

### CAT 596: Warriors Right Panels

K55, K201, K237, K429, K493, K506, K748, K819, K829, K961, K1013, K1109, K1328, K1361, K1412, K1423, K1437, K1476, K1495, K1503, K1562, K1574, K1577, K1593, K1596, K1621, K1664, K1667, K1690, K1694, K1772–K1773, K1847, K2181–K2182, K5017, K5039, K5067

### Condition Report

**Conservation Started:** June 2015

**Conservation Finished:** April 2016

**Conservator:** Kayleigh Fuller, Giovanna Fregni

**Time Taken:** 15.5 hours

Including digital photography, report, conservation and packing.

**Dimensions:** 44mm (Largest L), Th <0.5mm

A rectangular die c. W. 55mm; H. 50mm

**Weight before:** 7.40g

**Weight after:** n/a

#### **Digital photography:**

Taken with a Canon EOS digital camera under daylight bulbs and Photomicrographs taken using Keyence VHX-1000 3D digital microscope with LED and/or fibre optic lights, 20–200x magnification.

**Description:** Visual and microscopic examination using Meiji stereo microscope 7-75x magnification.

MULTIPLE SHEET PANELS IN SILVER-GILT SHOWING THREE WARRIORS MARCHING RIGHT. Eighty-two fragments, from a minimum of six identical panels, most less than half surviving. A rectangular die (c. W. 55mm; H. 50mm) was used to impress the pattern on the reverse of the sheet metal of each. Several panels were cut, in two cases truncating the design, though in some cases it is not clear if this relates to manufacture or removal. A few fixing-holes only occur at the edges, but their general absence is probably due to the lack of beaded edging that could be certainly attributed; many fragments with this type of border remain unassociated (**606**), as it was common to multiple panels and bands (**593–595, 597–598, 600, 602**). The fragments overall allow almost the entire design to be reconstructed. The design shows the warriors parading to the right with spears held point-down on the side facing the viewer. The other arm holds a shield at shoulder height. A scabbarded weapon is worn at the (left) waist on the side hidden. The central warrior wears a knee-length tunic, belted at the waist, with a 'textile' pattern. The figures either side wear belted hauberks, with a dotted texture. All look skyward as they march, and they wear helmets with cheek-pieces and bird-headed crests; the beaks are curved like raptors and the helmet caps are filled with herringbone pattern. They appear shoeless. (CF)

#### **Label information**

**X-Ray:** L33 L41, L94, L96, L104, L135

#### **Association:**

Helmet material

**Pre-Conservation Condition:** Visual and microscopic examination using Meiji stereo microscope 7-75x magnification.

The silver decorated sheet is highly fragmented, distorted and weak due to embrittlement of the silver sheet over time. One surface is gilded, however it is highly worn on the surface and brown corrosion products are present on the gilded surface along the band. Some of the die impressed patterned sections have been flattened in the burial environment.

**Treatment:** Carried out using a Meiji stereo microscope

**Purpose:** Study

**Aim:** Cleaning/ Reassembly

**Materials:** Soft natural/synthetic brushes, thorn in pin vice/holder, IMS on metals, 50:50 water/IMS on metals, cotton wool swabs, cocktail stick, Paraloid B72

#### *Treatment at British Museum Prior to treatment at Birmingham Museums Trust*

The granular soil on the front and back was mechanically removed or reduced where possible using a fine thorn tip secured in a pin vice and a small pure bristle brush. 50:50 IMS/water was used to soften the soil to facilitate removal. Loose particles of soil were then removed with a small swab of IMS.

The corrosion products were left in situ; corrosion was not active and can be further cleaned or stabilised at a later date.

The paper K number was adhered to the back with HMG brand Paraloid B72 (ethyl methacrylate copolymer) from the tube, applied with a cocktail stick.

Appropriate packing in Plastazote cut outs and crystals boxes.

#### *Joins made at British Museum*

Fragments were adhered together using HMG Paraloid B72. In some cases sections had been backed with a nylon gossamer material to further support the sections.

Joins across K numbers:

(10 frags) K5067x3+K512x3+K1694x2+K493.

(10 frags) K1577x6+K1574x4.

(18 frags) K1476+K1593x6+K1596x6+K1621+K1664x2+K1667+K1013.

(2 frags) K1423+K1412.

(5 frags) K506+K5039+K1690+K1328x2.

(3 frags) K829+K968+K961.

Joins within K numbers: K5017x2, K1503x3, K282x16, K55, K1109.

Other possible fragments: K7, K748, K819.

#### **Further treatment at Birmingham Museum**

Additional fragment associations were made and adhered to the frieze with 35%W/V Paraloid B72 in Acetone. Some fragments were removed and placed in a different location as appropriate. An additional support of unwoven polyester netting was added by way of a reverse facing to the back of the larger section using 10% W/V Paraloid B72 in Acetone.

*Final K numbers associated with the 6 panels*

K55, K201, K237, K282, K429, K493, K506, K512, K748, K819, K829, K961, K1013, K1109, K1328, K1361, K1412, K1423, K1437, K1476, K1495, K1503, K1562, K1574, K1577, K1593, K1596, K1621, K1664, K1667, K1690, K1694, K1772–K1773, K1847, K2181–K2182, K5017, K5039, K5067

Panel 2.1

K201, K1013, K1476, K1593 (6 frags), K1596 (5 frags), K1621, K1664 (2 frags), K1667, K1772-K1773, K5017 = 1.43g  
K429, K819= 0.48g

Panel 2.2

K506, K1328 (2 frags), K1690, K5039 = 0.94g  
K55 and K748 = 0.30g (not joined)  
K1109 = 0.06g  
K829 = 0.19g  
K1109 (4 frags, two sets of two fragments joined) = 0.36g

Panel 2.3

K237 (2 frags) = 0.10g  
K1423 = 0.50g  
K961 = 0.29g  
K1690 = 0.11g

Panel 2.4

K493, K2182 (was K512, 4 frags) K1694 (2 frags), K5067 (3 frags) = 0.40g (One fragment is not joined)  
K1503 (3 frags) = 0.15g  
K1495, K1562 = 0.24g (not joined)  
K201

Panel 2.5

K1412, K1847 (4 frags) = 0.35g  
K1361 = 0.12g  
K2181 (was K282 , 16 frags), K1437 = 0.93g

Panel 2.6

K1574, K1577 (2 frags) = 0.45g

Each of the die impressed sheet panels were appropriately packed in the suspected position of the original die pattern into their respective 1 of 6 panels in individual crystal boxes with inserts cut out of the plastazote lining. Fragments or sections likely to become loose then had a piece of surgical steel adhered to the back (with an interleaf of unwoven polyester netting) using 20% W/V Paraloid B72 in

Acetone. This then meant that the fragments could be tied onto the plastazote lining. This prevents fragments becoming further broken or disassociated with the frieze through transit and other activities. This also aided in correct final photography of the main die impressed sheet panels.

**Post-Conservation Condition/Findings:**

The 6 panels fit around the helmet in order to decorate the main circumference of the item.

**Key features:**

- **Die impressed sheet depicting warriors**
- **Helmet decoration**
- **6 panels**

**Samples:**

None – insufficient soil.

**References:**

E.S. Blakelock, XRF analysis of silver foils from the Staffordshire Hoard. British Museum Science Report PR0744-14, British Museum Research Report, (2014) unpublished

Shearman, F., 2014 'Silver gilt sheet/Friezes 2,4,6 Warriors moving to right Condition Report' British Museum reports

Shearman, F., Camurcuoglu, D., Hockey, M., and McArthur, G. 2014 *Department Of Conservation And Scientific Research: Staffordshire Hoard Die-Impressed Sheet Conservation Report*. Unpublished report for the British Museum