gem: 9.2 mm, at shoulder: 6 mm, at lowest preserved part of hoop: 2 mm. Diam.: W. (internal): 18 mm, H. not preserved, Wt. 1.89 gm.

The visible edge of the gem on its underside is marked by a series of intentional chips, as if its size has been reduced to fit it into the ring, and the flange visible on other gems in the hoard has been removed. Above this chipping is a greyish substance, either an oxidation product of the glass, or remains of resin that helped to hold the gem in place. The surface is very poorly preserved, with only a very thin layer of the upper light blue surviving. It does not seem as if much of the design can have ever penetrated the lower darker layer of glass.

*Type 2. Rings with plain glass gems*



Suppl. Fig. 3. *Type 2 rings from Wareswald. Scale 1:1. (Sabine Brygadin, Courtesy Landesdenkmalamt Saarland.)*

The next group of six rings (Suppl. Fig. 3) all have a plain and thin ribbon-like hoop (Th. 0.5–0.8 mm) that is rectangular in cross-section and tapers in width towards the underside of the ring. The overall shape of these rings is not perfectly circular but bends sharply at the shoulder to form a flat surface, or plate, where the hoop crosses the top of the finger. A raised circular ridge on the top of each ring forms a container

<sup>37</sup> Platz-Horster 1994, no. 222, pl. 41. From Colonia Ulpia Traiana, Xanten, Schnitt 89/15 insula 39 (Xanten Archaeological Park/Regional Museum, Inv. C28380d1). The ring in which the glass gem is set ring is very similar to the Wareswald examples, but the gem has been set in it from below. It is dated to 150–250 CE by Platz-Horster. Saalburg: Krug 1978, 497–98, no. 30, pl. 54,30 (Saalburg Museum, Inv. D. 167), dated to 200–50 CE by Krug. Wiggensbach (Kempten): Schleiernmacher 1972, 125, pl. 84.4, in a hoard with coins ending ca. 233.

<sup>38</sup> Heddernheim: Krug 1975, no. 3 pl. 31.3, found in 1963, now in the Frankfurt Archaeological Museum, 3rd-c. CE. Saarbrücken: Henkel 1913, no. 1209A, set in a bronze ring of a different type. Trier: Krug 1995, pl. 40B and 47,21. Interestingly, the type with Victory on a globe does not seem to be present amongst representations of the personification on gems from Aquileia (Siena Chiesa 1966, 253–61, nos. 655–93).



(chaton) for a glass gem, and here the hoop is at its widest (6.5 mm). Though the hoop of most rings is damaged, the most complete (**no. 8**) has internal dimensions of 18 x 16.5 mm, and weighs a mere 0.53 gm.

The chatons of all but one ring (**no. 13**) contain round glass gems, which are either black (**nos. 11–12**), or a lighter turquoise/green color (**nos. 8–10**). These glass gems are plain, in that they bear no intaglio or relief designs like the glass nicolos, but their surfaces are not flat and smooth. Each gem has a wavy appearance created by one or two ridges of glass, and a raised ring of glass pressed against the inside edge of the chaton. This effect was likely achieved when the jeweler used a stylus or pair of tweezers to push blobs of semi-molten glass into the empty chaton.

A small perforation, and in one instance a bulge, can be seen on each of these rings inside the hoop below the chaton. This feature was likely caused when hot air trapped below the molten glass forced its way out through the exceptionally thin bronze hoop. The perforations sometimes interrupt the lines of the file marks inside the hoops, indicating the glass gems were added at a later stage in the manufacturing process. Many of these perforations have left a tiny burr of metal, which would surely have been uncomfortable to the wearer, and it is noteworthy that they have not been filed off.

Finally, on the one ring missing its gem (**no. 13**), the chaton is filled with a porous, crumbly, white substance. As with the greyish substance visible below gems in the previous group, this may be resin used to glue the gems in place, a tin or lead alloy serving the same purpose, or even an oxidation product generated by the close proximity of the glass and bronze.<sup>39</sup> Guiraud noted that some rings of this type include small pieces of tin set behind plain translucent stones or glass gems, a so-called chaton foil, which she viewed as tiny mirrors serving to further enhance the colors of the gem. The use of silver and gold foil behind translucent gems to enhance their appearance is described by Pliny the Elder and is a distinct possibility here.<sup>40</sup>

These rings belong to Guiraud's type 4e, another type concentrated in eastern and northern Gaul.<sup>41</sup> Though bronze is the most common metal for the type, gold rings make up a high proportion (37%) of known examples. In some gold examples, the chaton and gem were made separately, with the chaton later soldered onto the hoop of the ring (Fig. 10). Plain glass gems without intaglios are common in gold rings of the type (Fig. 8.G–F), just like their cheaper bronze counterparts from Wareswald.<sup>42</sup>

Guiraud placed this type between the late 3rd and mid-5th c. CE, but most examples known to her came from mid-4th c. CE contexts.<sup>43</sup> Some rings of this type lack a chaton, and in its place have an inscription on the plate. This includes several rings with the phrase FIDEM CONSTANTINO, which confirms a 4th-c. CE production date. The majority have been found in small vici, with many coming from Germanic-style burials.<sup>44</sup> Oddly, there are no examples of the type in Henkel's corpus. Only a small gold ring in Darmstadt, with an oval sapphire set in the chaton is remotely close.<sup>45</sup> It is possible that Henkel viewed these rings as post-Roman in date and thus excluded them from his corpus, or that the type is very rare in Germany and eastern Gaul.

---

<sup>39</sup> Nicole Kasparek, conservator of the State Archaeological Service of the Saarland, believes the substance to be a glass oxidation product rather than metallic, but proper chemical analysis is needed. Interestingly, both opinions have been advanced for the rings found in the Trier Viehmarkt discussed in the article text.

<sup>40</sup> Guiraud 1989, 191; Plin. *HN* 36.26 and 31.

<sup>41</sup> Guiraud 1989, 198–91. These rings are something of a typological conundrum. Guiraud places them in her type 4, but most other rings in this group have a chaton that interrupts the circular path of the hoop, and in this variant the chaton is clearly on top of it. Other instances of rings with similar chatons exist in Guiraud's type 3, but these rings lack the sharply sloped, and often decorated, shoulders that are characteristic of that type.

<sup>42</sup> Guiraud 1989, 188–89.

<sup>43</sup> Guiraud 1989, 203.

<sup>44</sup> Guiraud 1989, 191.

<sup>45</sup> Henkel 1913, no. 215.



Suppl. Fig. 4. Rings similar to the type 2 rings but found in Britain. Left: Grateley, Hampshire (DEV-F0EB87) and Findon, West Sussex, (PAS SUSS-113FB3). Both scale 1:1. (Photo: Portable Antiquities Scheme.)

Some of the best parallels for the Wareswald Type 2 rings come from Britain. A silver-alloy ring from Springhead is very similar, as are several bronze rings recorded by the Portable Antiquities Scheme (Suppl. Fig. 4).<sup>46</sup> But the glass gems of the British examples all lack the wavy surfaces of the Wareswald gems, and the perforation below the chaton. They were cast separately and set into the ring in a later stage. Slightly more distant parallels include a series of rings with a tear-shaped chatons and plain glass gems, examples of which have been recorded at Springhead (bronze), Antigny (bronze), and Augst (silver).<sup>47</sup>

**Ring 8** (2018.17703.17). Found on the bracelet. There are two cracks in the hoop, which is otherwise complete. The glass gem is a somewhat whiter turquoise than **rings 9** and **10**, with a single large central ridge and a raised circular ridge around the edge matching the chaton. The ribbon is perforated directly below the gem. W. of hoop across gem: 6.5 mm, Internal diam.: W. 18 mm, H. 16.5 mm, Wt. 0.53 gm.

**Ring 9** (2018.17703.10). Found on the bracelet. A large section of the hoop is missing, from the shoulder on one side to just beyond the lowest point of the hoop. The gem is made of turquoise glass, with a large central ridge, and a raised ridge around the edge of the chaton. The surface of the glass is cracked and has numerous small bubbles. There is a squarish perforation in the ribbon directly behind the gem, which breaks through the rough file marks on the interior of the hoop. Similar rough file marks can also be seen on parts of the exterior as well. W. of hoop across gem: 7 mm, Diam., W. 16 mm, H. n/a, W: 16 mm (at break on the shoulder carination) H: n/a, Wt. 0.47 gm.

**Ring 10** (2018.17703.15). Found on the bracelet. Broken from the chaton to near base of hoop, such that only about 45% of the hoop survives. The gem is the same turquoise color as **ring 10**, with a large central ridge and a raised circle around the inner edge of the chaton. There is a very small squarish perforation behind the gem inside the ring. W. of hoop across gem: 6.5 mm, Internal diam. W. ca. 14 mm (but incomplete), H: n/a, Wt. 0.37 gm.

**Ring 11** (2018.17703.1). Found on the bracelet. There is a break right at the shoulder of the ring on one side, and a segment of the hoop is missing. The glass gem is black with three ridges and is chipped on one side. There is a large perforation below the gem through which a white material can be seen on the underside of the gem. Traces of the same whiteish material can be seen around the edge of the gem where the chaton is broken. Diam.: W. 16 mm, H: 14 mm, W. of hoop across gem: 6 mm, W. at bottom of hoop: 2 mm, Wt. 0.56 gm.

**Ring 12** (2018.17703.13). Found on the bracelet. A large section of the hoop just below the shoulder to beyond its lowest part is lost. The gem is made of black glass, chipped on one side, with a large central ridge and a raised circular ridge against the chaton. On one side of the chaton, the glass does not quite reach the edge, either because insufficient glass was used, or because some came out as the gem was being set. There is a squarish perforation behind the gem inside the hoop. W. of hoop across gem: 6.5 mm, Internal diam. W. 15 mm, H. n/a, Wt. 0.39 gm.

<sup>46</sup> Springhead: Schuster 2011, 239–40, no. 156, fig. 103. Examples recorded by the British Museum’s portable Antiquities Scheme include PAS nos: DEV-F0EB8, SUSS-113FB3, and SUSS-505634 (both with a raised dot in the middle of the glass inlay); HAMPA-422B06, SUR-19BD9E (both fragments in which the gem is missing and a “fixant” can be seen in the chaton); and SF-6459FA (a fragment with the chaton). See <https://finds.org.uk>.

<sup>47</sup> Springhead: Schuster 2011, 256–57, no. 157, fig. 103; Antigny: Bertrand 2003, 46, pl. 9.44; Augst: Riha 1990, no. 106. The chaton of the Augst example was soldered to the ring, like many of the other Guiraud type 4 rings.

**Ring 13** (2018.17703.6). Found on the bracelet. The hoop is broken at the shoulder on one side. The gem is missing, and the chaton filled with a white crumbling substance similar to that seen on **ring 8**. On the inside of the hoop, below the chaton, there is a small, raised boil in the surface of the metal at the same place where other gems have a perforation. Internal diam.: W. 15 mm, H. 13 mm, W. of hoop across gem: 6.5 mm, W. at bottom of hoop: 2 mm, Wt. 0.44 gm.

*Type 3. Rings with imitation opus interrasile shoulders*



Suppl. Fig. 5. *Type 3 Rings from Wareswald. (Sabine Brygadin, Courtesy Landesdenkmalamt Saarland.)*

The three rings in this type (Suppl. Fig. 5) are virtually identical. They have thin (ca. 1 mm) hoops that are rectangular in cross-section and relatively wide (3 mm) at the base, but are made most distinctive by their shoulders, which are roughly diamond-shaped and perforated by two holes. These ornate shoulders were enhanced by filing back the sides of the diamond, and then cutting a small wedge into the exposed corners. Each ring supports a large (8 x 10 mm) and deep (ca. 2 mm) oval chaton, all of which are empty. There is no trace of mounting or adhesive, as in the gems of the last two types. The rings are almost perfectly circular (Diam. 16.5 mm), with the decorative shoulders forming only a very slight carination in the hoop. The single dolphin-shaped shoulder of **ring 16** is markedly different, and the craftsman may well have been adjusting the ring to compensate for a flawed cast.

Each of the rings shows filing and cut marks on their outer surfaces, which one might normally expect to have been polished away in the final stage of production. On **rings 15** and **16**, two of the holes in each shoulder are still filled with casting flash. Taken alongside the lack of gems or any evidence of setting, the rings should be considered unfinished products.

The diamond-shaped shoulders with perforations and raised chatons put these rings firmly in Giraud's type 3f and Henig's type 8, ring forms in which elaborate shoulders are the norm.<sup>48</sup> These rings often have much steeper and carinated shoulders, though rounder examples like the Wareswald rings are also common.<sup>49</sup> The earliest dates for the type are in the middle of the 2nd c. CE, extending into the mid-4th, but they are generally considered characteristic of the 3rd c.<sup>50</sup> These three rings are much cheaper and cruder imitations of very high-quality gold or silver rings with shoulders in elaborate shapes (e.g., diamonds, hearts, volutes, etc.) and that occasionally include open-work (*opus interrasile*) decoration (**Fig. 8.D-E**).<sup>51</sup> The form is known in bronze, but very few of the bronze examples attempt to reproduce *opus interrasile* shoulders, which are rare even in precious metal.<sup>52</sup>

<sup>48</sup> Henkel 1913, 117–18, group I.3.C.IV.3. Guiraud 1989, 198, e.g., plate 67,n, no. 672 and 185 = Henig's type 8a.

<sup>49</sup> E.g., from the Boistray hoard: Guiraud 1981, nos. 7–9 and 11–12; Henkel 1913, nos. 247 and 253.

<sup>50</sup> Guiraud 1989, 203. Henig 2007, 13.

<sup>51</sup> E.g., in gold: Henkel 1913, nos. 241–53, Krug 1977, 51–52, no. 3, pl. 14; in silver: Henkel 1913, nos. 454–58.

<sup>52</sup> Henkel 1913, nos. 1305, 1307, and 1350.

Four rings from other sites are so similar that they were surely made in the same workshop. They come from the auxiliary fort at Niederberg, across the Rhine from Koblenz, Xanten (*castra vetera*) on the northern Rhine, Avenches (Aventicum), near Lake Morat in Vaud, and, remarkably, Carnuntum in Pannonia. The Niederberg ring (Suppl. Fig. 6) is missing its gem, but the Xanten and Carnuntum examples are set with glass nicolos – both with replica Fortuna intaglios. This suggests that these rings are near contemporaries not only to one another, but also to the Type 1 rings with nicolos from Wareswald. The glass nicolo in the Avenches ring is too worn to make out a motif, if indeed it ever had one.<sup>53</sup> The auxiliary fort at Niederberg was abandoned in 260 CE, at the time of the destruction of the larger and nearby fort at Niederbieber. The Xanten rings are from an area used for burials in the 2nd and 3rd c. The Avenches ring was found in a context dated 150–250, but with intrusions of later material. The occupation of Carnuntum continued well into the 4th c. CE.



Suppl. Fig. 6. *Bronze ring from Niederberg.* (After Henkel 1913, pl. 1292.)

**Ring 14** (2018.17703.3). Found on the bracelet. The perforation on one shoulder has broken open. Diam. 16 mm. W. of chaton: 8.1 mm, L. 10.2 mm, W. of hoop at base 2.8 mm. Th. of chaton: 2.1 mm, Th. of hoop at base: 1mm. Wt. 1.65 gm.

**Ring 15** (2018.17703.5). Found on the bracelet. The hoop is cracked just below one shoulder, which is also cracked open at one of its perforations. The second perforation in the same shoulder is still solid with casting flash and appears never to have been fully opened. Diam.: W. 17 mm, H. 16.5 mm, W. of chaton: 8 mm, L. of chaton: 10.8 mm, W. of hoop at bottom: 3 mm, Th. 0.9 mm. H. of chaton: 2 mm, Th. of hoop at base: 1 mm, Wt. 1.48 gm.

**Ring 16** (2018.17703.9). Found on the bracelet. Diam.: H. 16 mm, W. 17. L. of chaton: 9.9 mm, W. of chaton: 8 mm, H. of chaton 2.4 mm, W. of hoop at base: 3 mm, Th. of ring at base, 0.9 mm, Wt. 1.67 gm.

One shoulder of this ring is radically different from the others in this group. One of its perforations has been left solid with flash, while the other is open and broken the edge. The lower part of the normally diamond-shaped shoulder has been filed further than on other rings on one side and rounded out on the other. The overall effect is an asymmetrical form that resembles a dolphin or the head of a horse. Presumably, this was a creative adaptation made in response to a casting flaw, or after the jeweler accidentally cut open one of the perforations while filing the ring. The opposite shoulder of the ring is just like the other rings in the group.

<sup>53</sup> Niederberg: Henkel 1913, no. 1292. Xanten: Henkel 1913, no. 1293 = Platz-Horster 1987, 107, no. 188, pl. 39, who dates both ring and stone to the first half of the 3rd c. CE. The Xanten ring was close in size to the Wareswald examples (internal W. 17.5 x H. 16 mm), but since Henkel's day its lower half has been lost. Avenches: Crausaz 2016, 42, no. 42, no. 88, Inv. 91/09060-05, NE quadrant T11 88. Carnuntum: Dembski 2005, 84, no. 318a, pl 31.

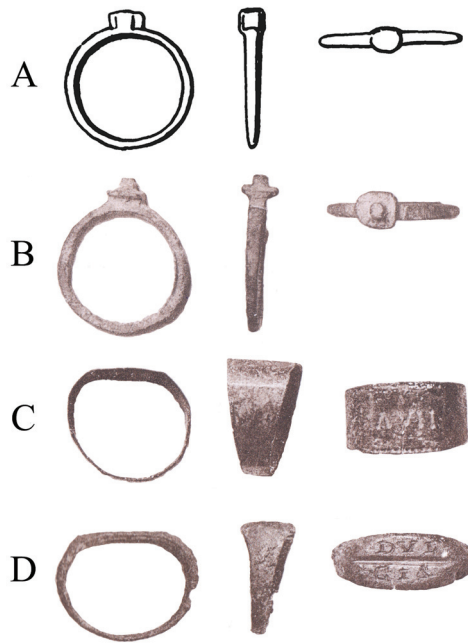
*Type 4. Rings with a small cylindrical projection*



Suppl. Fig. 7. *Type 4 rings, with cylindrical projections. (Sabine Brygadin, Courtesy Landesdenkmalamt Saarland.)*

These six rings (Suppl. Fig. 7) form the most distinctive type in the assemblage. Their basic shape is close to that of the Type 2 rings, consisting of a flat, ribbon-like hoop, less than 1 mm thick, and rectangular in cross-section, which tapers from a wide (6–7 mm) plate to ca. 2 mm at the bottom of the ring. Though most are bent out of shape, the rings were oval (14 x 17 mm), with the plate being somewhat flatter than the rest of the hoop. The rings have two grooves forming parallel lines that run near the edge of the hoop and end at the shoulders on the plate. In one instance, **ring 18**, the grooves continue all the way around the hoop. These lines are uneven and sometimes double slightly. There is no raised edge or burr, suggesting that the lines were cut into the original wax models, and not incised into the rings after casting.

The most characteristic trait of these rings is a small cylindrical projection of bronze in the middle of the plate. Some of these projections have been roughly filed down, such that they have a mushroom-like profile (**rings 18, 20, 21, and 22**). In some instances (e.g., **rings 20 and 21**) the surface of the projection has also been filed down at a sharp angle to the surface of the plate. But in two instances (**rings 17 and 19**) the projection has been neatly filed on both the top and sides, creating a smooth, rounded dome.



Suppl. Fig. 8. Rings with projections and inscriptions. A) Bregenz (Henkel no. 1011; B) Cologne (Henkel no. 1000), C) Rottweil, inscribed AVII = AVE, "Greetings"; D) Bonn: DVL / CIS, "sweetly" (Henkel 839 and 849 [face]).

There are simply no comparanda with projections like the ones found on these rings. In southern Bavaria, knob-like projections appear on a plain silver ring found in a female inhumation burial of the 330s or 340s at Weßling and on a ribbed silver ring from Valley. Two plain bronze rings from Bregenz and Cologne (Suppl. Fig. 8.A–B) have cylindrical projections, in the latter case on a square plate.<sup>54</sup> But the hoops of all these rings are uniform in width and circular or square in cross-section, and their projections are thicker, well-rounded cylinders, quite unlike those from Wareswald. If the crude projections on the Wareswald rings are decorative, then they are unique.

The overall shape of these rings is closest to Guiraud's type 4e, like the Wareswald Type 2 rings, but they lack either a chaton, a gem, or the inscription that is normal for the type. Parallels in Henkel's corpus, again lacking the projection, consist of rings with an inscription or incised decoration on the plate (Suppl. Fig. 8.C–D). A large number of these rings are from the 1902 Bonn hospital find (discussed in the article text), and have an incised line in the middle of the plate, or else a box around the lettering, that is somewhat reminiscent of the parallel lines on the edges of the Wareswald rings.<sup>55</sup> The Bonn rings belong to the mid-4th c. CE, and, as noted earlier, many of Guiraud's type 4e rings belong to the Constantinian dynasty. Thus the Wareswald Type 4 rings probably date to the first half of the 4th c.

The most likely explanation is that the cylindrical projections of the Wareswald rings are the remains of the sprue, or the casting funnel, where molten metal entered the mold. Where traces of a sprue are still visible on other incomplete Roman rings, it is usually located on the underside of the hoop, though it can appear on the plate and bezel as well.<sup>56</sup> The very thin, narrow, and thus structurally weak undersides of the Type 4 rings may have necessitated placing the sprue on the plate. Henkel believed that the projections on the rings from Cologne and Bregenz were the remains of a sprue that had been intentionally converted into part of the design.<sup>57</sup>

It is more likely that rings of this type were simply unfinished. The craftsman may have intended to file off the projections later, and perhaps to add an inscription or decorative punches to a flat plate according

<sup>54</sup> Weßling: Keller 1971, 262, grave 80.15, 1971, pl. 41.6. The ring was on the skeleton's left hand. The burial included two nummi of Constantine I, issued between 330 and 335. Valley: Keller 1971, 246, grave 47.5, pl. 23.11. Cologne and Bregenz: Henkel 1913, nos. 999–1000 and 1011–13.

<sup>55</sup> Henkel 1913, nos. 815–75; Lehner 1910, 179–81.

<sup>56</sup> E.g., Henkel 1913, nos. 1759, 1770, and 1771.

<sup>57</sup> Henkel 1913, 93, on no. 1000.

to the wishes of a customer. Alternatively, the projections could have been shaped into a very simple decoration – a very crude substitute for a gem. Those rings where the projection and surface have been crudely and unevenly filed, however, support the former hypothesis. **Rings 17 and 19**, where the projection is a smooth, rounded dome, suggest that both forms of finalization were an option.

A third possibility, that the projections were intended to attach a separate chaton, or decoration, can be dismissed outright. On rings with a separately made chaton, most of which are gold and silver, the chaton is typically soldered on and lacks any sort of pin or rivet. With these low-value rings, it would have been much simpler to cast a chaton as part of the hoop, as was done with the Type 2 rings.

**Ring 17** (2018.17703.4). Found on the bracelet. Two parallel lines in the hoop on the plate end just before the shoulders. The ring is bent slightly, giving the projection an offset appearance. The projection is slightly rounded and neatly filed, but also slightly uneven in height. Diam.: W. 17 mm, H. 14; Th. of projection and hoop: 1.9-2 mm, W. of hoop: 7.1 mm, at base: 2.2 mm. Wt. 0.46 gm.

**Ring 18** (2018.17703.12). Found on the bracelet. Unlike other rings in this group, the lines on the edges go all the way around the outside of the hoop. File marks are visible on the interior, while the exterior is very finely filed. The area around the projection is slightly thicker and more rounded than other rings. The projection is mushroom-shaped. Diam.: W. 17 mm, H. 14 mm, Th. of hoop and projection: 2 mm, W. of hoop at top: 6 mm, at base: 2 mm. Wt. 0.58 gm.

**Ring 19** (2018.17703.14). Found on the bracelet. The parallel lines appear only on the plate. The projection is very neatly filed and rounded. Diam.: W. 18 mm H. 14 mm, Th. of hoop at projection: 2 mm, W. of hoop at top: 7 mm, at base: 2.1 mm, Wt. 0.68 gm.

**Ring 20** (2018.17703.16). Found on the bracelet. Slightly bent. The parallel lines appear only on the plate. The projection is large and flat, with a mushroom-like profile, and is filed into an uneven slope. File marks are clearly visible on the projection, inside, and outside of the hoop. Diam.: W. 16 mm, H. 12.5 mm, Th. of projection and hoop: 1.8–9 mm, W. of hoop at top: 6 mm, at base: 2 mm. Wt. 0.57 gm.

**Ring 21** (2018.17703.19). Found in the soil next to the bracelet in the excavated block. The edge of the hoop is damaged at the top and cracked at the bottom. The parallel lines appear on the plate only. This is the crudest ring in this group. File marks visible inside and outside the surface of the hoop. The projection is wide, flat, and mushroom-shaped, and filed into an uneven slope. Diam.: W. 17 mm, H: 12 mm, Th. of projection and hoop: 1.5–1.8 mm, W. of hoop across plate: 5.5 mm (slightly damaged edge), at base 2 mm. Wt. 0.41 gm.

**Ring 22** (2018.17703.2). Found lying on the bracelet. A fragment of one of the rings of this type, the projection is smaller, but uneven and mushroom-shaped in profile. L. 9 mm, W. 5.2 mm, Th. of hoop and projection: 2 mm. Wt. 0.12 gm.

*Type 5. Octagonal Rings*



Suppl. Fig. 9. *The two octagonal rings. (Sabine Brygadin, Courtesy Landesdenkmalamt Saarland.)*

This group consists of only two rings, one of which (23) was certainly part of the same group attached to the bracelet. The second (24) was found later, in a pit next to the original find, and is not necessarily part of the group attached to the bracelet.

The basic form of both rings is the same. They have plain hoops that are rectangular in cross-section and shaped with eight flat faces on the outside. Unlike other types, within which rings are virtually identical, the two octagonal rings are quite different from one another. One (23) is larger and wider than the other (24), and its faces more elegantly articulated.

Polygonal rings are noted in all the main ring typologies, – these correspond to type 9 in both Guiraud and Henig's works. Guiraud found that they were relatively rare in Gaul outside of vici in northeast Gaul and the forts of the *limes*. She noted a range of context dates from the mid-2nd to early 5th c. CE, with the heaviest concentrations in the 3rd and early-4th c.<sup>58</sup> Henig simply saw all polygonal rings as belonging to the 3rd c. CE.<sup>59</sup> Gold polygonal rings inscribed with FIDEM CONSTANTINO again support a date for the form in the first half of the 4th c. CE.<sup>60</sup>

**Ring 23** (2018.17703.23). Found in soil next to the bracelet in the excavated block. Each of the ring's eight faces are themselves roughly diamond-shaped octagons, as the edge of each surface has been filed back at the corner sloping towards the interior. There are rough file marks on the interior, which is almost perfectly round, and occasional file marks are also visible on the outside faces. Diam.: 18.5 mm, W. of hoop, 4.5 mm, Th. 2 mm. Wt. 1.19 gm.

A very close parallel to this piece, with the edges filed back to create diamond-shaped facets, has been recorded in the collection of the museum in Wiesbaden and likely came from one of the *limes* forts, perhaps Hedderheim or the Saalburg.<sup>61</sup> Three octagonal silver rings, where the edges were also hammered or filed back, are known from Augst, one of which was found alongside 2nd- and 3rd- c. CE sherds.<sup>62</sup>

**Ring 24** (2018.17721.24). Not part of the main assemblage but found a week later and 30 cm deeper in a pit (Fst. 1495) in the same fill layer in which the rings on the bracelet were found. The hoop is narrower, but thicker than **ring 23** and is almost square in cross-section. Each of the eight facets is a plain rectangle. Diam. 16.25 mm, W. of hoop: 2 mm, Th. 1.8 mm. Wt. 1.13 gm.

*The Bracelet*



Suppl. Fig. 10. *The bracelet on which the rings were threaded.* (Sabine Brygadin, Courtesy Landesdenkmalamt Saarland.)

The wire onto which the rings were threaded was not a random piece of scrap, but a bracelet. It was made by folding a single piece of wire in half and twisting the resulting two strands around one another. It is preserved in three separate pieces, L. 60 mm, 45 mm, and 34 mm (Suppl. Fig. 10). Each strand is

<sup>58</sup> Guiraud 1989, type 9, 196–97 and 203, fig. 53; Henig 2007, type 9; Henkel 1913, group I.3.A.I.3α, 71–72, nos. 651–74; Riha 1990, 45–46, 2.30.

<sup>59</sup> Henig 2007, 14.

<sup>60</sup> Popavić 2006/7; Martin 2002.

<sup>61</sup> Henkel 1913, 71–72, no. 664, pl. 27.

<sup>62</sup> Henkel 1913, 45, no. 31, pl. 16; Riha 1990, 275–76.



approximately 1 mm thick and is roughly circular in cross-section. The fold at one end of the bracelet forms a loop, now cracked, to receive the hook of the bracelet. At the other end, the hook is a separate piece of wire, attached to the bracelet by two small strands wrapped around its base.

Bracelets like this are a well-known and easily recognizable type, and are routinely found on the Rhine and Danube, across northern Gaul, and in Britain, where they are referred to as “twisted cable bracelets.” The type includes bracelets with multiple interwoven strands of wire, and variations in the hook-and-loop terminals (Fig. 9.A–B). Most date to the first half of the 4th c. CE, but a few examples from Britain could be slightly earlier. Like most other Roman bracelets, they are normally found in female burials.<sup>63</sup> Close parallels to this example, with two strands and a simple hook-and-loop fastening, have been found at numerous sites, including Augst, Cologne, Krefeld-Gellep, and Colchester.<sup>64</sup>

Only the fastening mechanism of this bracelet deviates slightly from the normal pattern, in which one of the wire’s two strands is bent backwards at the end to form the hook that latches into the folded loop. In this case, the hook is actually a separate segment of wire. This could either be an ancient repair, after the original hook broke, or perhaps a modification intended to increase the bracelet’s size.

#### *Fragments*

Finally, numerous fragments of bronze rings and wire were recovered. They consist of around 30 pieces of ring hoops, most 1–3 mm in length, and a similar number of pieces of wire from the missing sections of the bracelet. The largest ring fragments are two sections of hoop, both ca. 10 mm in length, which could potentially belong to either a Type 2 or 4 ring. One has grooves on its edges that are quite similar to those on **ring 18**.<sup>65</sup> The quantity of these fragments suggests that the total number of rings originally on the bracelet was not much higher than the 23 or 24 rings that survived intact.

### Supplementary references

Bertrand, I. 2003. *Objets de parure et de soins du corps d’époque romaine dans l’Est picton (Deux-Sèvres, Vienne)*. Chauvigny: Association des Publications Chauvinoises.

Birley, B., and E. Greene. 2006. *The Roman Jewelry from Vindolanda*. Vindolanda Research Reports, n.s. 4.5. Greenhead: The Vindolanda Trust.

Buora, M., and F. Prenc, eds. 1996. *Römische Gemmen aus Aquileia / Gemme romane da Aquileia*. Udine: Società Friulana di Archeologia.

Crausaz, A. 2016. “Les bagues, anneaux et intailles d’Avenches.” *Bulletin de l’Association Pro Aventico* 57: 7–82.

Crummy, N. 1983. *The Roman Small Finds from Colchester, 1971-1979*. Colchester Archaeological Report 2. Colchester: Colchester Archaeological Trust.

Dembski, G. 2005. *Die antiken Gemmen und Kameen aus Carnuntum*. Vienna: Phoibos Verlag.

Fürtwangler, A. 1896. *Beschreibung der geschnittenen Steine im Antiquarium, Königliche Museen zu Berlin*. Berlin: Verlag von W. Spemann.

Glaser, M., S. Marek, and F.-J. Schühmacher. 2007. *Die römische Villa Nennig*. Saarbrücken: Stiftung Saarländischer Kulturbesitz.

Greene, E. 2015. “Impressions of identity: Choosing a signet ring in the Roman army.” In *Roman in the Provinces. Art on the Periphery of Empire*, ed. L. R. Brody and G. L. Hoffman, 3–12. Chicago: University of Chicago Press.

---

<sup>63</sup> Riha 1990, 60; Keller 1971, 97–98 and 108; Swift 2000, 124–26, and 299–300, figs. 145–50; Crummy 1983, 39.

<sup>64</sup> Swift 2000, 124, fig. 146, (“2 strand cable bracelets with plain hook and eye fastening”) and 299 with a list of findspots, including Cologne and Krefeld-Gellep. Augst: Riha 1990, 60, type 3.23.4, nos. 578–82 (settlement finds,) nos. 2911, 2917 (both stray finds from a 4th-c. CE cemetery), and 2927 (stray find in cemetery area 21B, with burials dated 300–350). Colchester: Crummy 1983, 39, fig 41, nos. 1611 and 1613 both from grave deposits of the late 3rd and 4th c. CE.

<sup>65</sup> Illustrations in the excavation documentation: Z. Nrs. 18.17703.27–8.

- Guiraud, H. 1981. "Les bagues d'époque romaine du trésor de Boistray (Rhône)." *Gallia* 39, no. 2: 219–233.
- Guiraud, H. 1988. *Intailles et Camées de l'Époque Romaine en Gaule (Territoire français)*. Gallia supplément 48. Paris: Centre national de la recherche scientifique.
- Guiraud, H. 1989. "Bagues et anneaux à l'époque romaine en Gaule." *Gallia* 46: 173–211.
- Guiraud, H. 1995. "Intailles de Lons-le-Saunier, Jura." *Gallia* 52: 359–406.
- Henig, M. 2007. *A Corpus of Roman Engraved Gemstones from British Sites*. British Archaeological Reports 8, 3rd edition. Oxford: British Archaeological Reports.
- Henkel, F. 1913. *Die römischen Fingerringe der Rheinlande und der benachbarten Gebiete*. Berlin: Verlag Georg Reimer.
- Keller, E. 1971. *Die spätrömischen Grabfunde in Südbayern*. Munich: C. H. Beck.
- Krug, A. 1975. "Römische Gemmen und Fingerringe im Museum für Vor- und Frühgeschichte Frankfurt a.M." *Germania* 53, no. 1–2: 113–25.
- Krug, A. 1977. "Römische Gemmen 2. Wiesbaden und Berlin." *Germania* 55, no. 1–2: 77–84.
- Krug, A. 1978. "Römische Gemmen 3. Speyer, Worms, Bad Kreuznach, Mainz, und Saalburg." *Germania* 56, no. 2: 476–503.
- Krug, A. 1980. "Römische Gemmen 4. Neuwied, Friedberg, Florstadt, Darmstadt, Hanau, Aschaffenburg und Koblenz." *Germania* 58: 117–135.
- Krug, A. 1981. *Antike Gemmen im Römisch-Germanischen Museum Köln*. Wissenschaftliche Katalog des Römisch-Germanischen Museums Köln 4. Reprinted from *BerRGK* 61: 151–260. Frankfurt: Verlag Philipp von Zabern.
- Krug, A. 1995. *Römische Gemmen im Rheinischen Landesmuseum Trier*. Schriftenreihe des rheinischen Landesmuseums Trier 10. Modified and reprinted from *BerRGK* 76: 159–218. Trier: Rheinische Landesmuseum.
- Lehner, H. 1910. "Ausgrabungs- und Fundberichte des Provinzialmuseums in Bonn vom 1. August 1901 bis 30. April 1903." *BjB* 110: 122–81.
- Maaskant-Kleibrink, M. 1986. *The Engraved Gems*. Description of the Collections in the Rijksmuseum G. M. Kam at Nijmegen 10. Nijmegen: Rijksmuseum G. M. Kam.
- Marshall, F. H. 1908. *Catalogue of the Finger Rings, Greek, Etruscan, and Roman, in the Departments of Antiquities, British Museum*. London: British Museum Press.
- Martin, M. 2002. "CONSTANTINO FIDEM und CONSTANT(I) FIDES - Goldene Treueringe für Constantinus I. und seinen Vater Constantius Chlorus." In *Neue Forschungen zur römischen Besiedlung zwischen Oberrhein und Enns*, ed. L. Wamser and B. Steidl, 253–65. Remshalden-Grünbach: Greiner.
- Platz-Horster, G. 1984. *Die antiken Gemmen im Rheinischen Landesmuseum Bonn*. Cologne: Rheinland-Verlag.
- Platz-Horster, G. 1987. *Die antiken Gemmen aus Xanten im Besitz des Niederrheinischen Altertumsvereins, des Rheinischen Landesmuseums Bonn, der Katholischen Kirchengemeinde St. Viktor und des Regionalmuseums Xanten*. Cologne: Rheinland-Verlag.
- Platz-Horster, G. 1994. *Die antiken Gemmen aus Xanten II im Besitz des Archäologischen Parks / Regionalmuseums Xanten, der Katholischen Kirchengemeinde St. Mariae Himmelfahrt Marienbaum sowie in Privatbesitz*. Cologne: Rheinland-Verlag.
- Platz-Horster, G. 2010. "'Kleine Praser" and Chromium-bearing chalcedonies. About a small group of engraved gems." *Pallas* 83: 179–202.
- Platz-Horster, G. 2018. *Antike Gemmen aus Bayern*. Ausstellungskataloge der Archäologischen Staatssammlung 42. Munich: Archäologische Staatssammlung München.
- Riha, E. 1990. *Der römische Schmuck aus Augst und Kaiseraugst*. Forschungen in Augst 10. Augst: Römermuseum.

- Schleiermacher, W. 1972. *Cambodunum-Kempton Eine Römerstadt im Allgäu*. Bonn: Rudolf Habelt Verlag.
- Schuster, J. 2011. "Springhead metalwork." In *Settling the Ebbsfleet Valley. High Speed 1: Excavations at Springhead and Northfleet, Kent. The Late Iron Age, Roman, Saxon, and Medieval Landscape. Volume 2: Late Iron Age to Roman Finds Reports*, ed. E. Biddulph, R. Seager Smith, and J. Schuster, 189–291. Oxford: Wessex Archaeology.
- Sena Chiesa, G. 1966. *Gemme del Museo Nazionale di Aquileia*. Padua: Associazione nazionale per Aquileia.
- Smith, C., and C. A. Hutton. 1908. *Catalogue of the Antiquities (Greek, Etruscan and Roman) in the Collection of the Late Wyndham Francis Cook, Esqre*. London: Privately printed.
- Spier, J. 1992. *Ancient Gems and Finger Rings. Catalogue of the Collections. J. Paul Getty Museum*. Malibu: The J. Paul Getty Museum.
- Swift, E. 2000. *Regionality in Dress Accessories in the Late Roman West*. Monographies Instrumentum 11. Montagnac: Éditions M. Mergoil.
- Woolley, C. L., and D. Randall-Macivari. 1910. *Karanòg. The Romano-Nubian Cemetery. Eckley B. Coxe Junior Expedition to Nubia III*. Philadelphia: University of Pennsylvania.
- Zahlhaas, G. 1985. *Fingerringe und Gemmen. Sammlung Dr. E. Pressmar*. Munich: Museum für Vor- und Frühgeschichte.